

**Appendix H Local Circulation Analysis, Del Amo Circle
Drive Apartments, Torrance, California**

Appendices

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LOCAL CIRCULATION ANALYSIS
DEL AMO CIRCLE DRIVE APARTMENTS

Torrance, California
June 14, 2022

Prepared for:

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LLG Ref. 2-22-4525-1



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EXECUTIVE SUMMARY

Project Description

- The Project site is a 2.83±-acre parcel of land that is located north of Carson Street, east of Del Amo Circle W. within the Del Amo Financial Center in the City of Torrance, California. The proposed Project includes the development of up to 200 residential apartment units with a total of 440 parking spaces, within a 234,928 square-foot (SF) five-story apartment podium with consisting of 35 studio units, 66 one-bedroom units, 30 one-bedroom + den units and 69 two-bedroom units “wrapped” around a 169,946 SF six-level parking structure from street level and a partial subterranean level (total floor area of the parking structure to be determined). On-site facilities/amenities include a leasing office, a lounge/lobby, co-working space, mail/lounge, pool/spa, and a fitness center for residents, and courtyards.

Vehicular access would be provided via one (1) full access unsignalized driveway located on Carson Street, which now serves the Del Amo Financial Center, and one (1) full access “All-Way Stop” unsignalized driveways on Del Amo Circle which will also serve as access to the future planned residential development located on an adjacent parcel directly to the north.

- The proposed Project is forecast to generate 908 daily trips, with 74 trips (17 inbound, 57 outbound) produced in the AM peak hour, and 78 trips (48 inbound, 30 outbound) produced in the PM peak hour.
- The eighteen (18) key study intersections selected for evaluation in this report that provides local and regional access to the study area. They consist of the following:
 1. Anza Avenue at Torrance Boulevard (Torrance)
 2. Anza Avenue at Carson Street (Torrance)
 3. Anza Boulevard at Sepulveda Boulevard (Torrance)
 4. Ocean Avenue at Torrance Boulevard (Torrance)
 5. Ocean Avenue at Carson Street (Torrance)
 6. Village Lane at Torrance Boulevard (Torrance)
 7. Village Court at Village Lane (Torrance)
 8. Village Court at Del Amo Circle (Torrance)
 9. Del Amo Circle W at Carson Street (Torrance)
 10. Hawthorne Boulevard at Torrance Boulevard (Torrance/Caltrans)
 11. Hawthorne Boulevard at Village Lane/Fashion Way (Torrance/Caltrans)
 12. Hawthorne Boulevard at Del Amo Circle N (Torrance/Caltrans)
 13. Hawthorne Boulevard at Carson Street (Torrance/Caltrans)
 14. Hawthorne Boulevard at Sepulveda Boulevard (Torrance/Caltrans)
 15. Madrona Avenue at Torrance Boulevard (Torrance)

- 16. Madrona Avenue at Carson Street (Torrance)
- 17. Del Amo Circle W at Project Driveway (Torrance)
- 18. Project Driveway at Carson Street (Torrance)

Traffic Impact Analysis

Existing Traffic Conditions

- For Existing traffic conditions, all eighteen (18) study intersections operate at acceptable level of service during the AM and PM peak hours.

Existing With Ambient Growth Traffic Conditions

- For Existing with Ambient Growth traffic conditions, all eighteen (18) study intersections operate at acceptable level of service during the AM and PM peak hours.

Existing With Ambient Growth With Project Traffic Conditions

- For Existing with Ambient Growth with Project traffic conditions, all eighteen (18) study intersections operate at acceptable level of service during the AM and PM peak hours. Since the proposed Project is not anticipated to exceed the level of service thresholds at any of the study intersections, no improvements are recommended or required of the Project.

Traffic Impact Analysis – Caltrans Requirements (HCM Methodology)

Existing Traffic Conditions (HCM Methodology)

- For Existing traffic conditions, all five (5) state-controlled study intersections currently operate at acceptable level of service D or better during the AM and PM peak hours.

Existing With Ambient Growth Traffic Conditions (HCM Methodology)

- For Existing Ambient Growth traffic conditions, all five (5) state-controlled study intersections currently operate at acceptable level of service D or better during the AM and PM peak hours.

Existing With Ambient Growth With Project Traffic Conditions (HCM Methodology)

- For Existing with Ambient Growth With Project traffic conditions, all five (5) state-controlled study intersections are forecast to operate at acceptable level of service D or better during the AM and PM peak hours. Since the proposed Project is not anticipated to exceed the level of service thresholds at any of the state-controlled study intersections, no improvements are recommended or required for the Project.

Site Access Evaluation

- The two (2) project driveways for Existing with Ambient Growth with Project traffic conditions are forecast to operate at acceptable levels of service in the AM and PM peak hours.

Development Impact Fee

- On October 31, 2005, the Torrance City Council approved and adopted a Development Impact Fee (DIF) Program. Pursuant to the requirements of the City of Torrance, Development Impact Fees will be required of the Project. The DIF is applied to pay a portion of the costs identified for public facilities, including transportation-related improvements, as well as underground of utilities, sewer, and storm drain improvements, and Police and Fire facilities. The Development Impact Fee is based on the size of all new developments and is a one-time cost other than a tax or special assessment according to information published by the City of Torrance Community Development Department. The precise fee required of the Project will be determined by the City of Torrance upon issuance of project building permits.

- Assuming the proposed Project falls under the “Multi-family / Others (per unit)” category, the Project can be expected to pay a total of \$1,058,120.00 (200 units x \$5,290.60) in Development Impact Fees based on the City’s fee schedule of October 21, 2020. Please note that this total fee is subject to change based on the actual total number of units proposed for the Project when approved. The category and precise fee will be determined upon issuance of project building permits by the City of Torrance.

LOCAL CIRCULATION ANALYSIS
DEL AMO CIRCLE DRIVE APARTMENTS
Torrance, California
June 14, 2022

1.0 INTRODUCTION

This local circulation analysis evaluates the potential traffic impacts and circulation needs associated with the proposed Del Amo Circle Drive Apartments Project (hereinafter referred to as Project) in the City of Torrance, California. The subject property is a 2.83± acre parcel of land that is located north of Carson Street, east of Del Amo Circle W. within the Del Amo Financial Center in the City of Torrance, California. The subject property is currently developed with surface parking lot. Access to the Project site is now provided by a full access driveway on Carson Street and a full access driveway on Del Amo Circle. The proposed Project is a five-story apartment podium with 200 units proposed consisting of consisting of 35 studio units, 66 one-bedroom units, 30 one-bedroom + den units and 69 two-bedroom units.

1.1 Scope of Work

This report documents the findings and recommendations of a local circulation analysis conducted by Linscott, Law & Greenspan Engineers (LLG) to determine the potential impacts the Project may have on the local street system in the immediate vicinity of the Project site. The traffic analysis evaluates the operating conditions/levels of service at eighteen (18) key study intersections, estimates the trip generation potential of the Project, and forecasts future (near-term) operating conditions without and with the Project.

This local circulation analysis has been prepared according to the traffic impact requirements of the City of Torrance. The approved Scope of Work for this local circulation analysis, which was developed in collaboration with City staff, is included in *Appendix A*. The City of Torrance Traffic Impact Analysis Guidelines (<https://www.torranceca.gov/our-city/public-works/civil-and-traffic-engineering/traffic-engineering/traffic-impact-analysis-guidelines>) was used to assess the potential traffic impacts of development projects within the City jurisdiction, inclusive of the significant impact thresholds.

The Project site has been visited and an inventory of adjacent area roadways and intersections was performed. Existing traffic count information has been compiled and is utilized in this report in support of a detailed intersection capacity analysis.

1.2 Study Area

The eighteen (18) key study intersections selected for evaluation in this report provides local and regional access to the study area. They consist of the following:

1. Anza Avenue at Torrance Boulevard (Torrance)
2. Anza Avenue at Carson Street (Torrance)
3. Anza Boulevard at Sepulveda Boulevard (Torrance)
4. Ocean Avenue at Torrance Boulevard (Torrance)
5. Ocean Avenue at Carson Street (Torrance)
6. Village Lane at Torrance Boulevard (Torrance)
7. Village Court at Village Lane (Torrance)
8. Village Court at Del Amo Circle (Torrance)
9. Del Amo Circle W at Carson Street (Torrance)
10. Hawthorne Boulevard at Torrance Boulevard (Torrance/Caltrans)
11. Hawthorne Boulevard at Village Lane/Fashion Way (Torrance/Caltrans)
12. Hawthorne Boulevard at Del Amo Circle N (Torrance/Caltrans)
13. Hawthorne Boulevard at Carson Street (Torrance/Caltrans)
14. Hawthorne Boulevard at Sepulveda Boulevard (Torrance/Caltrans)
15. Madrona Avenue at Torrance Boulevard (Torrance)
16. Madrona Avenue at Carson Street (Torrance)
17. Del Amo Circle W at Project Driveway (Torrance)
18. Project Driveway at Carson Street (Torrance)

Figure 1-1 presents a Vicinity Map, which illustrates the general location of the Project and depicts the study intersections and surrounding street system.

1.3 Local Circulation Analysis Components

The Volume-Capacity (V/C) and corresponding Level of Service (LOS) calculations at the key study intersections were used to evaluate the potential traffic-related impacts associated with area growth and the proposed Project. When necessary, this report recommends intersection improvements that may be required to accommodate future traffic volumes and restore/maintain an acceptable Level of Service and/or addresses the impact of the Project.

Included in this Traffic Impact Analysis are:

- Existing Traffic Counts,
- Estimated Project traffic generation/distribution/assignment,
- AM and PM peak hour LOS analyses for Existing Conditions,
- AM and PM peak hour LOS analyses for Existing with Ambient Growth to the Year 2025 (Near-term) conditions without and with Project traffic,
- State of California (Caltrans) analysis,

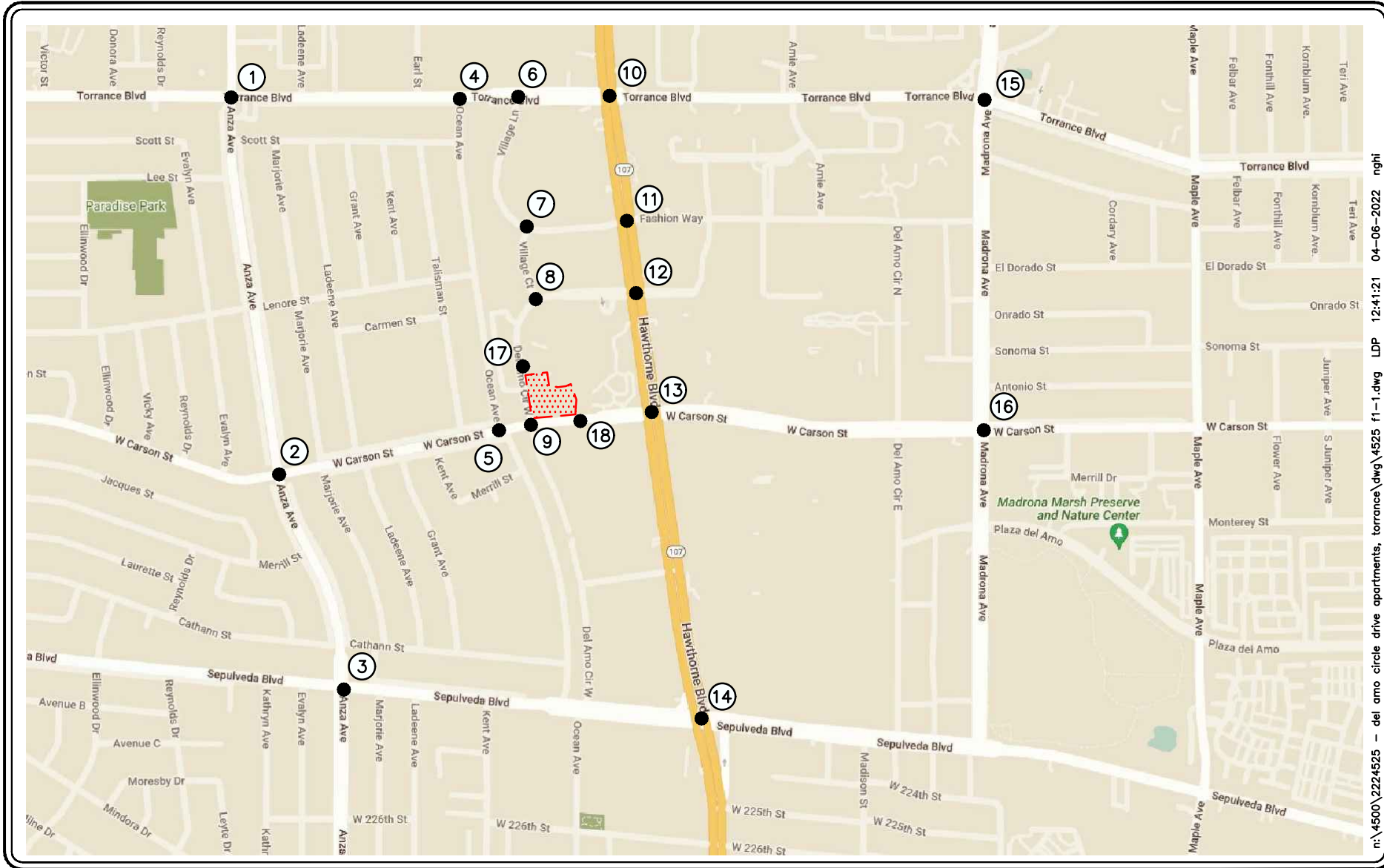
- Recommended Improvements to mitigate Project-Related impacts,
- Site Access and Internal Circulation Evaluation, and
- Congestion Management Program (CMP) assessment.

1.4 Local Circulation Analysis Scenarios

The following scenarios are those for which volume-capacity (V/C) and corresponding LOS calculations have been performed at the key intersections for Existing and Year 2025 traffic conditions:

- A. Existing Traffic Conditions,
- B. Existing With Ambient Growth (Year 2025) Traffic Conditions¹,
- C. Existing With Ambient Growth (Year 2025) With Project Traffic Conditions,
- D. Scenario (C) With Recommended Improvements, if any.

¹ It should be noted that per the request of the City of Torrance the near-term assessment (E+A) also includes the future development to the north of the site consisting of 183-unit senior independent living facility (i.e. Del Amo Senior Village) to fully assess the impact of the Project with development of the adjacent property.



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SOURCE: GOOGLE

KEY




-  = STUDY INTERSECTION
-  = PROJECT SITE

FIGURE 1-1

VICINITY MAP

DEL AMO CIRCLE DRIVE APARTMENTS, TORRANCE

**LINSCOTT
LAW &
GREENSPAN**
engineers



NO SCALE

2.0 PROJECT DESCRIPTION AND LOCATION

The Project site is a 2.83±-acre parcel of land that is located north of Carson Street, east of Del Amo Circle W. within the Del Amo Financial Center in the City of Torrance, California. The subject property is currently developed with surface parking lot. Access to the Project site is now provided by a full access driveway on Carson Street and a full access driveway on Del Amo Circle. *Figure 2-1* presents existing aerial photograph of the Project site.

The proposed Project includes the development of up to 200 residential apartment units with a total of 440 parking spaces, within a 234,928 square-foot (SF) five-story apartment podium with consisting of 35 studio units, 66 one-bedroom units, 30 one-bedroom + den units and 69 two-bedroom units “wrapped” around a 169,946 SF six-level parking structure from street level and a partial subterranean level (total floor area of the parking structure to be determined). On-site facilities/amenities include a leasing office, a lounge/lobby, co-working space, mail/lounge, pool/spa, and a fitness center for residents, and courtyards. *Figure 2-2* presents the Project Site Plan prepared by Architect Orange, whereas *Figure 2-3* presents the Project Conceptual Landscape Plan prepared by MJS Landscape Architecture.

Vehicular access would be provided via one (1) full access unsignalized driveway located on Carson Street, which now serves the Del Amo Financial Center, and one (1) full access “All-Way Stop” unsignalized driveways on Del Amo Circle which will also serve as access to the future planned residential development located on an adjacent parcel directly to the north.

The Project is expected to be completed in the next several years or so by Year 2024 but is dependent on several factors, including the timing of Project approval. Project funding, market conditions and/or the current COVID-19 environment which could delay Project completion. Due the current COVID-19 pandemic, the Project, like most other proposed development, have experienced delays. As such, subject to confirmation by the Project Applicant, Year 2025 will be utilized to assess the Project’s potential opening year (full buildout/occupancy) traffic impacts within a near-term traffic setting.

2.1 Pedestrian Circulation

Pedestrian circulation for the proposed Project would be provided via existing public sidewalks along Del Amo Circle, Carson Street and Hawthorne Boulevard within the vicinity of the Project. The existing sidewalk system within the Project vicinity provides direct connectivity to the existing development located along major thoroughfares. Pedestrian access for the Project will be provided via building entries/exits located on Del Amo Circle and Carson Street.



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KEY


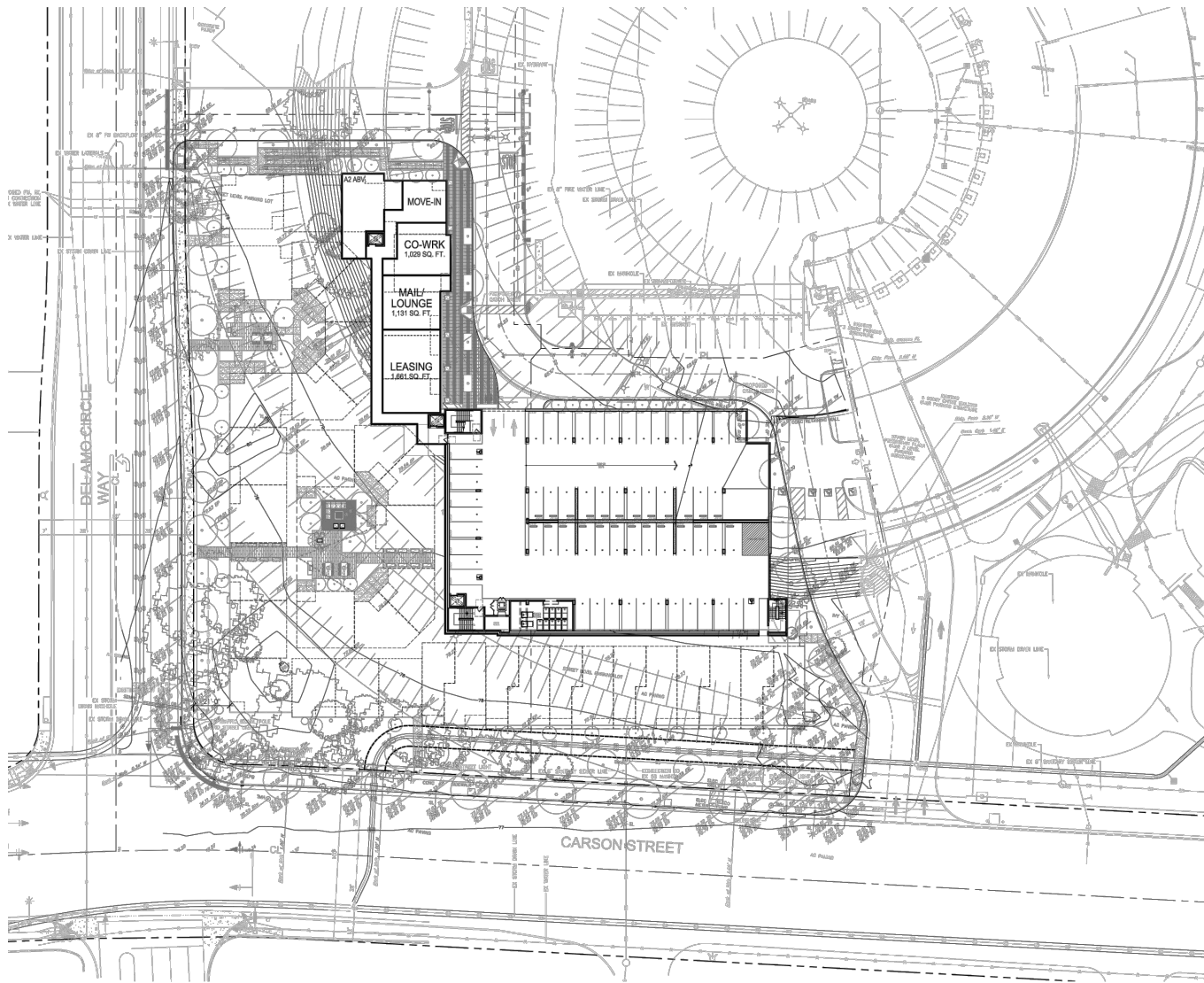
 = PROJECT SITE

FIGURE 2-1

EXISTING SITE

DEL AMO CIRCLE DRIVE APARTMENTS, TORRANCE

engineers



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SOURCE: AO ARCHITECTS

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GREENSPAN
engineers



NO SCALE

FIGURE 2-2

PROPOSED SITE PLAN
DEL AMO CIRCLE DRIVE APARTMENTS, TORRANCE



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SOURCE: MJS LANDCAPE ARCHITECTURE

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FIGURE 2-3

PROJECT CONCEPTUAL LANDSCAPE PLAN
DEL AMO CIRCLE DRIVE APARTMENTS, TORRANCE

3.0 ANALYSIS CONDITIONS AND METHODOLOGY

3.1 Existing Street System

The principal local network of streets serving the proposed Project is Anza Avenue, Hawthorne Boulevard, Madrona Avenue, Sepulveda Boulevard, Carson Street, Fashion Way, Torrance Boulevard. The following discussion provides a brief synopsis of these key area roadways. The descriptions are based on an inventory of existing roadway conditions.

Anza Avenue is a north-south, four-lane, divided roadway located to the west of the Project site. The posted speed limit on Anza Avenue is 35 miles per hour (mph). On-street parking is generally not permitted along either side of the roadway within the vicinity of the Project site. The City of Torrance Circulation Element designates Anza Avenue as a Minor Arterial. The study intersections of Anza Avenue at Torrance Boulevard, Carson Street, and Sepulveda Boulevard are controlled by a traffic signal.

Hawthorne Boulevard is a north-south, eight-lane, divided roadway located to the west of the Project site. The posted speed limit on Hawthorne Boulevard is 40 mph. On-street parking is generally not permitted along either side of the roadway within the vicinity of the Project site. The City of Torrance Circulation Element designates Hawthorne Boulevard as a Principal Arterial. The study intersections of Hawthorne Boulevard at Torrance Boulevard, Fashion Way, Carson Street, and Sepulveda Boulevard are controlled by a traffic signal.

Madrona Avenue is a north-south, four-lane divided roadway south of Plaza del Amo, six-lane, divided roadway north of Plaza del Amo and is located east to the Project site. The posted speed limit on Madrona Avenue is 40 mph between Del Amo Boulevard and Torrance Boulevard, and 35 mph south of Torrance Boulevard. On-street parking is generally not permitted along either side of the roadway within the vicinity of the Project. The City of Torrance Circulation Element designates Madrona Avenue as a Major Arterial. The study intersections of Madrona Avenue at Torrance Boulevard and Carson Street are controlled by a traffic signal.

Sepulveda Boulevard is an east-west, four-lane divided roadway west of Anza Avenue, and a six-lane divided roadway east of Anza Avenue located south of the Project site. The posted speed limit on Sepulveda Boulevard is 40 mph west of Madrona Avenue and 45 mph east of Madrona Avenue. On-street parking is generally not permitted along either side of the roadway within the vicinity of the Project. The City of Torrance Circulation Element designates Sepulveda Boulevard as a Major Arterial.

Carson Street is an east-west, two-lane divided roadway west of Anza Avenue, four-lane divided roadway between Anza Avenue and Del Amo Circle West, four-lane divided roadway between Del Amo Circle West and Hawthorne Boulevard, six-lane divided between Hawthorne Boulevard and Madrona Avenue, and a four-lane divided roadway east of Madrona Avenue. Carson Street borders the Project site to the south. The posted speed limit on Carson Street is 35 mph. On-street parking is generally not permitted along either side of the roadway within the vicinity of the Project, except for west of Anza Avenue where parking is permitted only on the eastbound direction of the roadway.

The City of Torrance Circulation Element designates Carson Street as a Minor Arterial between Palos Verdes Boulevard and Hawthorne Boulevard and a Major Arterial east of Hawthorne Boulevard.

Fashion Way is an east-west, four-lane, divided roadway that is located north of the project site. The prima facie speed limit on Fashion Way is 25 mph. On-street parking is generally not permitted on either side of the roadway.

Torrance Boulevard is an east-west, six-lane divided roadway between Anza Avenue and Madrona Avenue, and a four-lane divided roadway east of Madrona Avenue located to the north of the Project site. The posted speed limit on Torrance Boulevard is 40 mph between Anza Avenue and Madrona Avenue and 35 mph east of Madrona Avenue. On-street parking is generally not permitted on either side of the roadway within the vicinity of the Project. The City of Torrance Circulation Element designates Torrance Boulevard as a Major Arterial.

Figure 3-1 presents an inventory of the existing roadway conditions for the arterials and intersections evaluated in this report. This figure identifies the number of travel lanes for key arterials, as well as intersection configurations and controls for the key area intersections neighboring the Project site.

3.2 Existing Traffic Volumes

Manual vehicular turning movement counts were conducted at the eighteen (18) key study locations during the weekday morning and evening peak commuter periods to determine the existing AM and PM peak hour traffic volumes. AM and PM peak hour traffic counts at the eighteen (18) key study intersections were collected by Counts Unlimited in March/April 2022.

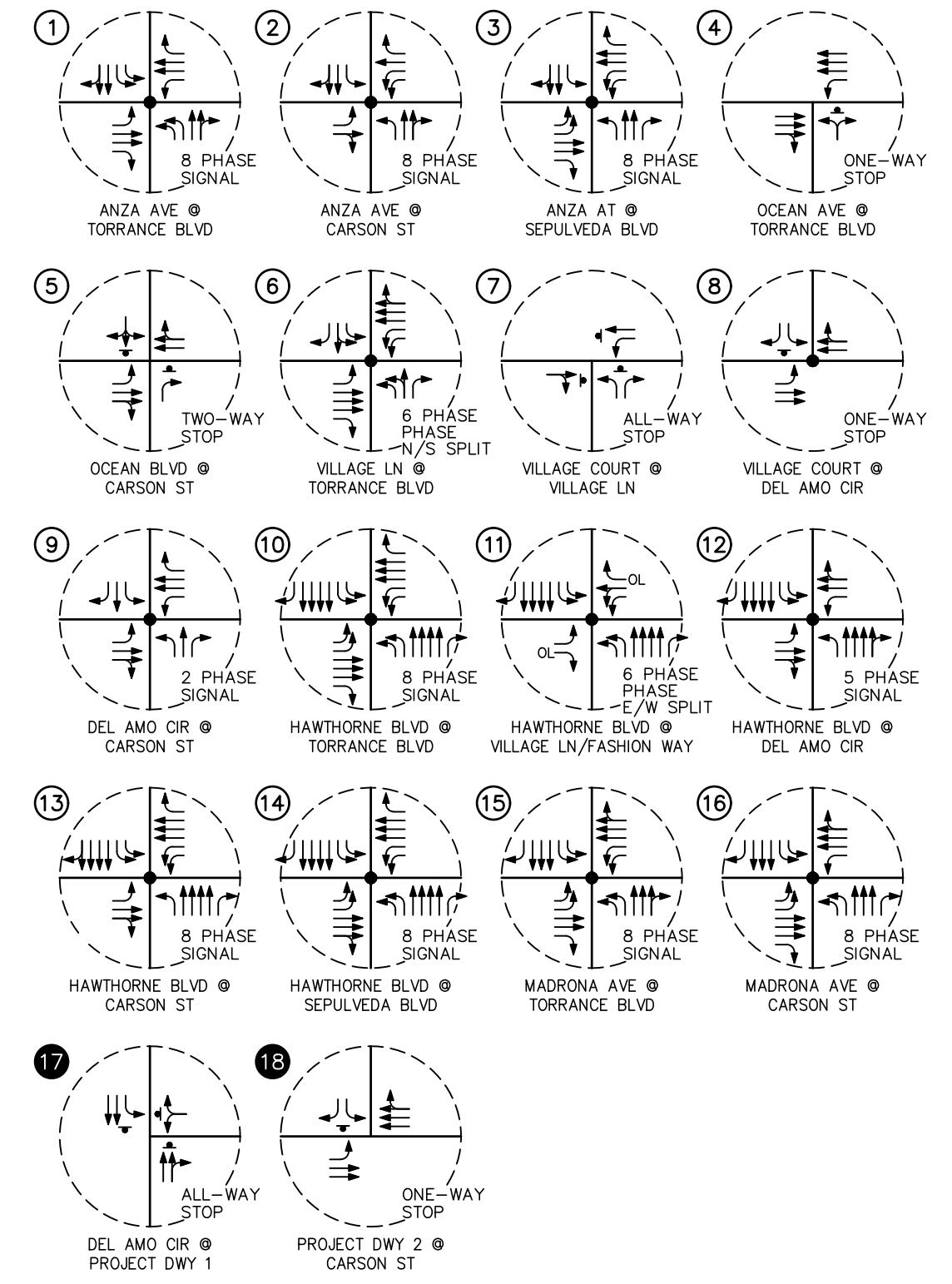
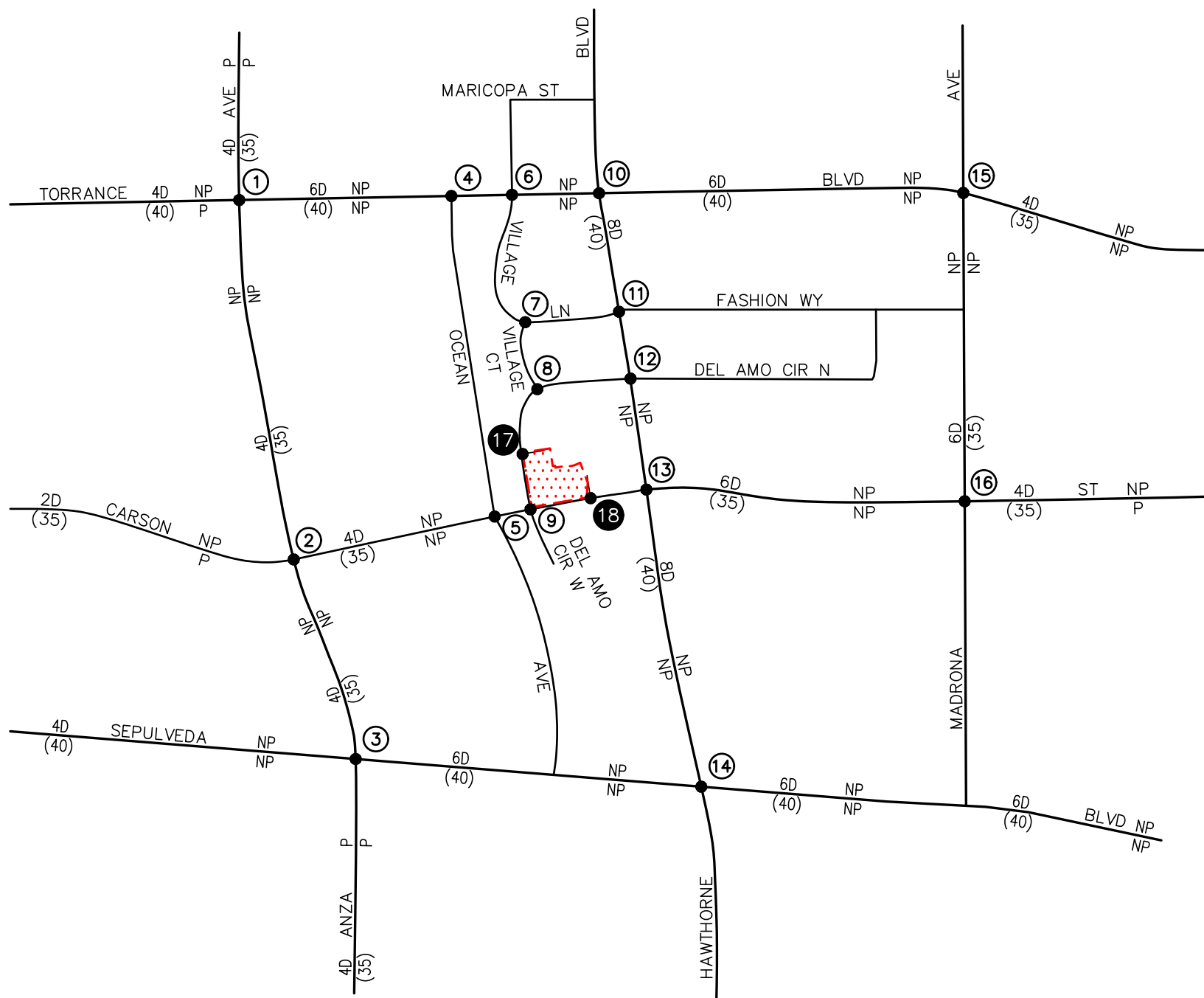
Figures 3-2 and *3-3* depict the existing AM and PM peak hour traffic volumes at the eighteen (18) key study intersections, respectively. *Appendix B* contains the detailed manual turning movement count sheets for the eighteen (18) key study intersections evaluated in this report.

3.3 Existing Public Transit

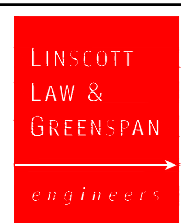
Torrance Transit, as illustrates in *Figures 3-4* operates Lines 1, 2, 3, 4X, 6, 7, 8, and 9 within the study area. The Metro operates Line 344 within the study area. Gardena Transit operates Line 3 within the study area. Bus stops are generally provided along Hawthorne Boulevard, Madrona Avenue, and Carson Street within the vicinity of the Project site.

Torrance Transit Line 1:

- The route extends from Del Amo Fashion Center to Harbor Freeway Station.
- The route traverses the study area on Torrance Boulevard, Hawthorne Boulevard and Carson Street, with the closest bus stop located in the southeast corner of Madrona Avenue/Torrance Boulevard.
- During the AM and PM peak hours, headways are approximately one bus in each direction every hour.

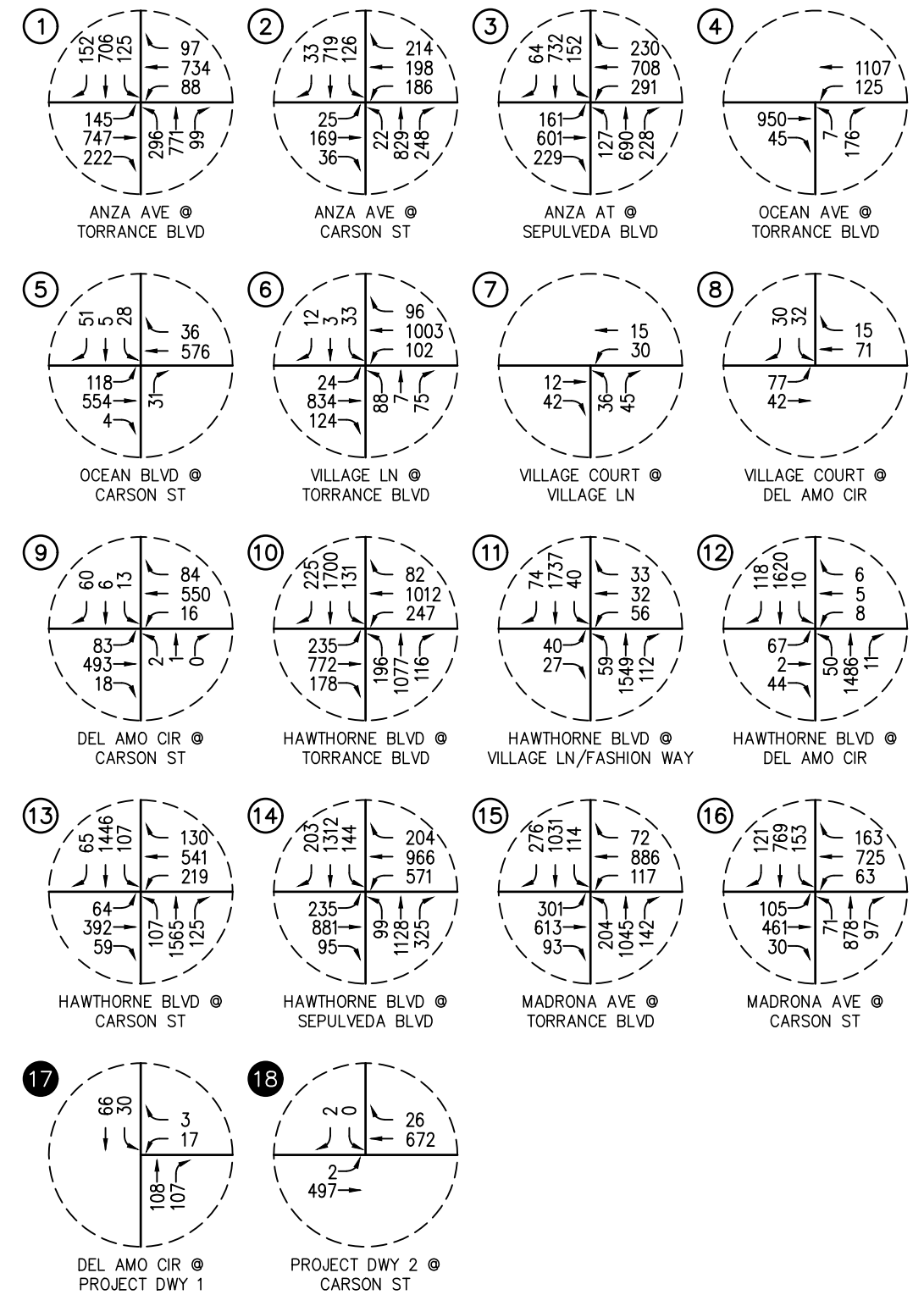
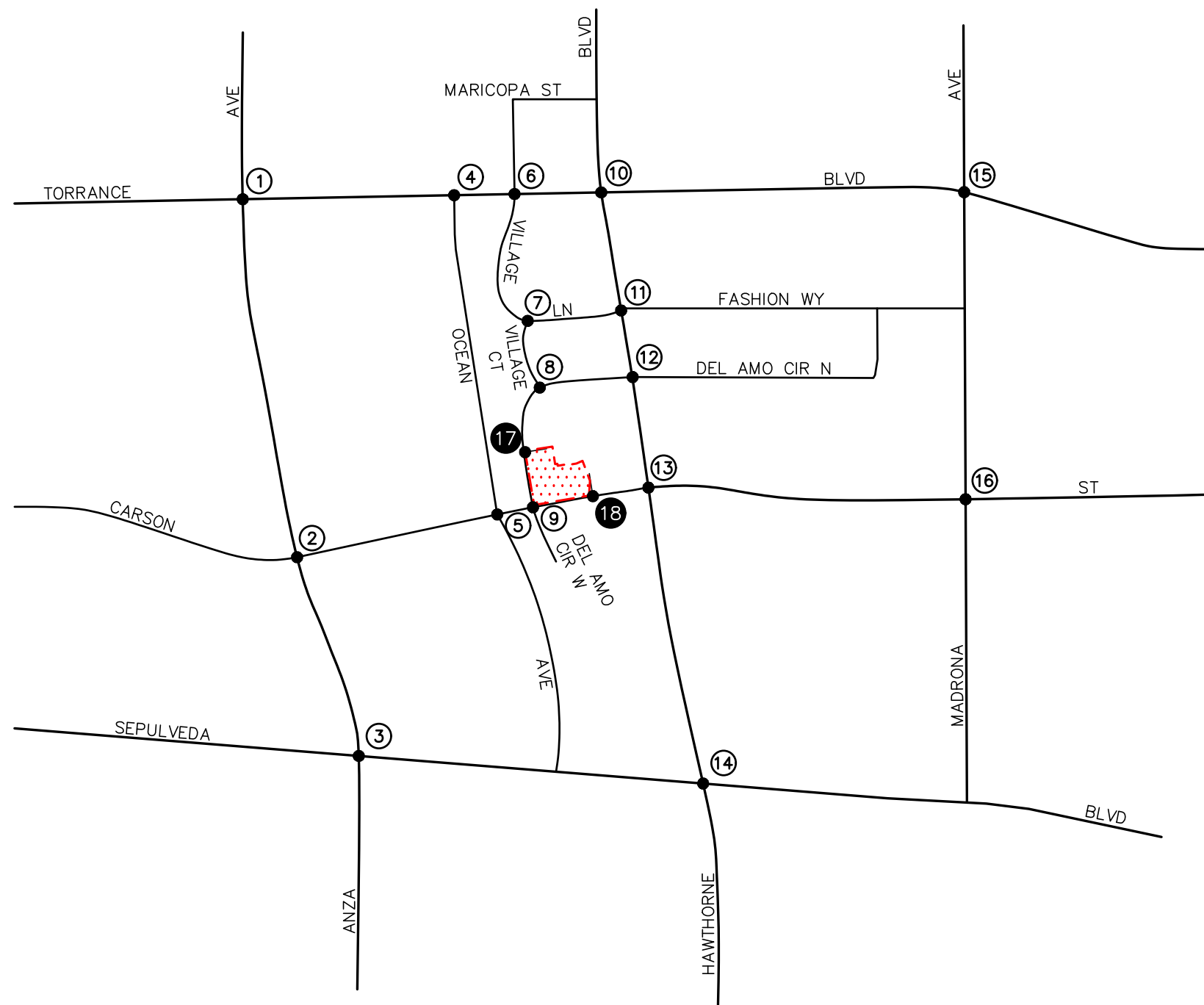


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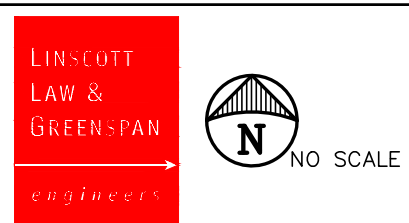


- KEY**
- ← = APPROACH LANE ASSIGNMENT
 - = TRAFFIC SIGNAL, ▼ = STOP SIGN
 - P = PARKING, NP = NO PARKING
 - U = UNDIVIDED, D = DIVIDED
 - 2 = NUMBER OF TRAVEL LANES
 - (XX) = POSTED SPEED LIMIT (MPH)
 - OL = OVERLAP
 - [Red Hatched Box] = PROJECT SITE

FIGURE 3-1
EXISTING ROADWAY CONDITIONS AND INTERSECTION CONTROLS
 DEL AMO CIRCLE DRIVE APARTMENTS, TORRANCE

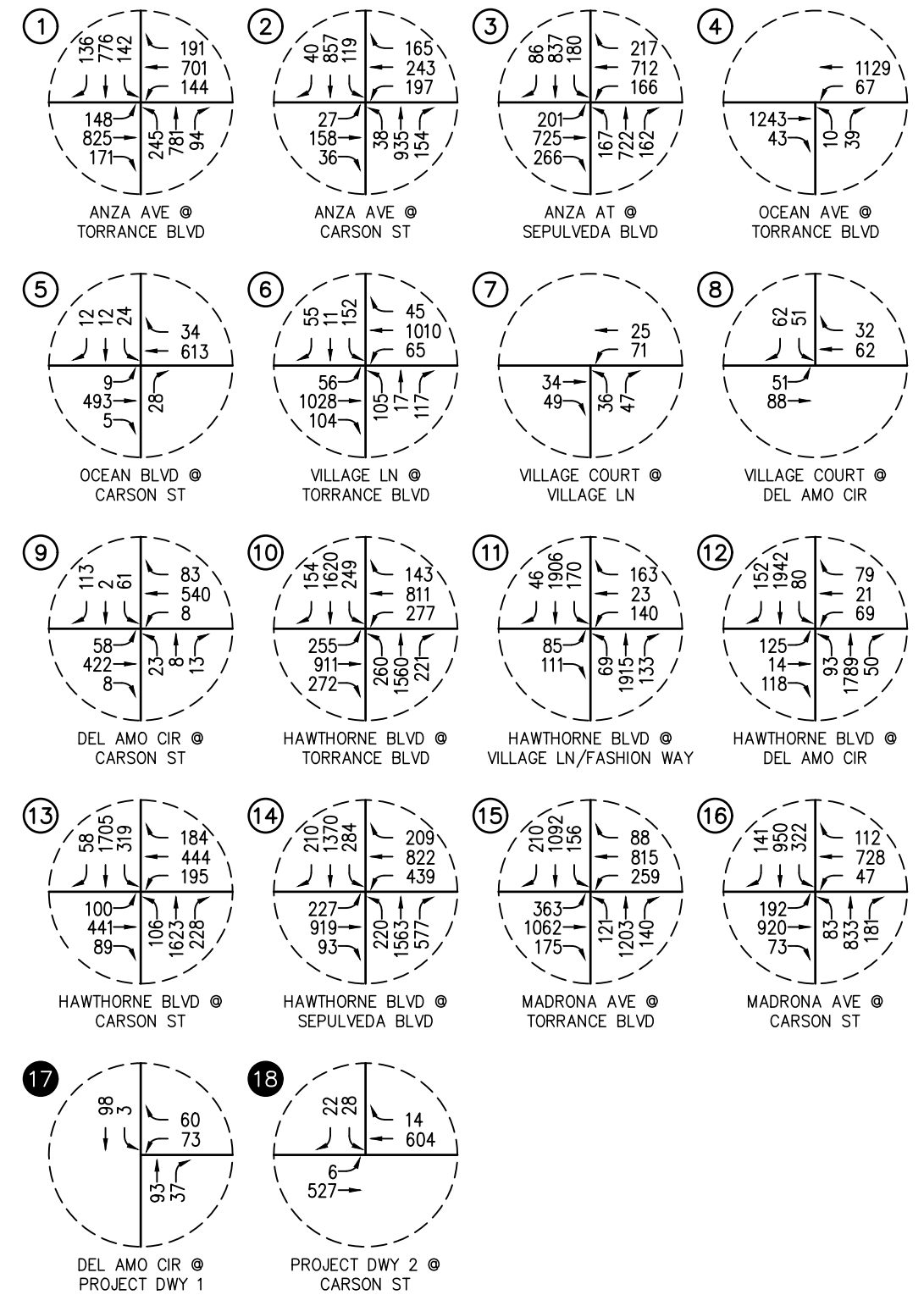
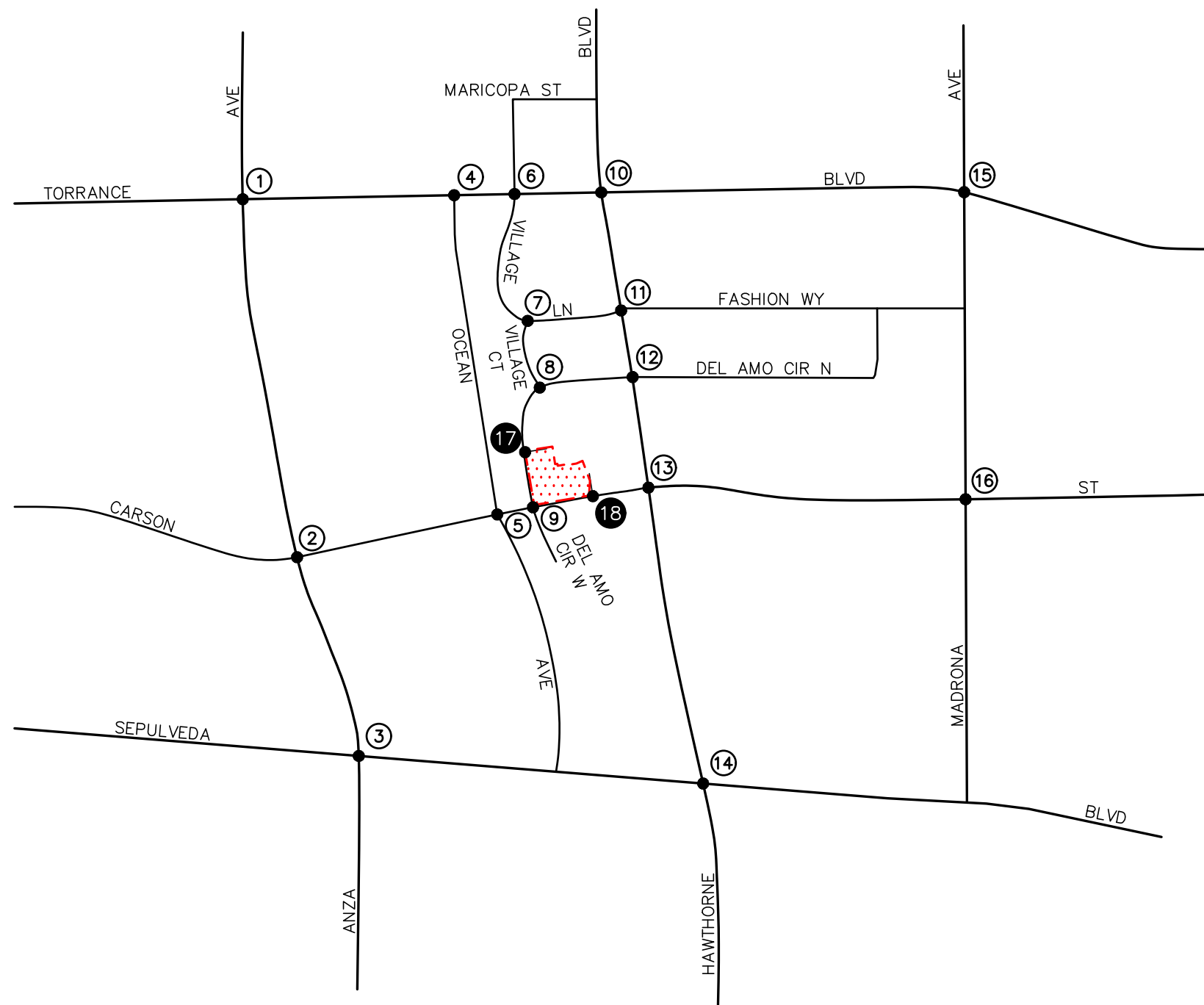


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KEY
 # = STUDY INTERSECTION
 [Red Hatched Box] = PROJECT SITE

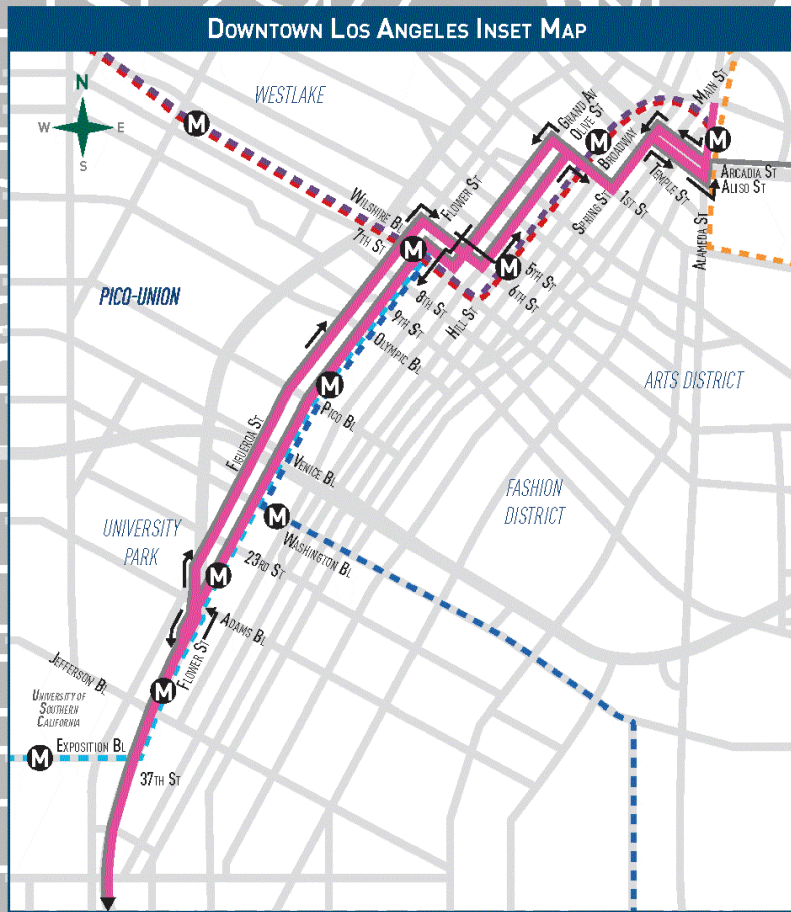
FIGURE 3-2
EXISTING AM PEAK HOUR TRAFFIC VOLUMES
 DEL AMO CIRCLE DRIVE APARTMENTS, TORRANCE



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SYSTEM MAP KEY
Temporary Schedule

- 1** TORRANCE - HARBOR FWY STATION
WEEKDAYS 6A-9P, SATURDAYS 6A-9P, SUNDAYS 6A-8P
- 2** TORRANCE - HARBOR FWY STATION
WEEKDAYS 6A-8P
- 3** REDONDO BEACH - LONG BEACH
WEEKDAYS 5A-9P, SATURDAYS 5A-9P, SUNDAYS 5A-9P
- 4X** TORRANCE - DOWNTOWN LOS ANGELES
WEEKDAYS 5A-11A AND 1P-8P
- 5** TORRANCE - CRENSHAW STATION
WEEKDAYS 5A-9P
- 6** TORRANCE - ARTESIA STATION
WEEKDAYS 5A-7P
- 7** REDONDO BEACH - CARSON
WEEKDAYS 6A-9P
- 8** TORRANCE - LAX TRANSIT CENTER
WEEKDAYS 4A-10P, SATURDAYS 5A-9P, SUNDAYS 6A-8P
- 9** TORRANCE - CARSON
WEEKDAYS 5A-9P
- 10** TORRANCE - CRENSHAW STATION
WEEKDAYS 6A-9P
- 13** REDONDO BEACH - ARTESIA STATION
WEEKDAYS 5A-9P, SATURDAYS 6A-9P, SUNDAYS 6A-9P



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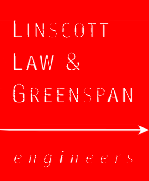


FIGURE 3-4

TRANSIT ROUTE MAP

DEL AMO CIRCLE DRIVE APARTMENTS, TORRANCE

Torrance Transit Line 2:

- The route extends from Del Amo Fashion Center to Harbor Freeway Station.
- The route traverses the study area on Madrona Avenue, Carson Street, Torrance Boulevard, Anza Avenue, and Artesia Boulevard, with the closest bus stop located in the northeast corner of Madrona Avenue/Carson Street.
- During the AM and PM peak hours, headways are approximately one bus in each direction every hour.

Torrance Transit Line 3:

- The route extends from Redondo Beach Pier to Downtown Long Beach.
- The route traverses the study area on Carson Street, Hawthorne Boulevard and Torrance Boulevard, with the closest bus stop located in the northeast corner of Madrona Avenue/Carson Street.
- During the AM and PM peak hours, headways are approximately one bus in each direction every 30 minutes.

Torrance Transit Line 4X:

- The route extends from Hawthorne Boulevard/Pacific Coast Highway to Union Station in Los Angeles.
- The route traverses the study area on Hawthorne Boulevard and Torrance Boulevard, with the closest bus stop located in the southeast corner of Madrona Avenue/Torrance Boulevard.
- During the AM and PM peak hours, headways are approximately one bus in each direction every 30 minutes. No midday service is provided.

Torrance Transit Line 6:

- The route extends from Del Amo Fashion Center to Artesia Station.
- The route traverses the study area on Carson Street, Hawthorne Boulevard, Madrona Avenue, Prairie Avenue, and West 190th Street, with the closest bus stop located in the northeast corner of Madrona Avenue/Carson Street.
- During the AM and PM peak hours, headways are approximately one bus in each direction every hour.

Torrance Transit Line 7:

- The route extends from Redondo Beach Pier to Sepulveda Boulevard/Avalon Boulevard.
- The route traverses the study area on Sepulveda Boulevard, Madrona Avenue, Carson Street, and Hawthorne Boulevard, with the closest bus stop located in the southwest corner of Madrona Avenue/Carson Street.
- During the AM and PM peak hours, headways are approximately one bus in each direction every hour.

Torrance Transit Line 8:

- The route extends from Hawthorne Boulevard/Pacific Coast Highway to the LAX transit center.
- The route traverses the study area on Hawthorne Boulevard and Artesia Boulevard. The closest bus stop is located in the northeast corner of Hawthorne Boulevard/Carson Street.
- During the AM and PM peak hours, headways are approximately one bus in each direction every hour.

Torrance Transit Line 9:

- The route extends from Del Amo Mall to Sepulveda Boulevard/Avalon Boulevard.
- The route traverses the study area on Carson Street, Anza Avenue, Madrona Avenue, and Del Amo Circle East, with the closest bus stops located in the southwest corner of Madrona Avenue/Carson Street.
- During the AM and PM peak hours, headways are approximately one bus in each direction every hour.

Metro Line 344:

- The route extends from the Harbor Gateway Transit Center to the Terranea Resort in Palos Verdes.
- The route traverses the study area on Hawthorne Boulevard, with the closest bus stop located in the southwest corner of Hawthorne Boulevard/Carson Street.
- During the AM and PM peak hours, headways are approximately one bus in each direction every 30 minutes.

Gardena Transit Line 3:

- The route extends from Alameda Street/Compton Boulevard to Torrance Boulevard/Prospect Avenue.
- The route traverses the study area on Hawthorne Boulevard and Torrance Boulevard, with the closest bus stop located in the northeast corner of Hawthorne Boulevard/Torrance Boulevard.
- During the AM and PM peak hours, headways are approximately one bus in each direction every 30 minutes.

3.4 Level of Service (LOS) Analysis Methodologies

AM and PM peak hour operating conditions for the key signalized study intersections were evaluated using the *Intersection Capacity Utilization (ICU) Methodology* for signalized intersections. Any unsignalized key study intersections were evaluated using the methodology outlined in the *Highway Capacity Manual (HCM)*.

3.4.1 Intersection Capacity Utilization (ICU) Method of Analysis (Signalized Intersections)

In conformance with City of Torrance requirements, existing AM and PM peak hour operating conditions for the key signalized study intersections were evaluated using the *Intersection Capacity Utilization (ICU)* method of analysis. The ICU technique is intended for signalized intersection analysis and estimates the volume to capacity (V/C) relationship for an intersection based on the individual V/C ratios for key conflicting traffic movements. The ICU numerical value represents the percent signal (green) time and thus capacity, required by existing and/or future traffic. It should be noted that the ICU methodology assumes uniform traffic distribution per intersection approach lane and optimal signal timing.

The ICU calculations use a lane capacity of 1,600 vehicles per hour (vph) for left-turn, through and right-turn lanes and dual left-turn capacity of 2,880 vph. A clearance adjustment factor of 0.10 was added to each Level of Service calculation.

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 3-1*. 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.

3.4.2 Highway Capacity Manual (HCM) Method of Analysis (Unsignalized Intersections)

The HCM unsignalized methodology for stop-controlled intersections was utilized for the analysis of the unsignalized intersections. LOS criteria for unsignalized intersections differ from LOS criteria for signalized intersections as signalized intersections are designed for heavier traffic and therefore a greater delay. Unsignalized intersections are also associated with more uncertainty for users, as delays are less predictable, which can reduce users' delay tolerance.

Two-way stop-controlled intersections are comprised of a major street, which is uncontrolled, and a minor street, which is controlled by stop signs. Level of service for a two-way stop-controlled intersection is determined by the computed or measured control delay. The control delay by movement, by approach, and for the intersection as a whole is estimated by the computed capacity for each movement. LOS is determined for each minor-street movement (or shared movement) as well as major-street left turns. The worst side street approach delay is reported. LOS is not defined for the intersection as a whole or for major-street approaches, as it is assumed that major-street through vehicles experience zero delay. The HCM control delay value range for two-way stop-controlled intersections is shown in *Table 3-2*.

All-way stop-controlled intersections require every vehicle to stop at the intersection before proceeding. Because each driver must stop, the decision to proceed into the intersection is a function of traffic conditions on the other approaches. The time between subsequent vehicle departures depends on the degree of conflict that results between the vehicles and vehicles on the other approaches. This methodology determines the control delay for each lane on the approach, computes a weighted average for the whole approach, and computes a weighted average for the intersection as

a whole. Level of service (LOS) at the approach and intersection levels is based solely on control delay. The HCM control delay value range for all-way stop-controlled intersections is shown in *Table 3-2*.

3.5 Level of Service Criteria and Thresholds

The need for potential Project-related improvements due to the added Project traffic volumes generated by the proposed Project during the AM and PM peak hours was evaluated based on analysis of future operating conditions at the key study intersections, without, then with, the proposed Project using the *Intersection Capacity Utilization (ICU) Methodology* and the *Highway Capacity Manual (HCM) Methodology*. The previously discussed capacity analysis procedures were utilized to investigate the future volume-to-capacity relationships, delay and service level characteristics at each key study intersection. Each key study intersection was then evaluated using the following LOS criteria. It is noted that according to the City of Torrance, LOS D or better is the City’s target for intersection operation. The LOS D objective for the roadway network reflects the City’s desire to maintain a minimum acceptable condition during the morning and evening peak commute hours on all intersections within the City.

3.5.1 Signalized Intersections Criteria

- For signalized intersections, Project-related improvements are needed if the project related increase in the volume to capacity (V/C) ratio equals or exceeds the threshold shown below:

| Level of Service (LOS) | Project-Related V/C Increase |
|------------------------|------------------------------|
| C | 0.04 or more |
| D | 0.02 or more |
| E/F | 0.01 or more |

Source: City of Torrance Traffic Circulation Analysis (TCA) Guidelines

As indicated above, the Project-related increase in ICU value that defines whether Project-related improvements are needed varies with LOS. At LOS C or LOS D, the threshold is an increase of 0.04 or greater or 0.02 or greater, respectively, in the ICU value. This is reduced to 0.01 or greater under LOS E and F.

3.5.2 Unsignalized Intersections Criteria

- For unsignalized intersections, Project-related improvements are needed if the project causes an intersection at LOS D or better to degrade to LOS E or F.

However, unsignalized intersection LOS is based on the control delay, but delay is only assessed for those traffic movements that are stopped or must yield to through traffic. Some movements, including cross traffic on the minor street or left turns onto the major street are acceptable with long delays, provided through traffic and right turns from a major street do not experience any delays at stopped intersections. When delay for cross traffic is severe

(LOS F), the intersection should be further evaluated for possible improvement with traffic signals. In some cases, this analysis determines that the delay is being experienced by a very low number of vehicles and traffic signals are not warranted. For this condition, the intersection does not satisfy the need for Project-related improvements, but measures to reduce delay may be considered, if appropriate. In other cases, the number of stopped vehicles is substantial and traffic signals may be justified as a circulation enhancement. Therefore, the following significance criteria for unsignalized intersections are used:

An unsignalized intersection requires Project-related improvements if the project causes an intersection at LOS D or better to degrade to LOS E or F, and the traffic signal warrant analysis determines that a signal is justified.

TABLE 3-1
LEVEL OF SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS (ICU METHODOLOGY)²

| Level of Service (LOS) | Intersection Capacity Utilization Value (ICU) | 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. |

² Source: *Transportation Research Board Circular 212 - Interim Materials on Highway Capacity.*

TABLE 3-2
LEVEL OF SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS (HCM METHODOLOGY)^{3,4}

| 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 |

³ Source: *Highway Capacity Manual 6*, Chapter 20: Two-Way Stop-Controlled Intersections. The LOS criteria apply to each lane on a given approach and to each approach on the minor street. LOS is not calculated for major-street approaches or for the intersection as a whole.

⁴ Source: *Highway Capacity Manual 6*, Chapter 21: All-Way Stop-Controlled Intersections. For approaches and intersection-wide assessment, LOS is defined solely by control delay.

4.0 TRAFFIC FORECASTING METHODOLOGY

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

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

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

With the forecasting process complete and Project traffic assignments developed, the impact of the Project is isolated by comparing operational (LOS) conditions at selected key intersections using expected future traffic volumes with and without forecast Project traffic. If necessary, the need for site-specific and/or cumulative local area traffic improvements can then be evaluated.

5.0 PROJECT TRAFFIC CHARACTERISTICS

5.1 Project Trip Generation Forecast

Traffic generation is expressed in vehicle trip ends, defined as one-way vehicular movements, either entering or exiting the generating land use. Generation factors and equations used in this analysis are based on information found in the 11th Edition of *Trip Generation*, published by the Institute of Transportation Engineers (ITE) [Washington, D.C., 2021].

Table 5-1 presents the trip generation forecast for the Project. The upper portion of *Table 5-1* summarizes the trip generation rates used in forecasting the vehicular trips generated by the proposed Project. As shown, ITE Land Use Code 221: Multifamily Housing Mid Rise Not Close to Rail Transit average trip rates were used.

A review of *Table 5-1* shows the trip generation forecast for the proposed Project. As shown, the proposed Project is forecast to generate 908 daily trips, with 74 trips (17 inbound, 57 outbound) produced in the AM peak hour, and 78 trips (48 inbound, 30 outbound) produced in the PM peak hour.

5.2 Project Trip Distribution and Assignment

The directional traffic distribution pattern for the proposed Project at the eighteen (18) study intersections is graphically presented in *Figure 5-1*. Project traffic volumes both entering and exiting the site have been distributed and assigned to the adjacent street system based on the following considerations:

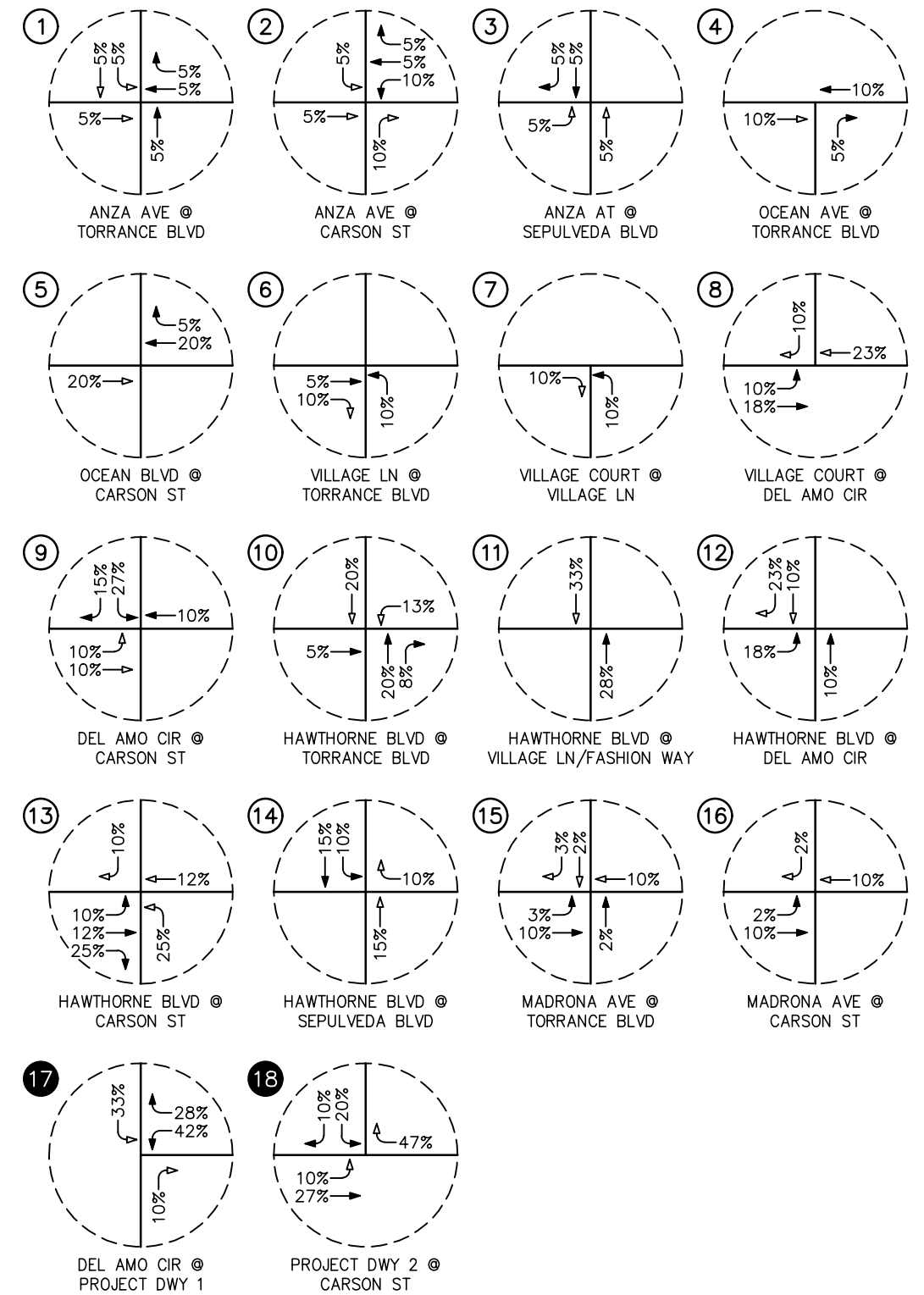
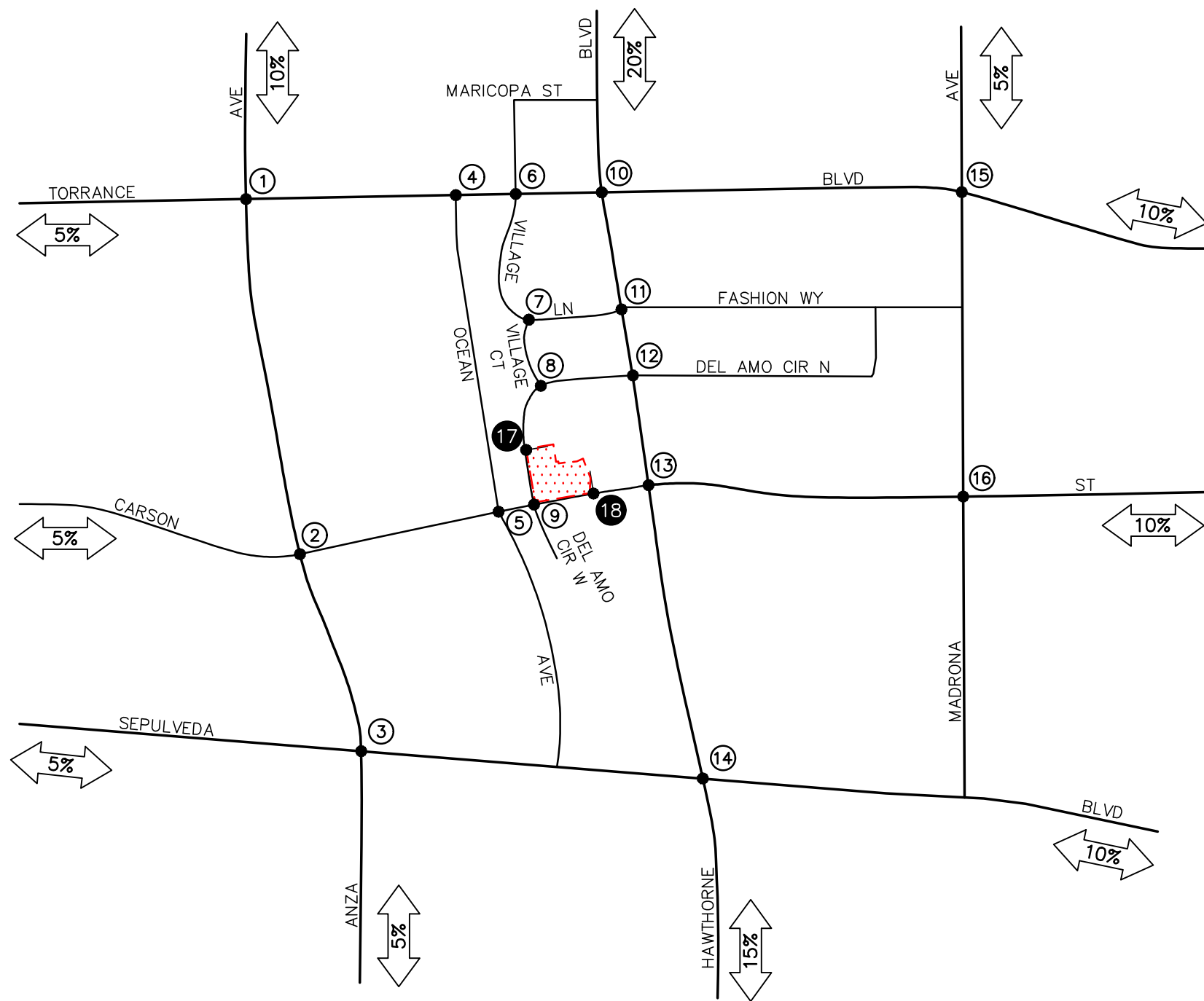
- Location of site access points in relation to the surrounding street system,
- the site's proximity to major traffic carriers and regional access routes,
- physical characteristics of the circulation system such as lane channelization and presence of traffic signals that affect travel patterns, and peak hour turn restrictions,
- presence of traffic congestion in the surrounding vicinity,
- location of the Project within the Del Amo Fashion Center Mall property,
- ingress/egress availability at the Project site, and
- input from City staff.

The anticipated AM and PM peak hour Project volumes associated with the proposed Project at the eighteen (18) study intersections are presented in *Figures 5-2* and *5-3*, respectively. The traffic volume assignments presented in *Figures 5-2* and *5-3* reflect the traffic distribution characteristics shown in *Figure 5-1* and the traffic generation forecast presented in *Table 5-1*.

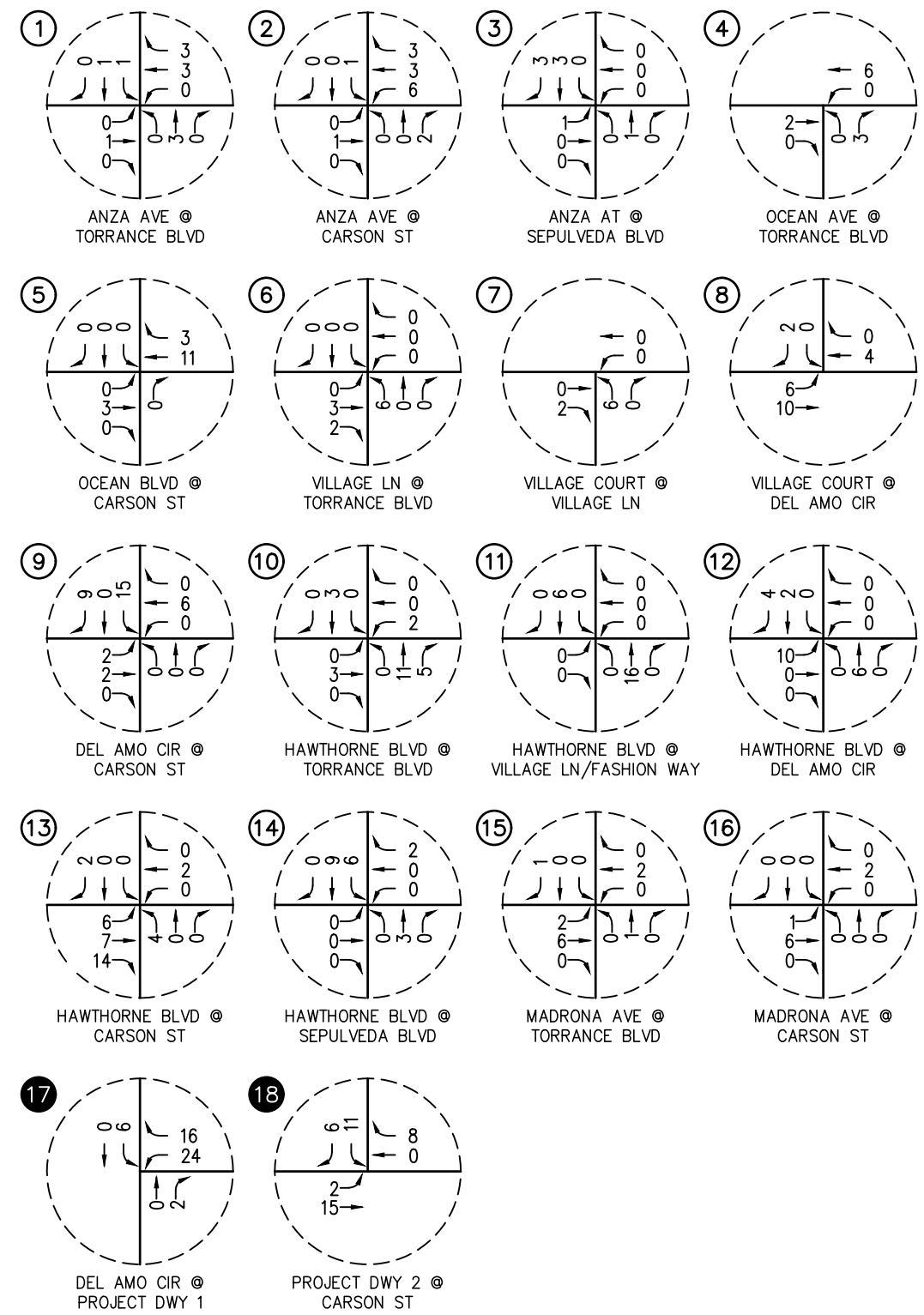
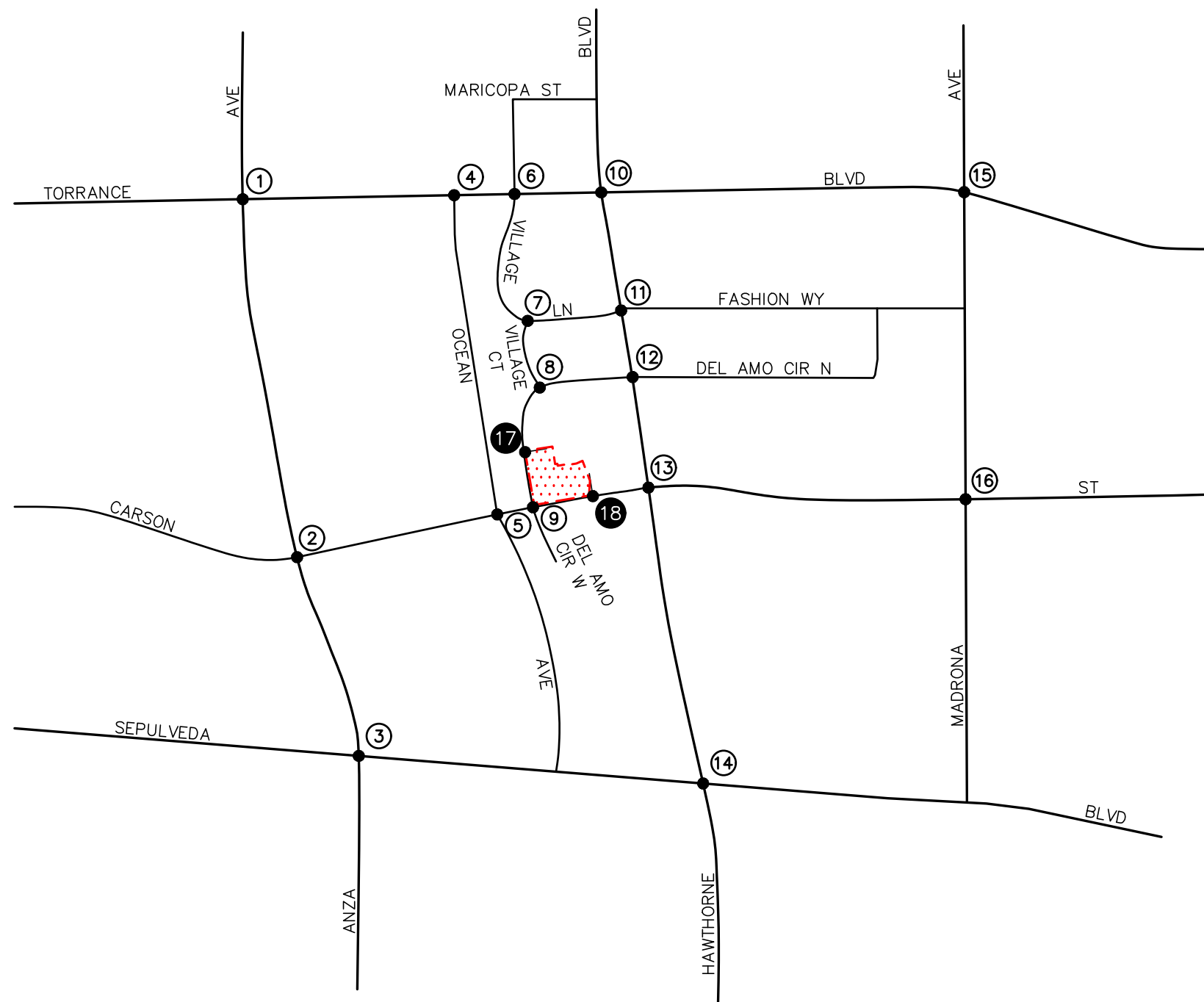
TABLE 5-1
PROJECT TRAFFIC GENERATION RATES AND FORECAST⁵

| Description | Daily 2-Way | AM Peak Hour | | | PM Peak Hour | | |
|---|----------------|--------------|------|-------|--------------|------|-------|
| | | Enter | Exit | Total | Enter | Exit | Total |
| <u>Proposed Trip Generation Rates:</u> | | | | | | | |
| <ul style="list-style-type: none"> ▪ ITE 221: Multifamily Housing Mid Rise Not Close to Rail Transit (TE/DU) | 4.54 | 23% | 77% | 0.37 | 61% | 39% | 0.39 |
| <u>Proposed Trip Generation Forecast:</u> | | | | | | | |
| <ul style="list-style-type: none"> ▪ Multifamily Housing Mid Rise (200 DU) | 908 | 17 | 57 | 74 | 48 | 30 | 78 |

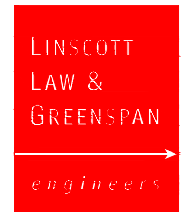
⁵ Source: *Trip Generation*, 11th Edition, Institute of Transportation Engineers (ITE), Washington, D.C. (2021).



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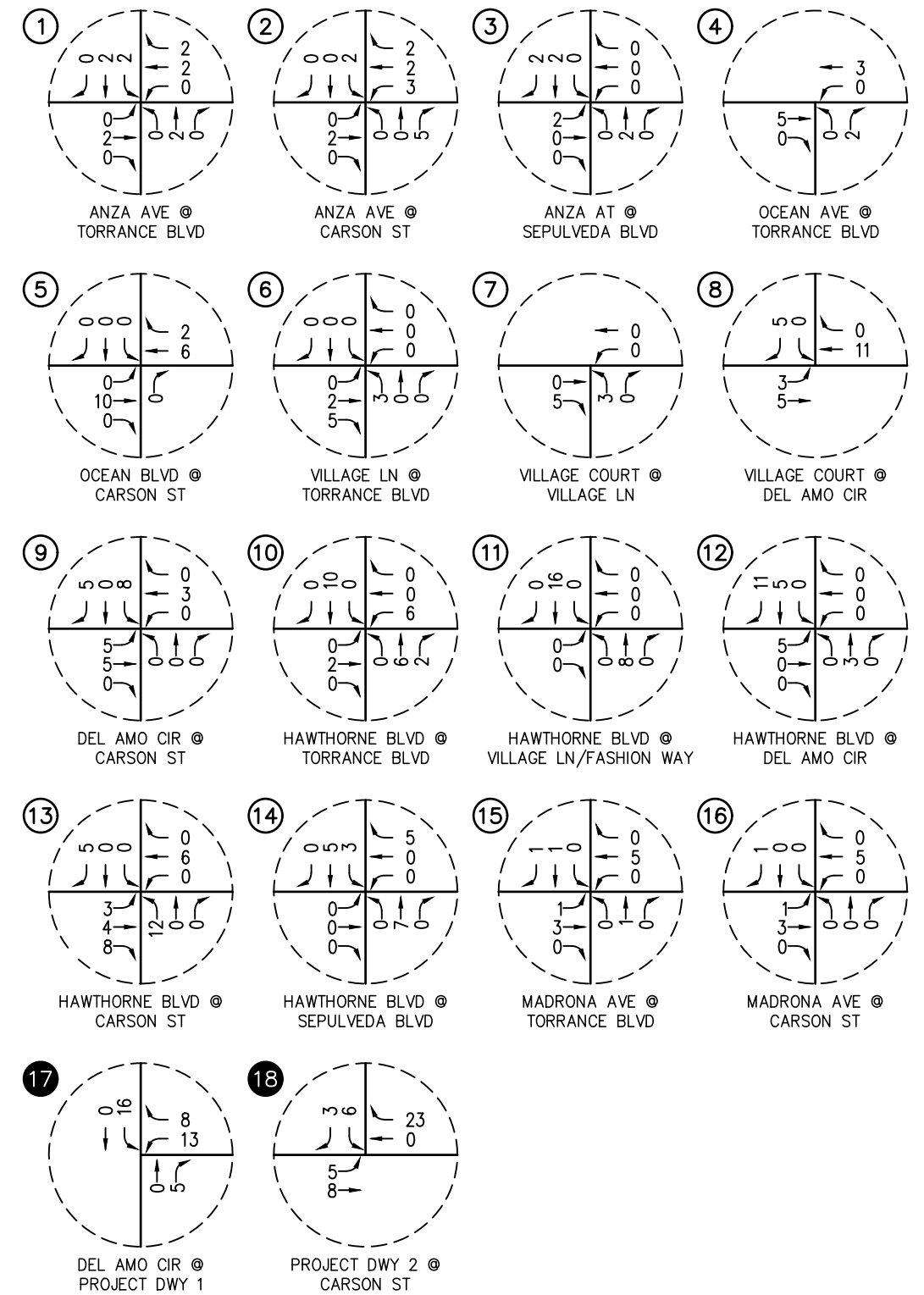
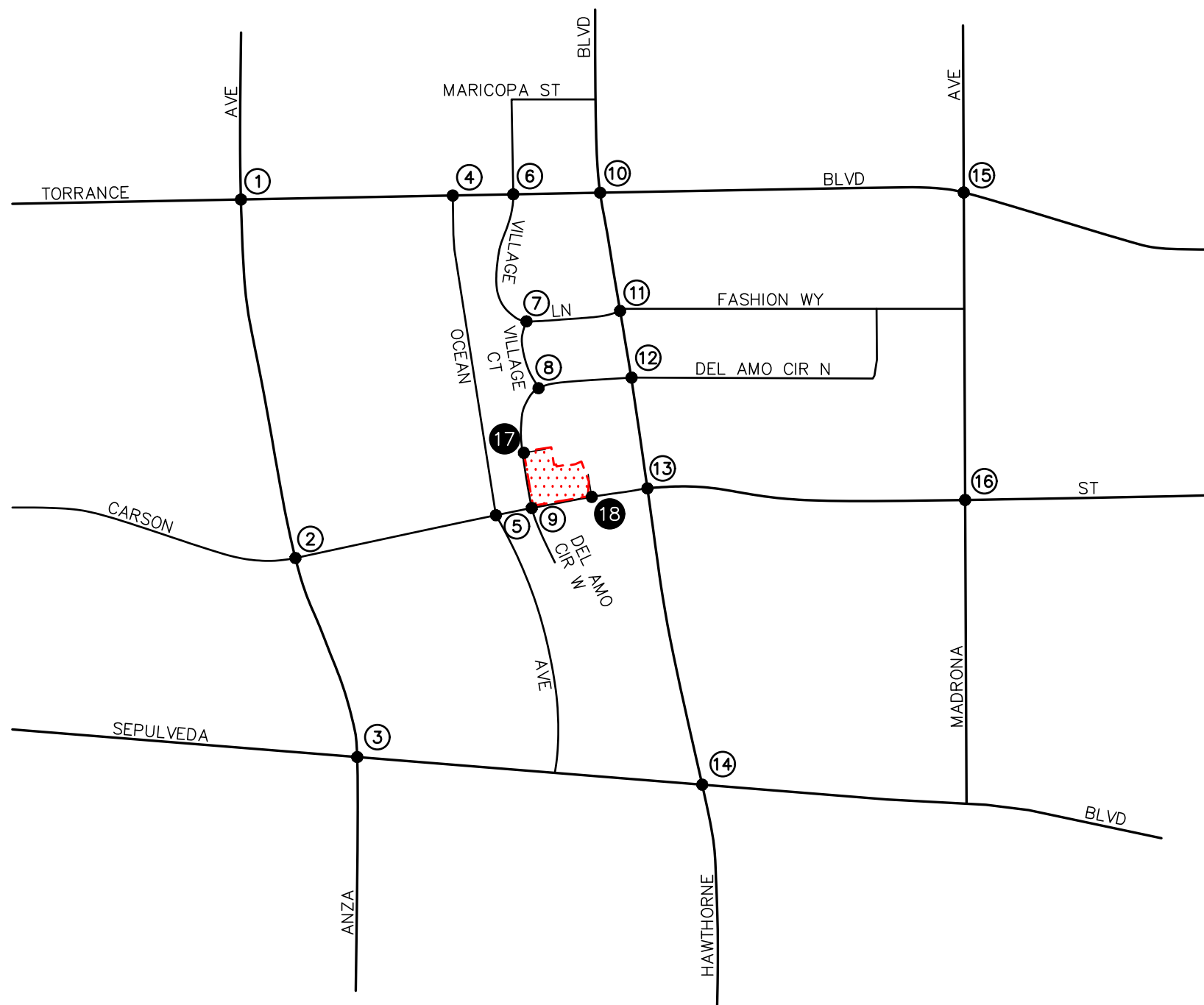
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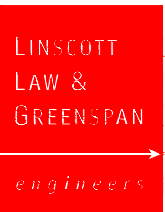
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 [Red Hatched Box] = PROJECT SITE

FIGURE 5-2

AM PEAK HOUR PROJECT TRAFFIC VOLUMES
 DEL AMO CIRCLE DRIVE APARTMENTS, TORRANCE



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KEY
 # = STUDY INTERSECTION
 [Red Hatched Box] = PROJECT SITE

FIGURE 5-3

PM PEAK HOUR PROJECT TRAFFIC VOLUMES
 DEL AMO CIRCLE DRIVE APARTMENTS, TORRANCE

6.0 FUTURE TRAFFIC CONDITIONS

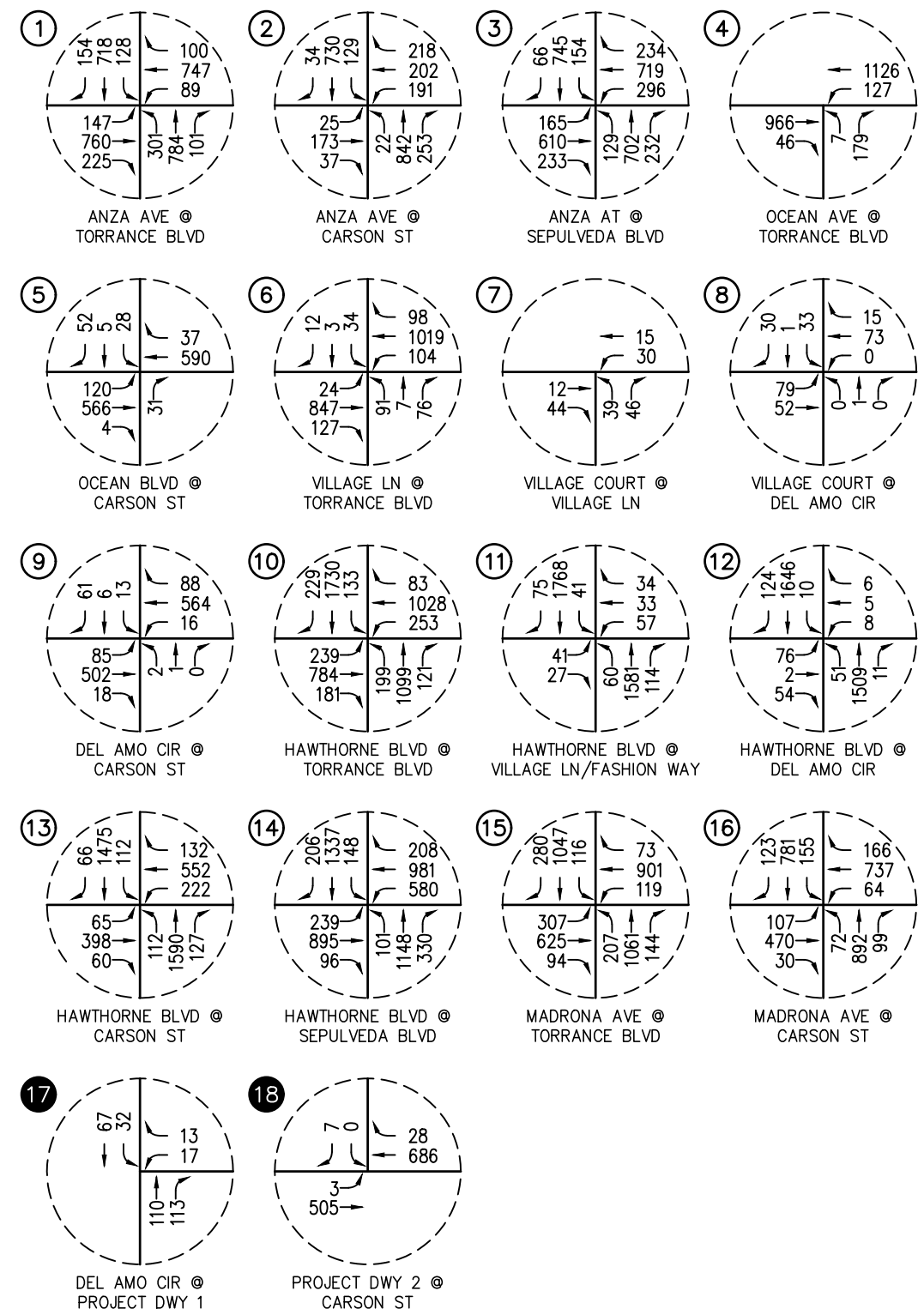
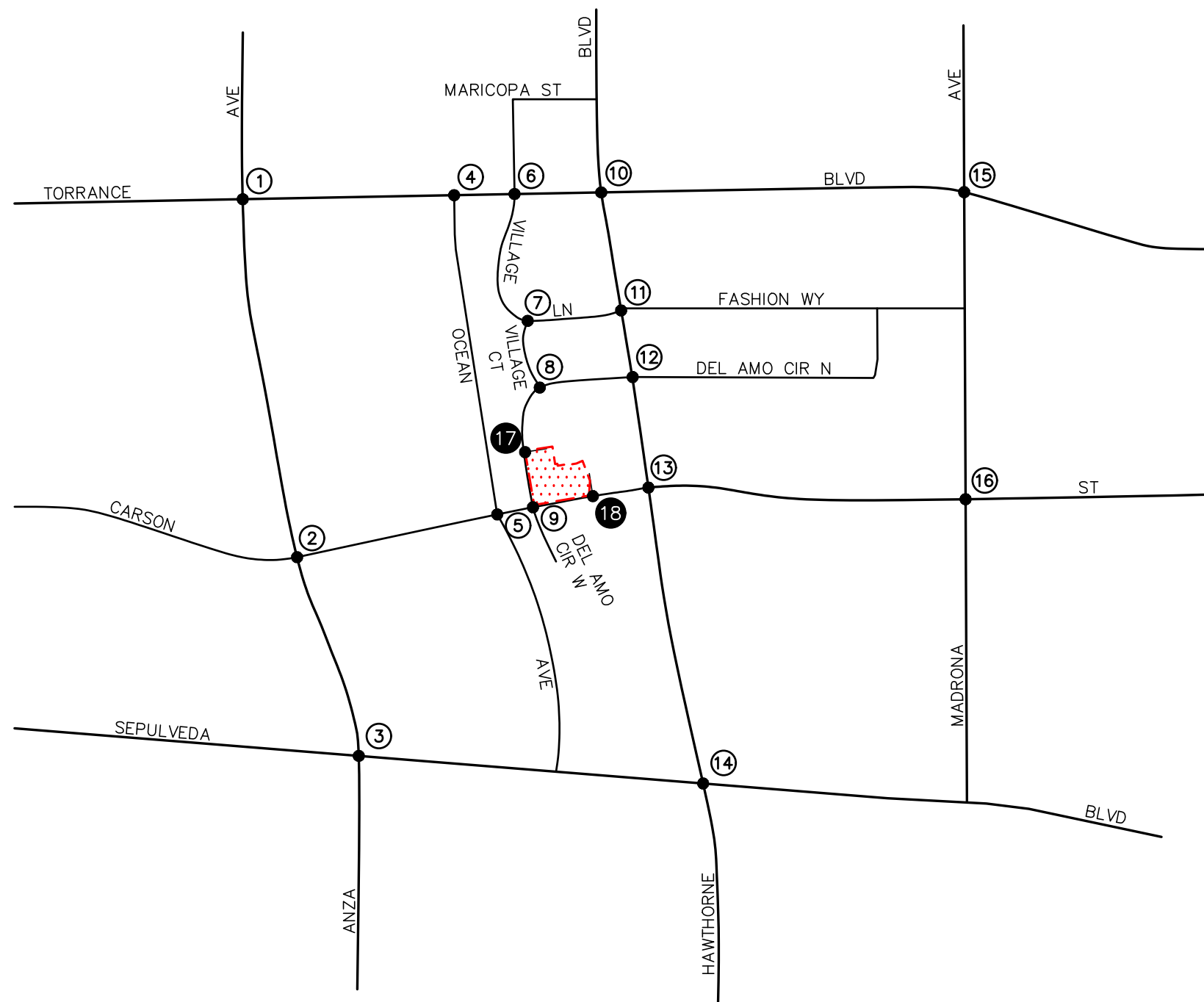
6.1 Ambient Traffic Growth

For future traffic conditions, background traffic growth estimates have been calculated using an ambient growth factor. The ambient growth factor is intended to include unknown and future cumulative projects in the study area, as well as account for regular growth in traffic volumes due to the development of projects outside the study area. An annual growth rate of 0.525 percent was applied to baseline Year 2022 traffic volumes at the key study intersections to develop horizon Year 2025 traffic volumes.

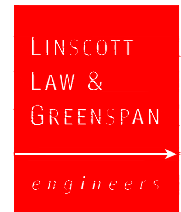
6.2 Year 2025 Traffic Volumes

Figures 6-1 and *6-2* present the AM and PM peak hour Existing with Ambient Growth to the Year 2025 traffic volumes at the eighteen (18) key study intersections, respectively. *Figures 6-3* and *6-4* present the AM and PM peak hour Existing with Ambient Growth to the Year 2025 with Project traffic volumes at the eighteen (18) key study intersections, respectively.

It should be noted that per the request of the City of Torrance the near-term assessment also includes the future development to the north of the site consisting of 183-unit senior independent living facility (i.e. Del Amo Senior Village).

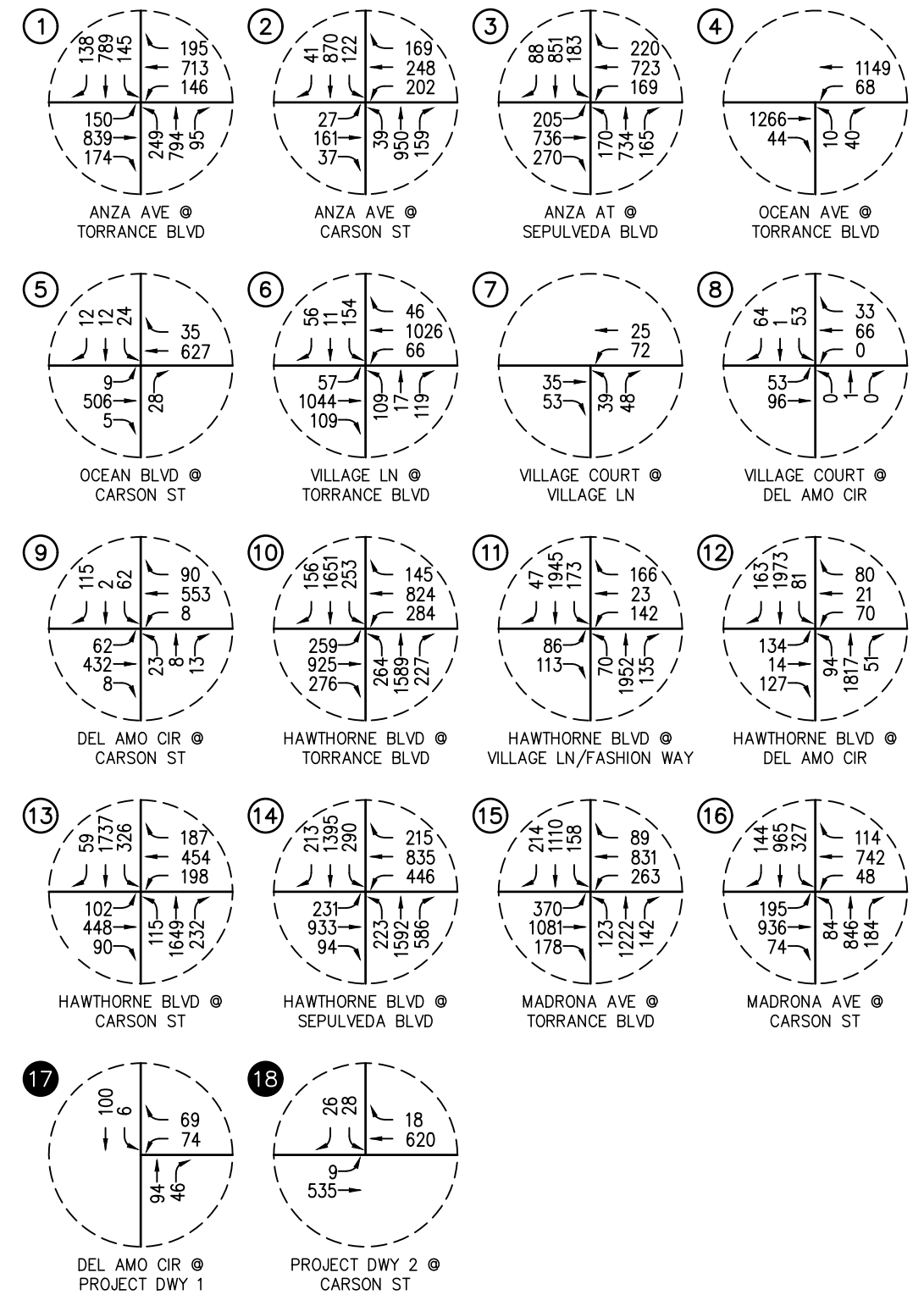
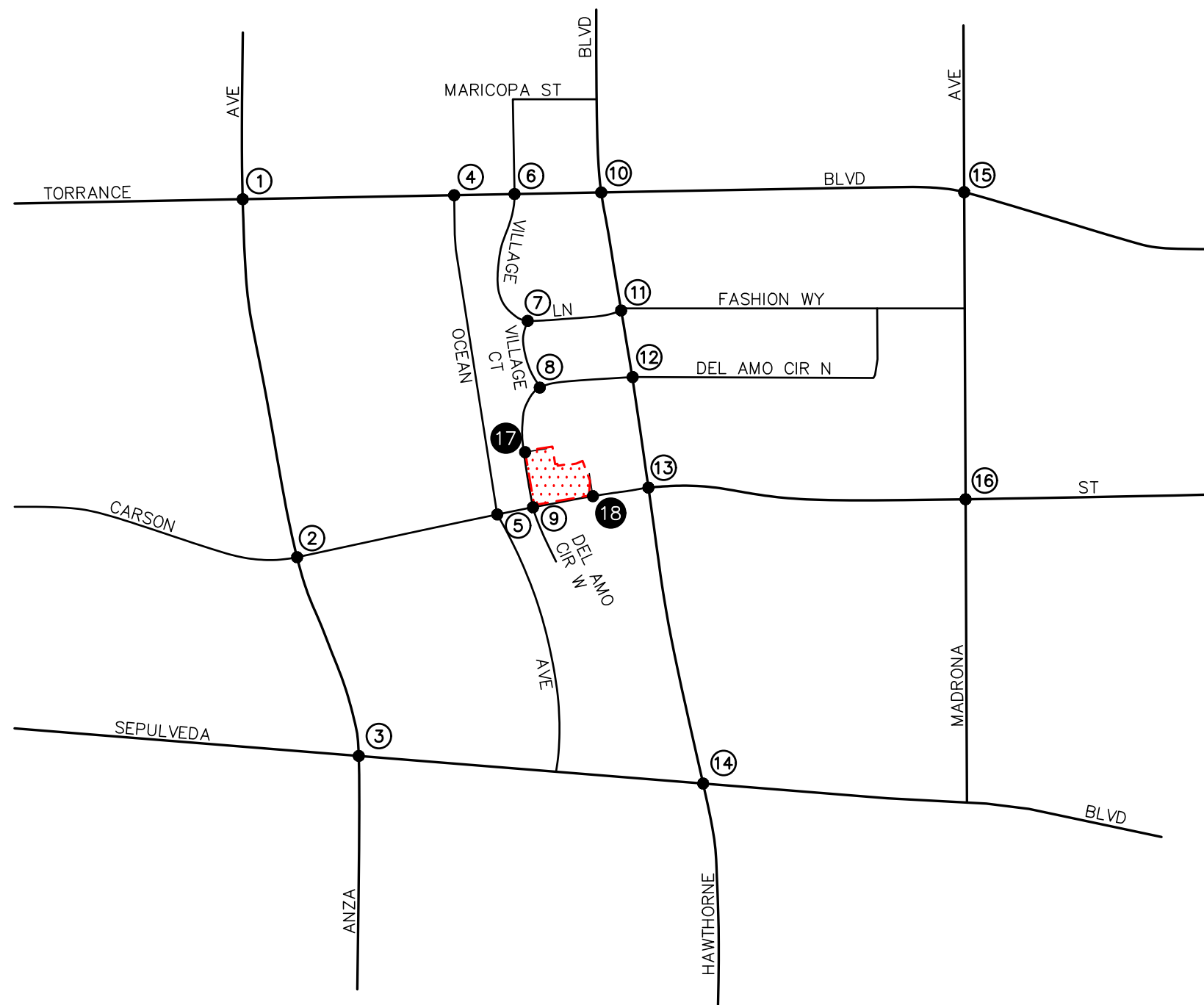


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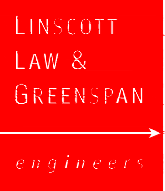


KEY
 # = STUDY INTERSECTION
 [Red Hatched Box] = PROJECT SITE

FIGURE 6-1
EXISTING WITH AMBIENT GROWTH (YEAR 2025)
AM PEAK HOUR TRAFFIC VOLUMES
 DEL AMO CIRCLE DRIVE APARTMENTS, TORRANCE

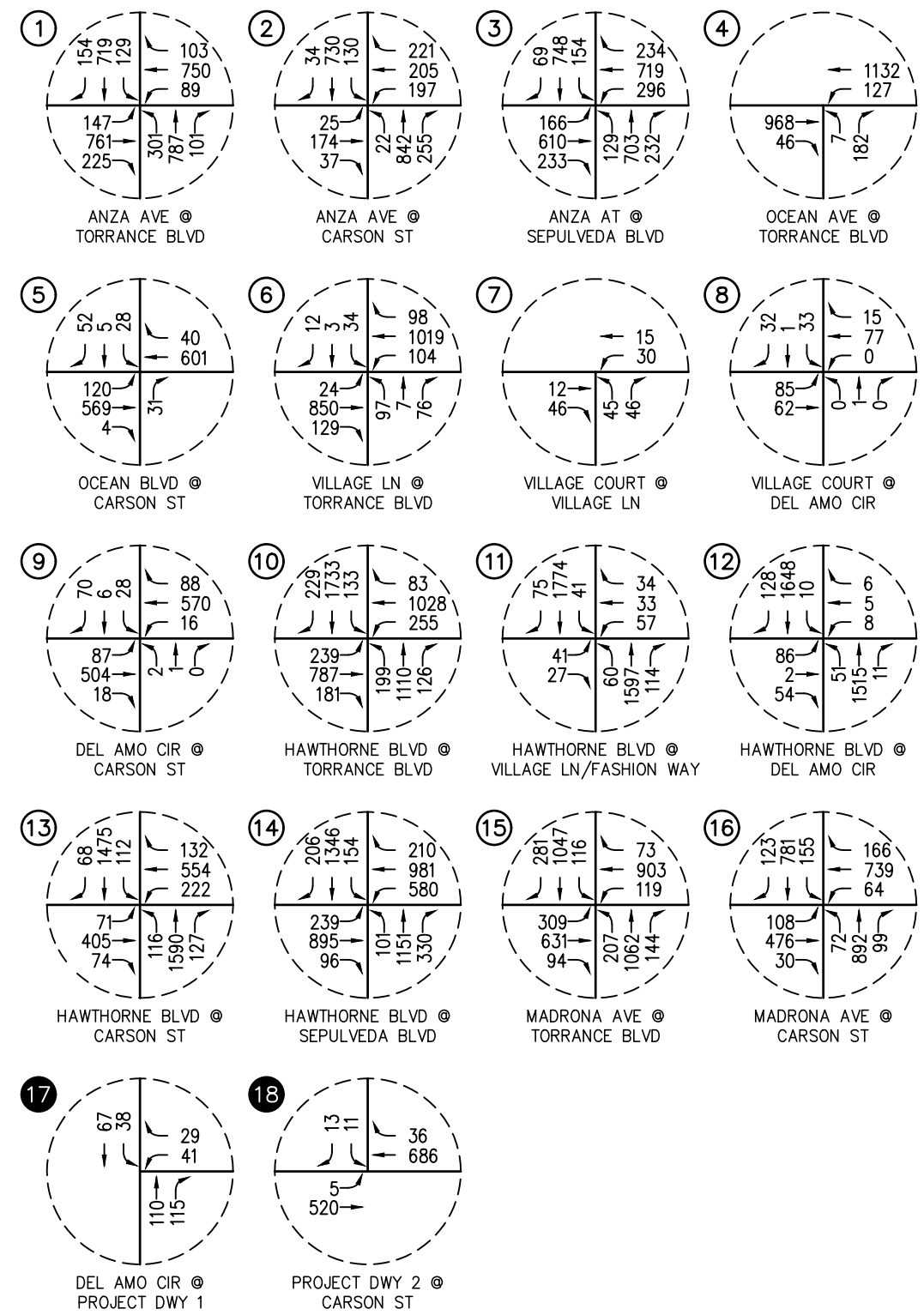
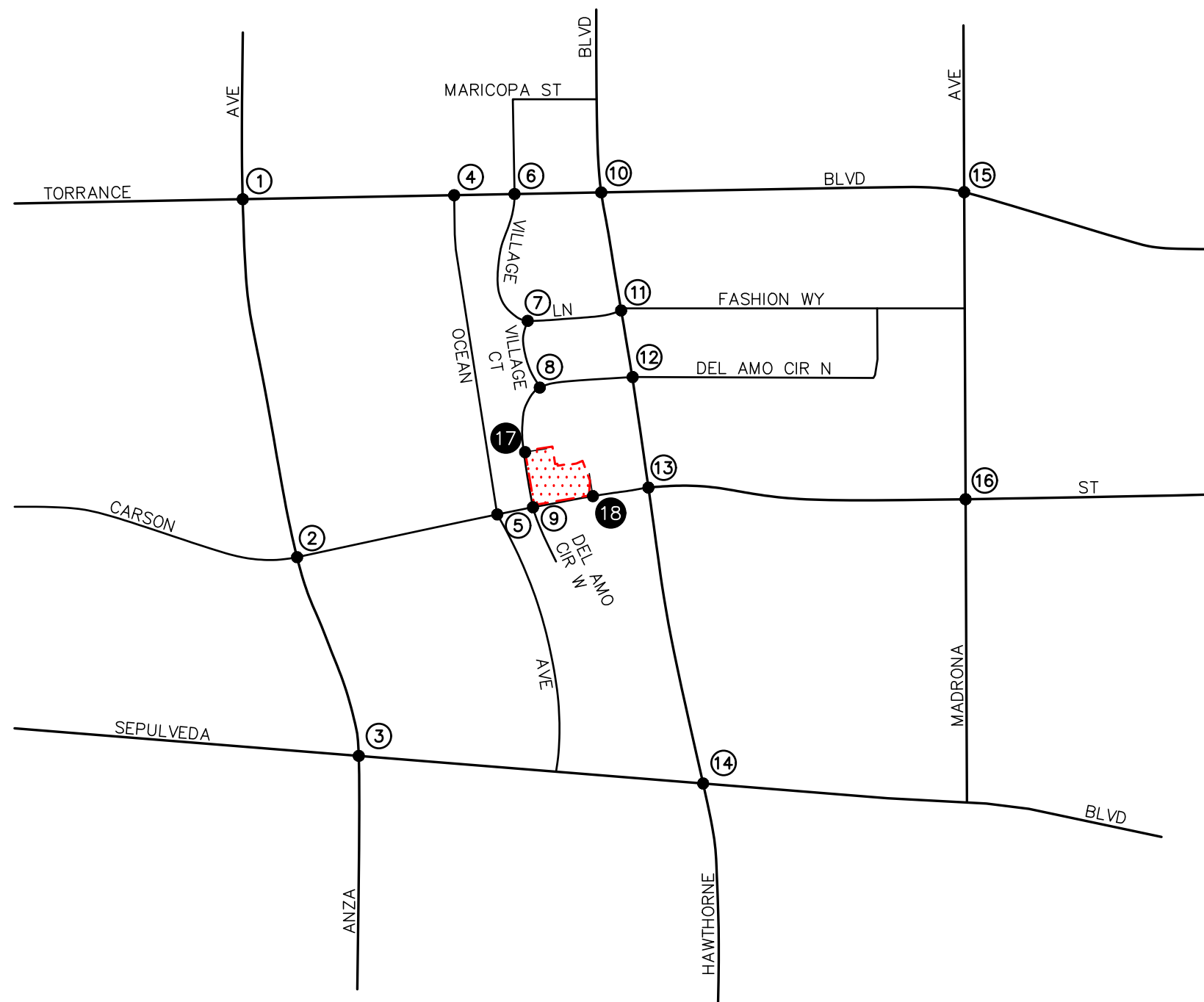


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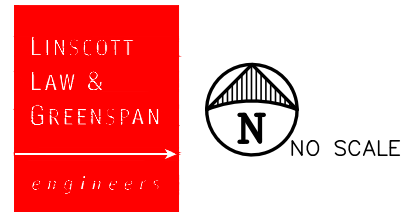


KEY
 # = STUDY INTERSECTION
 [Red Hatched Box] = PROJECT SITE

FIGURE 6-2
EXISTING WITH AMBIENT GROWTH (YEAR 2025)
PM PEAK HOUR TRAFFIC VOLUMES
 DEL AMO CIRCLE DRIVE APARTMENTS, TORRANCE

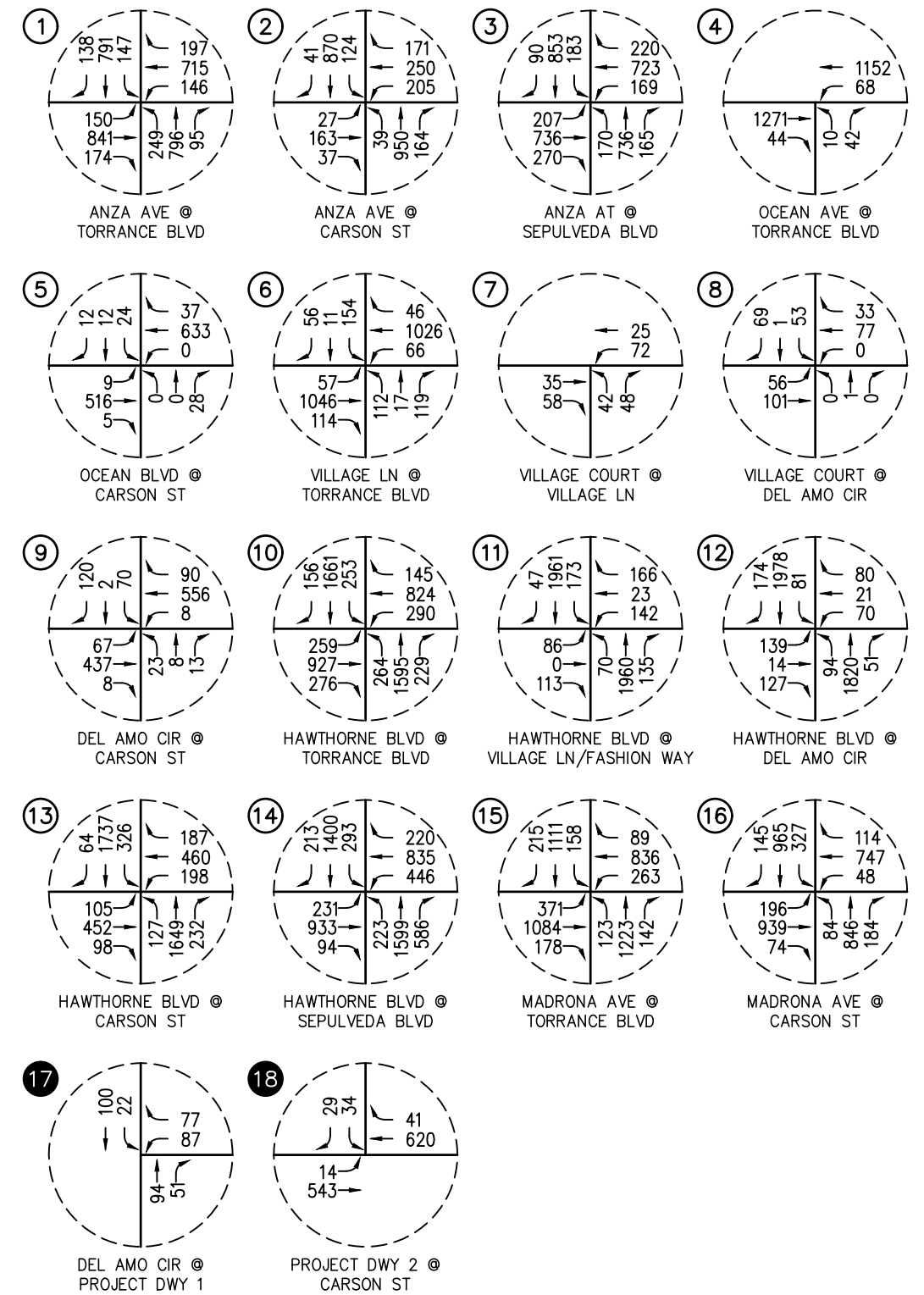
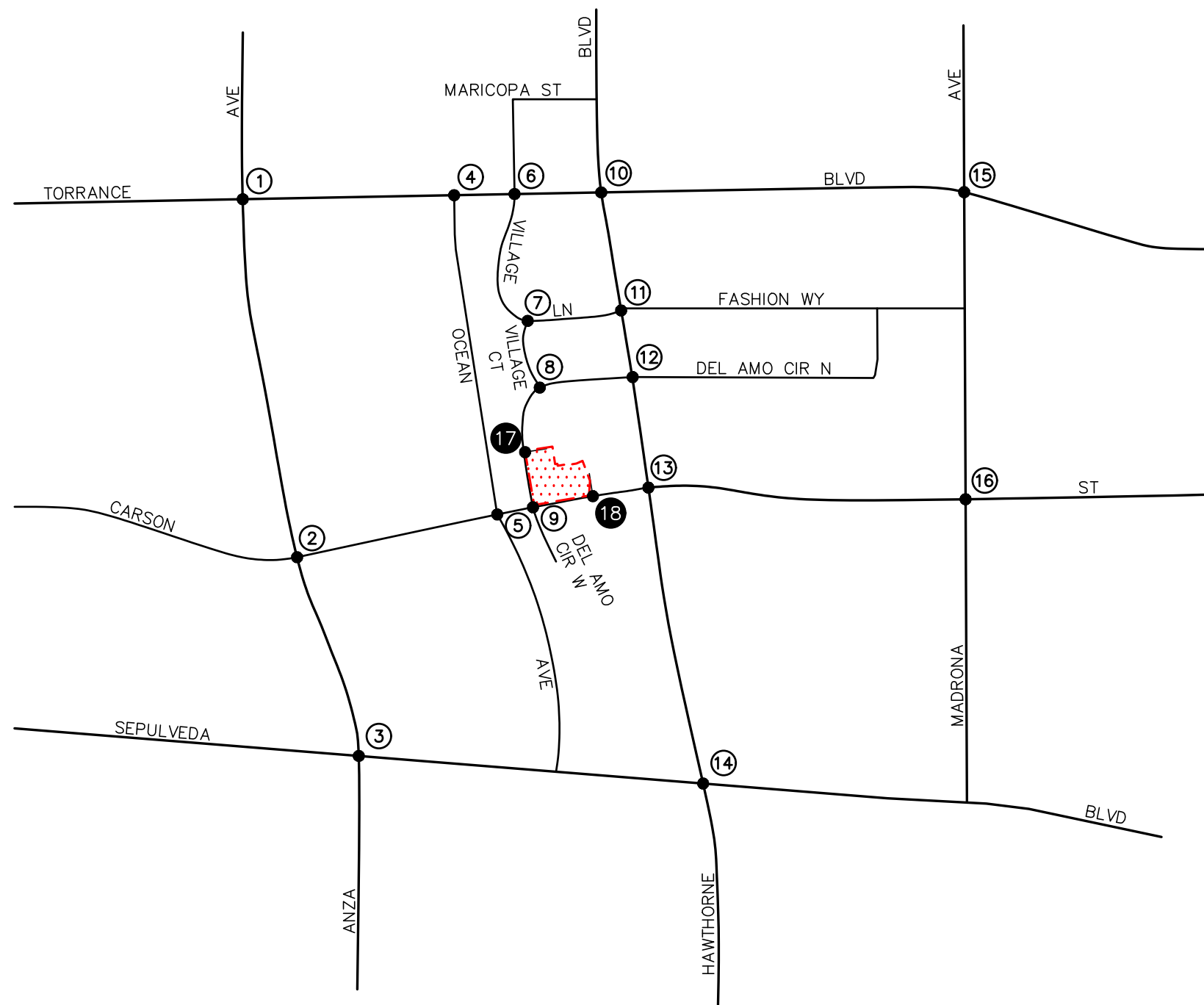


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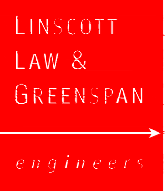


KEY
 # = STUDY INTERSECTION
 [Red Hatched Box] = PROJECT SITE

FIGURE 6-3
EXISTING WITH AMBIENT GROWTH (YEAR 2025)
WITH PROJECT AM PEAK HOUR TRAFFIC VOLUMES
 DEL AMO CIRCLE DRIVE APARTMENTS, TORRANCE



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KEY
 # = STUDY INTERSECTION
 [Red Hatched Box] = PROJECT SITE

FIGURE 6-4
EXISTING WITH AMBIENT GROWTH (YEAR 2025)
WITH PROJECT PM PEAK HOUR TRAFFIC VOLUMES
 DEL AMO CIRCLE DRIVE APARTMENTS, TORRANCE

7.0 YEAR 2025 CONDITIONS TRAFFIC IMPACT ANALYSIS

The relative impacts of the added Project traffic volumes generated by proposed Project during the AM and PM peak hour traffic conditions were evaluated based on analysis of future Year 2025 operating conditions at the eighteen (18) key study intersections. The previously discussed capacity analysis procedures were utilized to investigate the future ICU/HCM relationships and service level characteristics at each study intersection. The significance of the potential impacts of the Project at each key intersection was then evaluated using the traffic impact criteria summarized in *Section 3.5* of this report.

7.1 Traffic Impact Analysis Scenarios

The following scenarios are those for which AM peak hour and PM peak hour volume/capacity calculations have been performed at the key study intersections:

- A. Existing Traffic Conditions;
- B. Existing Traffic Conditions Plus Ambient Growth Traffic to the Year 2025;
- C. Scenario (B) plus Project Traffic Conditions;
- D. Scenario (C) with Improvements, if necessary;

7.2 Year 2025 Conditions Intersection Capacity Analysis

Table 7-1 summarizes the AM and PM peak hour Level of Service results at the key signalized study intersections for Year 2025 traffic conditions, based on the *Intersection Capacity Utilization (ICU)* Method of Analysis.

The first column (1) of ICU/HCM/LOS values in *Table 7-1* presents a summary of existing AM and PM peak hour traffic conditions for intersections within the City of Torrance. The second column (2) presents Existing with Ambient Growth traffic conditions based on existing intersection geometry but without any traffic generated from the proposed project. The third column (3) identifies Existing with Ambient Growth traffic conditions with the addition of project traffic. The fourth column (4) shows the increase in ICU/HCM value due to the added peak hour Project trips and indicates whether the traffic associated with the Project will exceed the LOS thresholds mentioned in this report. The fifth column (5) presents the resultant level of service of Existing With Ambient Growth with Project traffic conditions with the inclusion of planned and/or recommended traffic improvements, if needed.

7.2.1 Existing Traffic Conditions

Review of column (1) of *Table 7-1* indicates that for existing traffic conditions, all eighteen (18) study intersections operate at acceptable level of service during the AM and PM peak hours.

7.2.2 Existing With Ambient Growth (Year 2025) Traffic Conditions

Review of column (2) of *Table 7-1* indicates that for Existing with Ambient Growth traffic conditions, all eighteen (18) study intersections operate at acceptable level of service during the AM and PM peak hours.

7.2.3 Existing With Ambient Growth (Year 2025) With Project Traffic Conditions

Review of column (3) of *Table 7-1* indicates that for Existing with Ambient Growth with Project traffic conditions, all eighteen (18) study intersections are forecast to operate at acceptable level of service during the AM and PM peak hours. Since there are no significant impacts based on the City's LOS Criteria and Thresholds, no improvements are recommended or required for the Project.

Appendix C contains the ICU/HCM/LOS calculation worksheets.

**TABLE 7-1
YEAR 2025 CONDITIONS PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY**

| Key Intersection | Time Period | (1) Existing Traffic Conditions | | (2) Existing With Ambient Growth (Year 2025) Traffic Conditions | | (3) Existing With Ambient Growth (Year 2025) With Project Traffic Conditions | | (4) Exceed LOS Thresholds (3) – (2) | | (5) Existing With A.G. (Year 2025) With Project With Mitigation | |
|--|-------------|------------------------------------|-----|--|----------------|---|----------------|--|--------|--|-----|
| | | ICU/HCM | LOS | ICU/HCM | LOS | ICU/HCM | LOS | Increase | Yes/No | ICU/HCM | LOS |
| 1. Anza Avenue at Torrance Boulevard | AM | 0.791 | C | 0.802 | D | 0.804 | D | 0.002 | No | -- | -- |
| | PM | 0.818 | D | 0.830 | D | 0.831 | D | 0.001 | No | -- | -- |
| 2. Anza Avenue at Carson Street | AM | 0.708 | C | 0.720 | C | 0.724 | C | 0.004 | No | -- | -- |
| | PM | 0.704 | C | 0.717 | C | 0.722 | C | 0.005 | No | -- | -- |
| 3. Anza Avenue at Sepulveda Boulevard | AM | 0.717 | C | 0.727 | C | 0.729 | C | 0.002 | No | -- | -- |
| | PM | 0.785 | C | 0.797 | C | 0.799 | C | 0.002 | No | -- | -- |
| 4. Ocean Avenue at Torrance Boulevard | AM | 22.2 s/v | C | 22.9 s/v | C | 23.2 s/v | C | 0.3 s/v | No | -- | -- |
| | PM | 26.3 s/v | D | 27.3 s/v | D | 27.3 s/v | D | 0.0 s/v | No | -- | -- |
| 5. Ocean Avenue at Carson Street | AM | 24.2 s/v | C | 25.1 s/v | D | 25.8 s/v | D | 0.7 s/v | No | -- | -- |
| | PM | 22.1 s/v | C | 22.8 s/v | C | 23.3 s/v | C | 0.5 s/v | No | -- | -- |
| 6. Plaza Lane/Village Lane at Torrance Boulevard | AM | 0.403 | A | 0.408 | A | 0.408 | A | 0.000 | No | -- | -- |
| | PM | 0.485 | A | 0.491 | A | 0.491 | A | 0.000 | No | -- | -- |
| 7. Village Court at Village Lane | AM | 7.6 s/v | A | 7.6 s/v | A | 7.7 s/v | A | 0.1 s/v | No | -- | -- |
| | PM | 8.0 s/v | A | 8.0 s/v | A | 8.0 s/v | A | 0.0 s/v | No | -- | -- |
| 8. Village Court at Del Amo Circle | AM | 9.4 s/v | A | 11.2 s/v | B ⁶ | 11.5 s/v | B ⁶ | 0.3 s/v | No | -- | -- |
| | PM | 9.3 s/v | A | 11.1 s/v | B ⁶ | 11.3 s/v | B ⁶ | 0.2 s/v | No | -- | -- |
| 9. Del Amo Circle W at Carson Street | AM | 0.363 | A | 0.369 | A | 0.378 | A | 0.009 | No | -- | -- |
| | PM | 0.390 | A | 0.398 | A | 0.405 | A | 0.007 | No | -- | -- |

Notes:

- ICU = Intersection Capacity Utilization
- HCM = Highway Capacity Manual
- s/v = seconds per vehicle (delay)
- LOS = Level of Service, please refer to *Table 3-1* for the LOS definitions
- **Bold ICU /LOS values** indicate adverse service levels based on the LOS standards mentioned in this report

⁶ If the intersection were converted to an All-Way Stop control, the intersection will operate at a delay of 8.1 s/v and LOS A for the AM peak hour and a delay of 8.2 s/v and LOS A for the PM peak hour under Existing With Ambient Growth (Year 2025) traffic conditions. the intersection will operate at a delay of 8.2 s/v and LOS A for the AM peak hour and a delay of 8.3 s/v and LOS A for the PM peak hour under Existing With Ambient Growth (Year 2025) With Project traffic conditions.

TABLE 7-1 (CONTINUED)
YEAR 2025 CONDITIONS PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY

| Key Intersection | Time Period | (1) Existing Traffic Conditions | | (2) Existing With Ambient Growth (Year 2025) Traffic Conditions | | (3) Existing With Ambient Growth (Year 2025) With Project Traffic Conditions | | (4) Exceed LOS Thresholds (3) – (2) | | (5) Existing With A.G. (Year 2025) With Project With Mitigation | |
|---|-------------|------------------------------------|-----|--|-----|---|-----|--|--------|--|-----|
| | | ICU/HCM | LOS | ICU/HCM | LOS | ICU/HCM | LOS | Increase | Yes/No | ICU/HCM | LOS |
| 10. Hawthorne Boulevard at Torrance Boulevard | AM | 0.726 | C | 0.737 | C | 0.737 | A | 0.000 | No | -- | -- |
| | PM | 0.729 | C | 0.741 | C | 0.745 | C | 0.004 | No | -- | -- |
| 11. Hawthorne Boulevard at Village Lane/Fashion Way | AM | 0.447 | A | 0.454 | A | 0.455 | A | 0.001 | No | -- | -- |
| | PM | 0.568 | A | 0.576 | A | 0.577 | A | 0.001 | No | -- | -- |
| 12. Hawthorne Boulevard at Del Amo Circle | AM | 0.430 | A | 0.440 | A | 0.447 | A | 0.007 | No | -- | -- |
| | PM | 0.571 | A | 0.582 | A | 0.586 | A | 0.004 | No | -- | -- |
| 13. Hawthorne Boulevard at Carson Street | AM | 0.620 | B | 0.631 | B | 0.640 | B | 0.009 | No | -- | -- |
| | PM | 0.698 | B | 0.708 | C | 0.711 | C | 0.003 | No | -- | -- |
| 14. Hawthorne Boulevard at Sepulveda Boulevard | AM | 0.741 | C | 0.752 | C | 0.753 | C | 0.001 | No | -- | -- |
| | PM | 0.806 | D | 0.818 | D | 0.820 | D | 0.002 | No | -- | -- |
| 15. Madrona Avenue at Torrance Boulevard | AM | 0.691 | B | 0.701 | C | 0.702 | C | 0.001 | No | -- | -- |
| | PM | 0.856 | D | 0.868 | D | 0.869 | D | 0.001 | No | -- | -- |
| 16. Madrona Avenue at Carson Street | AM | 0.558 | A | 0.565 | A | 0.566 | A | 0.001 | No | -- | -- |
| | PM | 0.627 | B | 0.636 | B | 0.637 | B | 0.001 | No | -- | -- |
| 17. Del Amo Circle W at Project Driveway 1 | AM | 7.9 s/v | A | 7.9 s/v | A | 8.2 s/v | A | 0.3 s/v | No | -- | -- |
| | PM | 8.4 s/v | A | 8.5 s/v | B | 8.7 s/v | A | 0.2 s/v | No | -- | -- |
| 18. Project Driveway 2 at Carson Street | AM | 11.5 s/v | B | 11.7 s/v | B | 14.0 s/v | B | 2.3 s/v | No | -- | -- |
| | PM | 13.7 s/v | B | 13.8 s/v | B | 15.0 s/v | C | 1.2 s/v | No | -- | -- |

Notes:

- ICU = Intersection Capacity Utilization
- HCM = Highway Capacity Manual
- s/v = seconds per vehicle (delay)
- LOS = Level of Service, please refer to *Table 3-1* for the LOS definitions
- **Bold ICU /LOS values** indicate adverse service levels based on the LOS standards mentioned in this report

8.0 STATE OF CALIFORNIA (CALTRANS) ASSESSMENT

In conformance with the Caltrans *Guide for the Preparation of Traffic Impact Studies, dated December 2002*, existing and projected peak hour operating conditions at the five (5) state-controlled study intersections within the study area have been evaluated using the *Highway Capacity Manual* operations method of analysis. These state-controlled locations include the following study intersections:

10. Hawthorne Boulevard at Torrance Boulevard (Torrance/Caltrans)
11. Hawthorne Boulevard at Village Lane/Fashion Way (Torrance/Caltrans)
12. Hawthorne Boulevard at Del Amo Circle (Torrance/Caltrans)
13. Hawthorne Boulevard at Carson Street (Torrance/Caltrans)
14. Hawthorne Boulevard at Sepulveda Boulevard (Torrance/Caltrans)

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. For this analysis, LOS D is the target level of service standard and will be utilized to assess the project impacts at the state-controlled study intersections.

The Caltrans *Guide for the Preparation of Traffic Impact Studies, dated December 2002* states that if an existing State-owned facility operates at less than the target LOS (i.e. LOS D); the existing service level should be maintained. Based on Caltrans Criteria, a Project’s impact is considered significant if the Project causes the LOS to change from an acceptable LOS (i.e., LOS D or better) to a deficient LOS (i.e. LOS E or F).

8.1 Highway Capacity Manual (HCM) Method of Analysis (Signalized Intersections)

Based on the HCM 6th Edition 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.

In the HCM, only the portion of total delay attributed to the control facility is quantified. This delay is called *control delay*. Control delay includes initial deceleration delay, queue move-up time, stopped delay and final acceleration delay. Specifically, LOS standards for traffic signals are stated in terms of the average control delay per vehicle. 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 **Table 8-1**.

TABLE 8-1
LEVEL OF SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS (HCM METHODOLOGY)⁷

| Level of Service (LOS) | Control Delay Per Vehicle (seconds/vehicle) | Level of Service Description |
|------------------------|---|---|
| A | ≤ 10.0 | This level of service occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay. |
| B | > 10.0 and ≤ 20.0 | This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of average delay. |
| C | > 20.0 and ≤ 35.0 | Average traffic delays. These higher delays may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping. |
| D | > 35.0 and ≤ 55.0 | Long traffic delays. At level D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable. |
| E | > 55.0 and ≤ 80.0 | Very long traffic delays. This level is considered by many agencies (i.e. SANBAG) to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences. |
| F | ≥ 80.0 | Severe congestion. This level, considered to be unacceptable to most drivers, often occurs with over saturation, that is, when arrival flow rates exceed the capacity of the intersection. It may also occur at high v/c ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing factors to such delay levels. |

⁷ Source: *Highway Capacity Manual* (Signalized Intersections).

8.2 Year 2025 Conditions Intersection Capacity Analysis

Table 8-2 summarizes the AM and PM peak hour Level of Service results at the five (5) state-controlled study intersections for Year 2025 traffic conditions, based on the *Highway Capacity Manual (HCM)* Method of Analysis. The first column (1) of Delay/LOS values in *Table 8-2* presents a summary of existing AM and PM peak hour traffic conditions. The second column (2) presents Existing with Ambient Growth traffic conditions based on existing intersection geometry but without any traffic generated from the proposed project. The third column (3) identifies Existing with Ambient Growth traffic conditions with the addition of project traffic. The fourth column (4) indicates whether the traffic associated with the Project will exceed the LOS thresholds mentioned in this report. The fifth column (5) presents the resultant level of service of Existing With Ambient Growth with Project traffic conditions with the inclusion of planned and/or recommended traffic improvements, if needed.

8.2.1 Existing Traffic Conditions

Review of column (1) of *Table 8-2* indicates that for existing traffic conditions, all five (5) state-controlled study intersections currently operate at acceptable level of service D or better during the AM and PM peak hours.

8.2.2 Existing With Ambient Growth (Year 2025) Traffic Conditions

Review of column (2) of *Table 8-2* indicates that for Existing with Ambient Growth traffic conditions, all five (5) state-controlled study intersections are forecast to operate at acceptable level of service D or better during the AM and PM peak hours.

8.2.3 Existing With Ambient Growth (Year 2025) With Project Traffic Conditions

Review of column (3) of *Table 8-2* indicates that for Existing with Ambient Growth with Project traffic conditions, all five (5) state-controlled study intersections are forecast to operate at acceptable level of service D or better during the AM and PM peak hours. Review of column (4) indicates that the proposed Project is not anticipated to exceed the level of service thresholds at any of the state-controlled study intersections. Therefore, no improvements are recommended or required for the Project.

Appendix D contains the HCM/LOS calculation worksheets for the Year 2025 Traffic Conditions.

TABLE 8-2
YEAR 2025 CONDITIONS PEAK HOUR INTERSECTION CAPACITY ANALYSIS SUMMARY – CALTRANS

| Key Intersection | Time Period | (1) | | (2) | | (3) | | (4) | (5) | |
|---|-------------|-----------------------------|-----|---|-----|--|-----|-----------------------|---|-----|
| | | Existing Traffic Conditions | | Existing With Ambient Growth (Year 2025) Traffic Conditions | | Existing With Ambient Growth (Year 2025) With Project Traffic Conditions | | Exceed LOS Thresholds | Existing With A.G. (Year 2025) With Project With Mitigation | |
| | | Delay (s/v) | LOS | Delay (s/v) | LOS | Delay (s/v) | LOS | Yes/No | Delay (s/v) | LOS |
| 10. Hawthorne Boulevard at Torrance Boulevard | AM | 33.9 | C | 34.1 | C | 34.1 | C | No | -- | -- |
| | PM | 35.6 | D | 35.8 | D | 35.9 | D | No | -- | -- |
| 11. Hawthorne Boulevard at Village Lane/Fashion Way | AM | 9.8 | A | 9.9 | A | 9.9 | A | No | -- | -- |
| | PM | 17.6 | B | 17.7 | B | 17.7 | B | No | -- | -- |
| 12. Hawthorne Boulevard at Del Amo Circle | AM | 6.3 | A | 6.7 | A | 7.0 | A | No | -- | -- |
| | PM | 14.3 | B | 14.4 | B | 14.3 | B | No | -- | -- |
| 13. Hawthorne Boulevard at Carson Street | AM | 23.6 | C | 23.8 | C | 24.2 | C | No | -- | -- |
| | PM | 26.9 | C | 27.3 | C | 27.7 | C | No | -- | -- |
| 14. Hawthorne Boulevard at Sepulveda Boulevard | AM | 41.1 | D | 41.9 | D | 42.0 | D | No | -- | -- |
| | PM | 40.6 | D | 41.4 | D | 41.5 | D | No | -- | -- |

Notes:

- s/v = seconds per vehicle (delay)
- LOS = Level of Service, please refer to *Table 8-1* for the LOS definitions
- **Bold ICU/LOS values** indicate adverse service levels based on the LOS standards mentioned in this report

9.0 SITE ACCESS EVALUATION

9.1 Site Access

As shown in *Figure 2-2*, access to the proposed Project will be provided vehicular access via one (1) full access unsignalized driveway located on Carson Street, which now serves the Del Amo Financial Center, and one (1) full access “All-Way Stop” unsignalized driveways on Del Amo Circle which will also serve as access to the future planned residential development located on an adjacent parcel directly to the north.

Table 9-1 presents the level of service results at the project driveways under Existing with Ambient Growth with Project traffic conditions. It should be noted that this information was already presented in *Table 7-1*. Review of the *Table 9-1* indicates that the driveways are forecast to operate at acceptable levels of service in the AM and PM peak hours.

Appendix C contains the LOS calculation worksheets for Year 2025 Traffic Conditions at the Project Driveways.

9.2 Internal Circulation

The Project driveways on Carson Street and Del Amo Circle will provide access to the subject property for various types of trucks and passenger vehicles. On-site circulation was evaluated for a trash truck and fire truck and was performed using the *Turning Vehicle Templates*, developed by Jack E. Leisch & Associates and *AutoTURN for AutoCAD* computer software that simulates turning maneuvers for various types of vehicles. A large truck turning template for a trash truck and fire truck was utilized in this evaluation.

Figures 9-1 and *9-2* illustrates the turning movements required of a trash truck and fire truck, respectively, as it accesses and circulates through the site. Review of *Figures 9-1* and *9-2* shows that access to and from the site via a trash truck and fire truck are considered adequate.

9.3 Project Driveway Sight Line Analysis

At intersections a substantially clear line of sight should be maintained between the driver of a vehicle waiting at the crossroad and the driver of an approaching vehicle. Adequate time must be provided for the waiting vehicle to either cross all lanes of through traffic, cross the near lanes and turn left, or turn right, without requiring through traffic to radically alter their speed. The Sight Distance Evaluation prepared for the proposed Project Driveways was based on the criteria and procedures set forth in *Highway Design Manual (HDM)*.

To provide a conservative assessment, the “corner sight distance” criteria in Section 405.1(2)(b) of the *HDM* was also utilized. Based on the criteria set forth in Table 405.1A of the Caltrans *HDM* and a speed of 35 mph on Carson Street, the corner sight distance required for a left-turning vehicle is 467 feet for vehicles approaching from the right and 416 feet for vehicles approaching from the left. The corner sight distance required for a right-turning vehicle is 334 feet for vehicles approaching from the left.

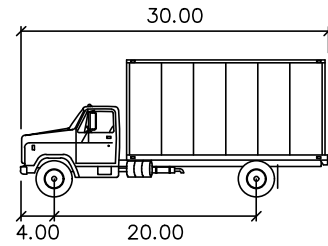
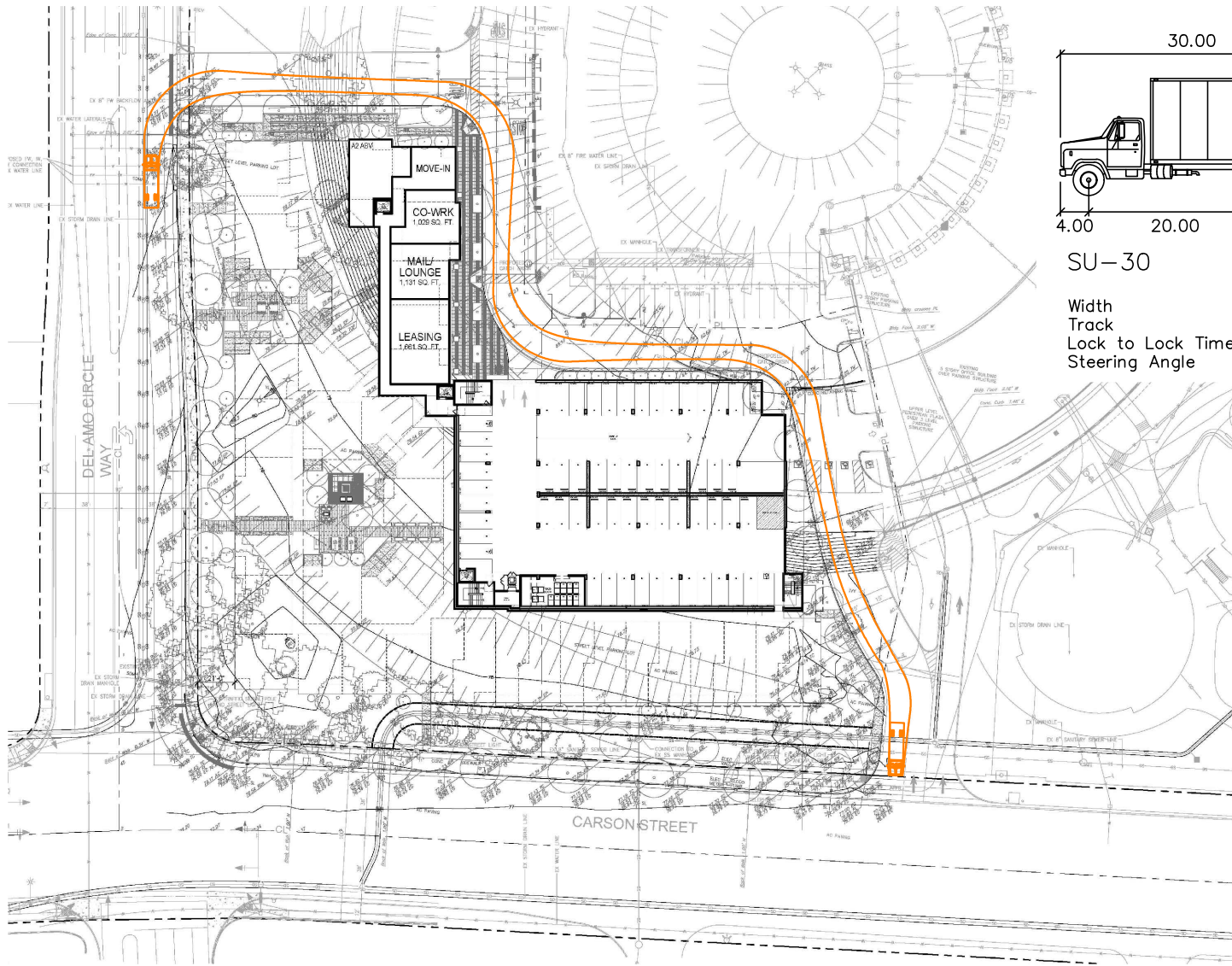
Figures 9-3 and 9-4 present the results of the sight distance evaluation based on the application of the corner sight distance criteria at the Project Driveway located along Carson Street. The figures illustrate the limited use areas. As shown, the sight lines at the proposed Project driveway are expected to be adequate as long as obstructions within the sight triangles are minimized.

**TABLE 9-1
PROJECT DRIVEWAY PEAK HOUR LEVELS OF SERVICE SUMMARY**

| Key Intersections | Control Type | Time Period | (1) Existing With Ambient Growth (Year 2025) With Project Traffic Conditions | |
|---|--------------|-------------|---|-----|
| | | | ICU/HCM | LOS |
| 17. Del Amo Circle W at Project Driveway 1 | All-Way Stop | AM | 8.2 s/v | A |
| | | PM | 8.7 s/v | A |
| 18. Project Driveway 2 at Carson Street | One-Way Stop | AM | 14.0 s/v | B |
| | | PM | 15.0 s/v | C |

Note:

- s/v = seconds per vehicle (delay)



SU-30

| | |
|-------------------|--------|
| | feet |
| Width | : 8.00 |
| Track | : 8.00 |
| Lock to Lock Time | : 6.0 |
| Steering Angle | : 31.8 |

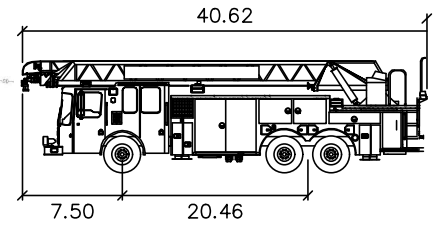
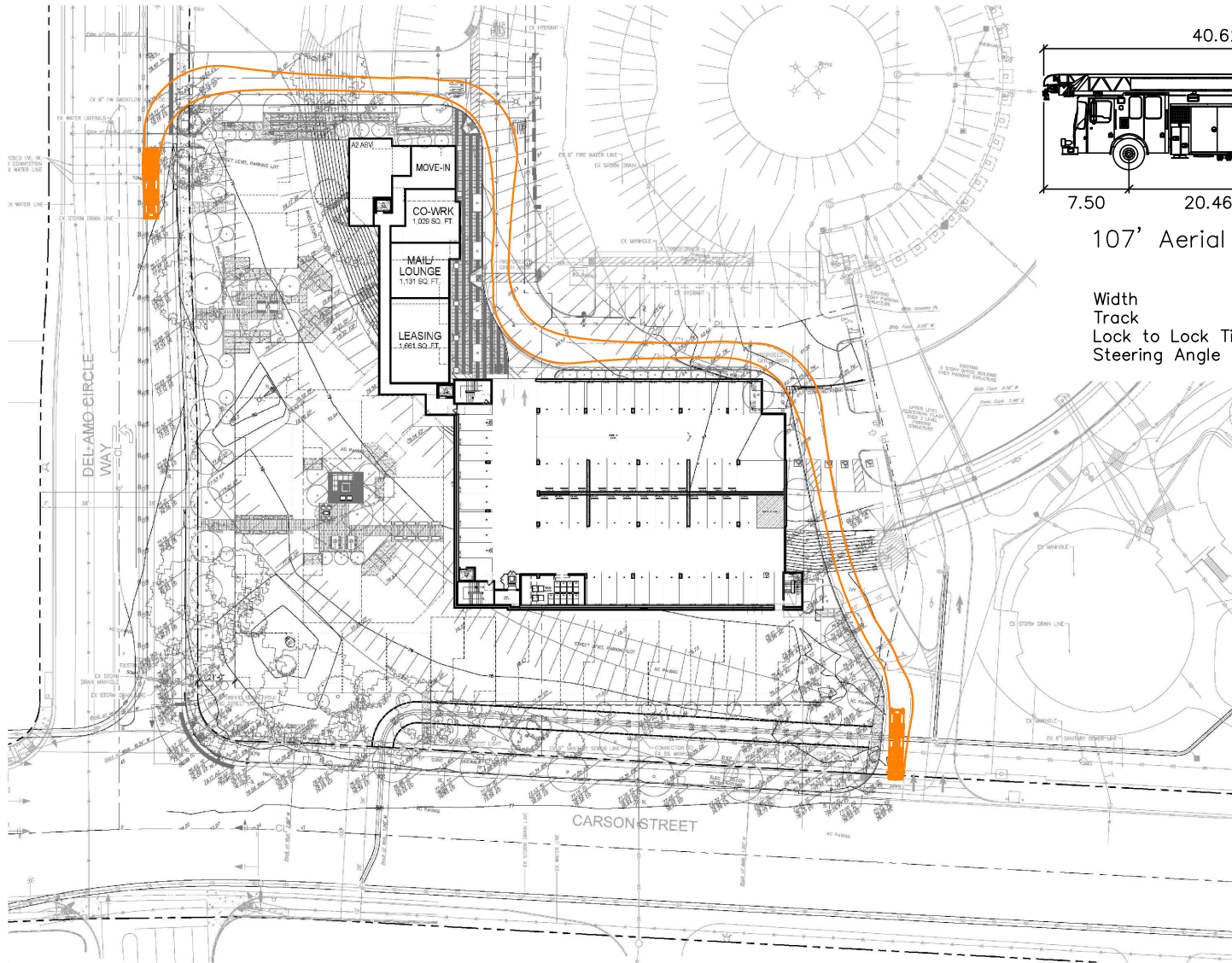
SOURCE: AO ARCHITECTS

FIGURE 9-1

TRASH TRUCK TURNING ANALYSIS
 DEL AMO CIRCLE DRIVE APARTMENTS, TORRANCE

LINSCOTT
 LAW &
 GREENSPAN
 engineers





107' Aerial Ladder

| | feet |
|-------------------|--------|
| Width | : 8.00 |
| Track | : 8.00 |
| Lock to Lock Time | : 6.0 |
| Steering Angle | : 45.0 |

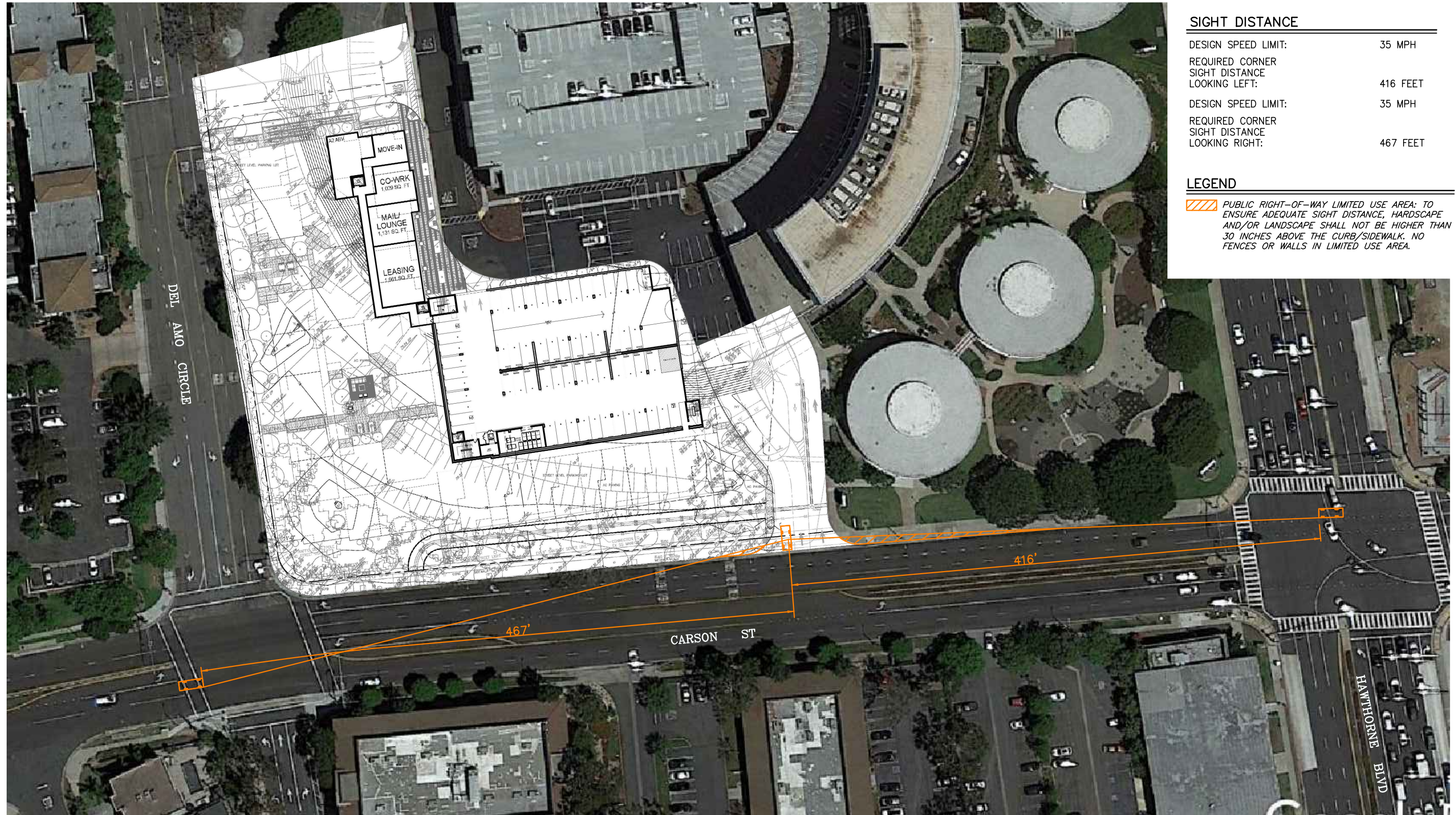
SOURCE: AO ARCHITECTS

LINSCOTT
LAW &
GREENSPAN
engineers



FIGURE 9-2


FIRE TRUCK TURNING ANALYSIS
DEL AMO CIRCLE DRIVE APARTMENTS, TORRANCE



SIGHT DISTANCE

| | |
|---|----------|
| DESIGN SPEED LIMIT: | 35 MPH |
| REQUIRED CORNER SIGHT DISTANCE LOOKING LEFT: | 416 FEET |
| DESIGN SPEED LIMIT: | 35 MPH |
| REQUIRED CORNER SIGHT DISTANCE LOOKING RIGHT: | 467 FEET |

LEGEND

 PUBLIC RIGHT-OF-WAY LIMITED USE AREA: TO ENSURE ADEQUATE SIGHT DISTANCE, HARDSCAPE AND/OR LANDSCAPE SHALL NOT BE HIGHER THAN 30 INCHES ABOVE THE CURB/SIDEWALK. NO FENCES OR WALLS IN LIMITED USE AREA.

n:\4500\2224525 - del amo circle drive apartments, torrance.dwg\4525 f9-3.dwg LDP 16:28:28 06-14-2022 aguilar

SOURCE: AO ARCHITECTS

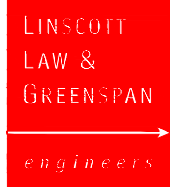
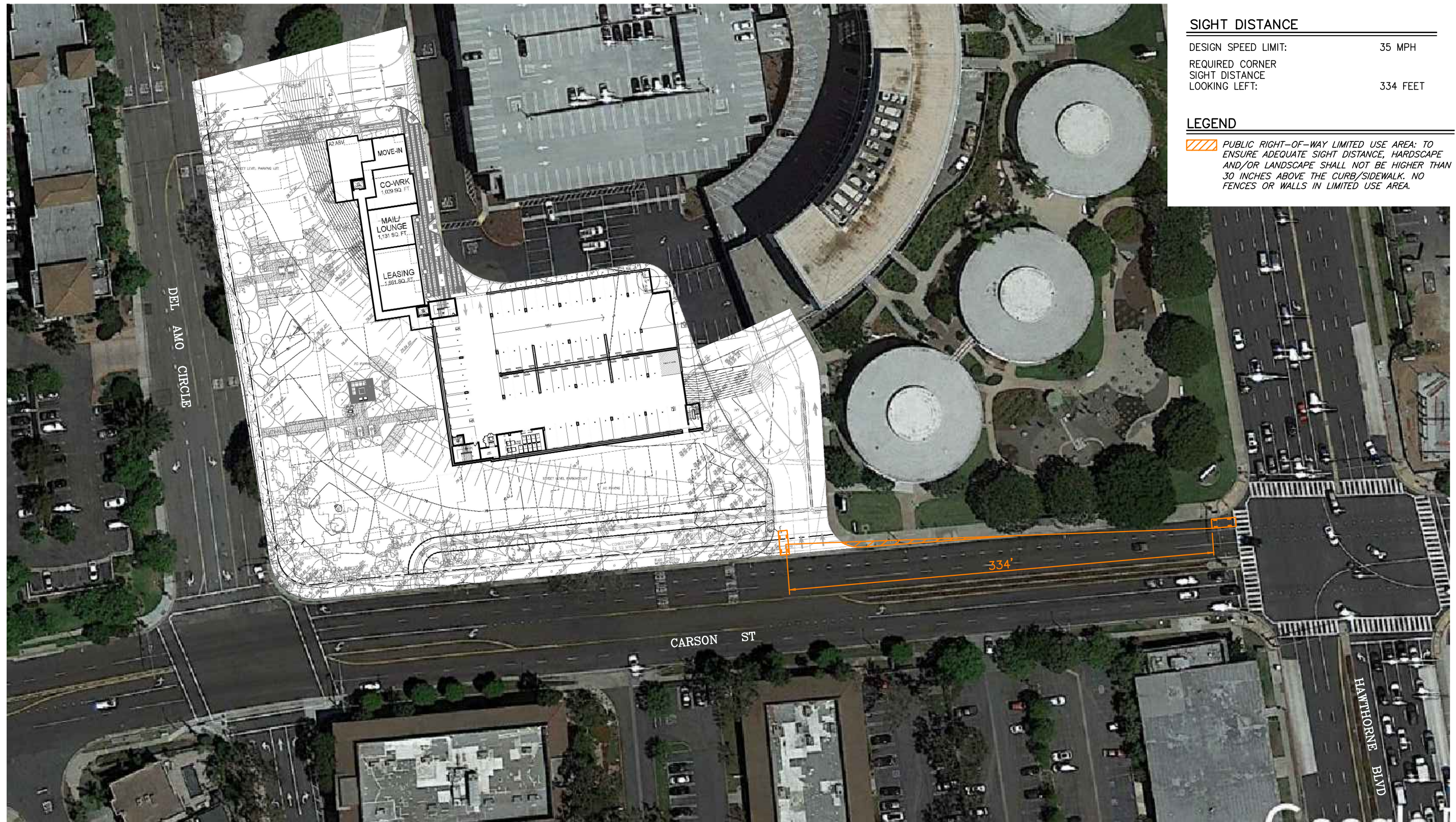


FIGURE 9-3


**SIGHT DISTANCE ANALYSIS
FOR LEFT-TURNING VEHICLES**
DEL AMO CIRCLE DRIVE APARTMENTS, TORRANCE



SIGHT DISTANCE

| | |
|--|----------|
| DESIGN SPEED LIMIT: | 35 MPH |
| REQUIRED CORNER SIGHT DISTANCE LOOKING LEFT: | 334 FEET |

LEGEND

 PUBLIC RIGHT-OF-WAY LIMITED USE AREA: TO ENSURE ADEQUATE SIGHT DISTANCE, HARDSCAPE AND/OR LANDSCAPE SHALL NOT BE HIGHER THAN 30 INCHES ABOVE THE CURB/SIDEWALK. NO FENCES OR WALLS IN LIMITED USE AREA.

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SOURCE: AO ARCHITECTS

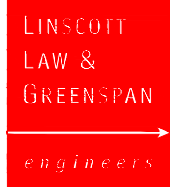


FIGURE 9-4

**SIGHT DISTANCE ANALYSIS
FOR RIGHT-TURNING VEHICLES**
DEL AMO CIRCLE DRIVE APARTMENTS, TORRANCE

10.0 AREA-WIDE TRAFFIC IMPROVEMENTS

For those intersections where projected traffic volumes are expected to exceed the LOS criteria thresholds, this report recommends traffic improvements that change the intersection geometry to increase capacity. These capacity improvements involve roadway widening and/or re-striping to reconfigure roadways to specific approaches of a key intersection. The identified improvements are expected to improve levels of service at the locations which exceed the LOS criteria thresholds.

10.1 Existing With Ambient Growth (Year 2025) With Project Traffic Conditions

The results of the intersection capacity analyses presented previously in *Table 7-1* indicates that none of the eighteen (18) key study intersections are forecast to exceed the LOS criteria thresholds under Existing with Ambient Growth with Project traffic conditions. Therefore, Project-related improvements are not required or recommended.

10.2 City of Torrance Development Impact Fee (DIF) Program

On October 31, 2005, the Torrance City Council approved and adopted a Development Impact Fee (DIF) Program. Pursuant to the requirements of the City of Torrance, Development Impact Fees will be required of the Project. The DIF is applied to pay a portion of the costs identified for public facilities, including transportation-related improvements, as well as underground of utilities, sewer, and storm drain improvements, and Police and Fire facilities. The Development Impact Fee is based on the size of all new developments and is a one-time cost other than a tax or special assessment according information published by the City of Torrance Community Development Department.

Review of *Table 10-1* indicates that effective October 21, 2020 for FY20/21-FY21/22 and FY22/23-FY23/24, the City's DIF rate for "Multi-Family / Others" ranges from a \$5,290.60 to \$6,424.30 over the next couple of fiscal years.

Assuming the proposed Project falls under the "Multi-family / Others (per unit)" category, the Project can be expected to pay a total of \$1,058,120.00 (200 units x \$5,290.60) in Development Impact Fees assuming FY 21/22 rates. This fee increases to \$1,284,860.00 (200 units x \$6,424.30) when considering the fees in FY22/23 and FY23/24. Please note that this total fee is subject to change based on the actual total number of units proposed for the Project when approved. The category and precise fee will be determined upon issuance of project building permits by the City of Torrance.

**TABLE 10-1
CITY OF TORRANCE DEVELOPMENT IMPACT FEE RATES**

| Type of Development | FY 2020/21 – FY 2021/22 City Fee / Rate (\$ per 1000 SF)⁸ | FY 2022/23 – FY 2023/24 City Fee / Rate (\$ per 1000 SF) |
|---|---|---|
| ▪ Single Family Detached (per unit) (single-family detached and mobile home resulting in a net increase in the number of units on the lot) | \$6,224.40 | \$7,558.20 |
| ▪ Multi-family / Others (per unit) (attached residential units, apartments, condominiums, all other units not classified as single-family) | \$5,290.60 | \$6,424.30 |
| ▪ Commercial / General (per 1000 SF) | \$10,581.20 | \$12,848.60 |
| ▪ Commercial Center (per 1000 SF) | \$8,750.70 | \$10,625.85 |
| ▪ Industrial / Light (per 1000 SF) | \$2,753.80 | \$3,343.90 |
| ▪ Industrial / Heavy (per 1000 SF) | \$5,875.80 | \$7,134.90 |
| ▪ Industrial / Business Park (per 1000 SF) | \$2,983.40 | \$3,622.70 |

⁸ Source: City of Torrance, effective October 21, 2020

APPENDIX A

LOCAL CIRCULATION ANALYSIS SCOPE OF WORK (APPROVED 4/8/2022)

MEMORANDUM

To: Steve Finton, P.E., Deputy Public Works Director Date: April 8, 2022
– City Engineer

Cc: City of Torrance – Public Works Department
Brenda Moun, P.E., Engineering Manager
Jessamine Que, Associate Engineer
City of Torrance, Public Works Department

From: Richard E. Barretto, P.E., Principal LLG Ref: 2.22.4525.1
LLG, Engineers

Subject: **Revised Del Amo Circle Apartments Project, Torrance**
Local Circulation Analysis Scope of Work

Engineers & Planners
Traffic
Transportation
Parking

Linscott, Law &
Greenspan, Engineers

2 Executive Circle
Suite 250

Irvine, CA 92614

949.825.6175 T

949.825.6173 F

www.llgengineers.com

Pasadena

Irvine

San Diego

Woodland Hills

As a part of the processing of approval for the above-referenced project in the City of Torrance, Linscott, Law & Greenspan, Engineers (LLG) is pleased to submit the following revised scope of work for the preparation of a Local Circulation Analysis for Del Amo Circle Apartments, a proposed multifamily residential development (hereinafter referred to as Project) in the City of Torrance. The work program details summarized below are based on our recent collaboration on similar-type projects and City's current requirements, as well as prior work on the subject property.

The analysis for the proposed Project will satisfy the traffic impact requirements of the City of Torrance. The following links provide access to the *City of Torrance Traffic Circulation Analysis (TCA) Guidelines* (www.torranceca.gov/tca-guidelines) as well as the *City of Torrance Traffic Impact Assessment Guidelines for Land Use Projects, dated January 2021* (www.torranceca.gov/traffic-reports).

Local Circulation Analysis Scope of Work

A. Project Location: The Project site is a 2.82±-acre parcel of land that is located north of Carson Street, east of Del Amo Circle W. within the Del Amo Financial Center in the City of Torrance, California. The subject property is currently developed with surface parking lot. Access to the Project site is now provided by a full access driveway on Carson Street and a full access driveway on Del Amo Circle. See the attached **Figure 1-1**, a Vicinity Map that illustrates the general location of the Project and surrounding street system. **Figure 2-1** presents existing aerial photograph of the Project site.

B. Project Description: **Figure 2-2** presents the Project Site Plan prepared by Architect Orange, whereas **Figure 2-3** presents the Project Conceptual Landscape Plan prepared by MJS Landscape Architecture.

Review of **Figure 2-2** indicates that the proposed Project includes the development of up to 200 residential apartment units with a total of 440 parking spaces, within a 174,407 square-foot (SF) five-story apartment podium with

consisting of 35 studio units, 66 one-bedroom units, 30 one-bedroom + den units and 69 two-bedroom units “wrapped” around a 169,034 SF six-level parking structure from street level and a partial subterranean level (total floor area of the parking structure to be determined). On-site facilities/amenities include a leasing office, a lounge/lobby, co-working space, mail/lounge, pool/spa, and a fitness center for residents, and courtyards. **Table 2-1** summarizes the proposed development summary and parking information for the Project.

Vehicular access would be provided via one (1) full access unsignalized driveway located on Carson Street, which now serves the Del Amo Financial Center, and one (1) full access “All-Way Stop” unsignalized driveways on Del Amo Circle which will also serve as access to the future planned residential development located on an adjacent parcel directly to the north.

Pedestrian circulation for the proposed Project would be provided via existing public sidewalks along Del Amo Circle, Carson Street and Hawthorne Boulevard within the vicinity of the Project. The existing sidewalk system within the Project vicinity provides direct connectivity to the existing development located along major thoroughfares. Pedestrian access for the Project will be provided via building entries/exits located on Del Amo Circle and Carson Street.

The Project is expected to be completed in the next several years or so by Year 2024 but is dependent on several factors, including the timing of Project approval. Project funding, market conditions and/or the current COVID-19 environment which could delay Project completion. Due the current COVID-19 pandemic, the Project, like most other proposed development, have experienced delays. As such, subject to confirmation by the Project Applicant, Year 2025 will be utilized to assess the Project’s potential opening year (full buildout/occupancy) traffic impacts within a near-term traffic setting.

- C. Project Trip Generation:** Traffic generation is expressed in vehicle trip ends, defined as one-way vehicular movements, either entering or exiting the generating land use. Generation factors and equations used in this analysis are based on information found in the 11th Edition of *Trip Generation*, published by the Institute of Transportation Engineers (ITE) [Washington, D.C., 2021].

Based on the description of the proposed Project uses, the trip generation potential, as presented in **Table 5-1**, was estimated using the average rates for the ITE Land Use Code 221: Multifamily Housing Mid Rise Not Close to Rail Transit.

Proposed Project Development

A review of **Table 5-1** shows the trip generation forecast for the proposed Project. As shown, the proposed Project is forecast to generate 908 daily trips, with 74 trips (17 inbound, 57 outbound) produced in the AM peak hour, and 78 trips (48 inbound, 30 outbound) produced in the PM peak hour.

Need for Traffic Analysis

Per the City's requirements¹, a traffic report "is generally needed if a project generates over 500 trips per day...". Given the Project's trips amount of 908 daily trips, an assessment of the Project will be completed. Therefore, a focused traffic study/local circulation analysis is required.

D. Project Trip Distribution Patterns: See attached **Figure 5-1** for the Project Trip Distribution Pattern as well as a tabular summary on **Table 5-2** for review by the City. Project traffic volumes both entering and exiting the site have been distributed and assigned to the adjacent street system based on the following considerations:

- a. location of site access points in relation to the surrounding street system,
- b. the site's proximity to major traffic carriers and regional access routes,
- c. physical characteristics of the circulation system such as lane channelization and presence of traffic signals that affect travel patterns,
- d. presence of traffic congestion in the surrounding vicinity, and
- e. ingress/egress availability specifically for the Project site from Del Amo Circle and Carson Street.

E. Background Traffic:

- Project Completion Year: 2025 (to be confirmed with Project Applicant)
- Ambient Growth Rate: 0.525% per year

F. Study Intersections: Subject to confirmation by City staff, the following nineteen (19) intersections, inclusive of the two project driveways, would be evaluated:

1. Anza Avenue at Torrance Boulevard
2. Anza Avenue at Carson Street
3. Anza Boulevard at Sepulveda Boulevard

¹ The City of Torrance *Traffic Impact Analysis Report Guidelines*.

4. Ocean Avenue at Torrance Boulevard
5. Ocean Avenue at Carson Street
6. Village Lane at Torrance Boulevard
7. Village Court at Village Lane
8. Village Court at Del Amo Circle
9. Del Amo Circle W at Carson Street
10. Hawthorne Boulevard at Torrance Boulevard
11. Hawthorne Boulevard at Village Lane/Fashion Way
12. Hawthorne Boulevard at Del Amo Circle N
13. Hawthorne Boulevard at Carson Street
14. Hawthorne Boulevard at Sepulveda Boulevard
15. Madrona Avenue at Torrance Boulevard
16. Madrona Avenue at Carson Street
17. Del Amo Circle W at Project Driveway
18. Project Driveway at Carson Street

G. Traffic Counts: Traffic counts at the study intersections identified in Item F will be collected in March or April 2022 during the AM peak period (7:00 AM – 9:00 AM) and PM peak period (4:00 PM – 6:00 PM) on a Tuesday, Wednesday or Thursday. Please note that counts at intersections 1, 2, 3, 4, 5, 8, 9, 10, 12, 13, 14, 15 and 16 were collected on March 31, 2022. The remaining intersections 6, 7, 11 and 17 will be collected on April 26 through 28, 2022.

H. Level of Service Criteria: Level of service calculations will be based on Intersection Capacity Utilization (ICU) methods of analyses. According to the City of Torrance, LOS D or better is the City’s target for intersection operation. The LOS D objective for the roadway network reflects the City’s desire to maintain a minimum acceptable condition during the morning and evening peak commute hours on all intersections within the City.

➤ Level of Service Criteria and Thresholds: The City of Torrance uses the following criteria to assess the need for project-related improvements. For intersections under City of Torrance jurisdiction, a developer may be required to incorporate offsite work into the project to offset the project’s negative effect in the City’s traffic circulation when the following conditions are met:

- For signalized intersections, project-related improvements are needed if the project related increase in the volume to capacity (V/C) ratio equals or exceeds the threshold shown below:

| Level of Service (LOS) | Project-Related V/C Increase |
|------------------------|------------------------------|
| C | 0.04 or more |
| D | 0.02 or more |
| E/F | 0.01 or more |

- For unsignalized intersections, project-related improvements are needed if the project:

| Existing + Ambient Growth + Project | Signal Warrant Analysis Result |
|-------------------------------------|--------------------------------|
| Degrades to E or F | Traffic signal is warranted |

Source: City of Torrance Traffic Circulation Analysis (TCA) Guidelines www.torranceca.gov/tca-guidelines

I. Analysis Methodology: The LOS calculations will be based on *Intersection Capacity Utilization (ICU)* methodology for signalized intersections. The need for project-related offsite improvements that the developer may be required to incorporate to offset the project’s negative effect in the City’s traffic circulation will be based on the thresholds noted above.

The following scenarios are those for which LOS calculations will be performed using the ICU and HCM methodologies per the City’s TCA guidelines:

- A. Existing (E)
- B. Forecast Opening Year (E + Ambient Growth to Year 2025, A)
- C. Forecast Opening Year with Project (E + A + P)
- D. Scenario C with improvements, if necessary

Scenarios B and C from above will include the Senior Village’s forecasted demand related to Parcel A which consists of a 183 DU senior independent living facility.

J. Other Issues

- Evaluate site access and line of sight at the Project driveways.

* * * * *



We appreciate the opportunity to provide this scope of work. Should you have any questions, please call Shane Green or me at (949) 825-6175. Thank You.

Recommended by:

Consultant's Representative

Date

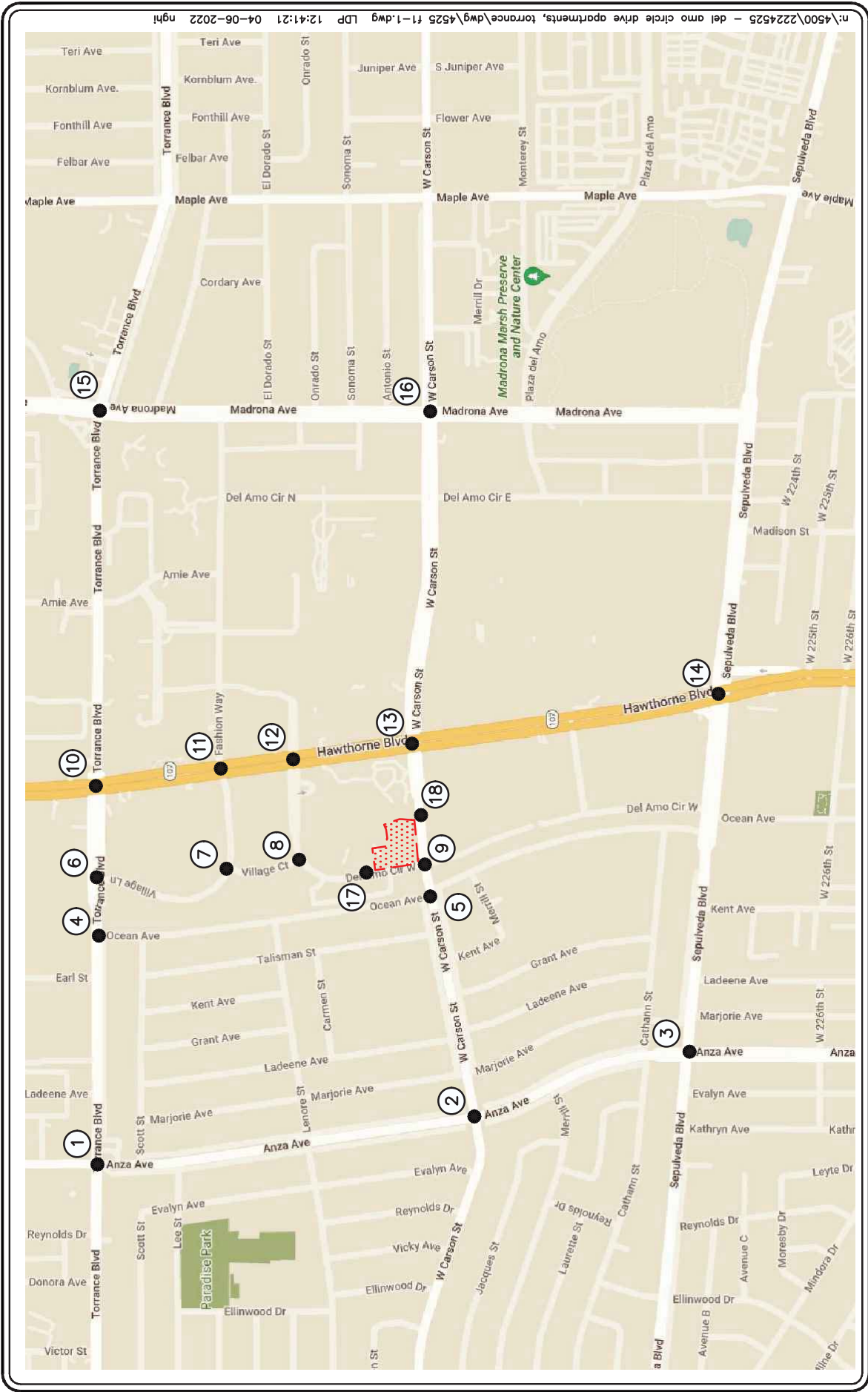
Approved by:

City of Torrance

Date

- cc: File
Shane Green, LLG
David Pinto, Legacy Partners
Benjamin Mount, Legacy Partners
Soc Angelo Yumul, Torrance Planning Department

Attachment



n:\4500\2224525 - del amo circle drive apartments, torrance\dwg\4525 f1-1.dwg LDP 12:41:21 04-06-2022 night

FIGURE 1-1
VICINITY MAP
DEL AMO CIRCLE DRIVE APARTMENTS, TORRANCE

SOURCE: GOOGLE

KEY

- = STUDY INTERSECTION
- = PROJECT SITE



NO SCALE

**LINSCOTT
LAW &
GREENSPAN**
engineers



FIGURE 2-1
EXISTING SITE
 DEL AMO CIRCLE DRIVE APARTMENTS, TORRANCE

SOURCE: GOOGLE

KEY
 = PROJECT SITE

 NO SCALE

LINSCOTT
 LAW &
 GREENSPAN
engineers

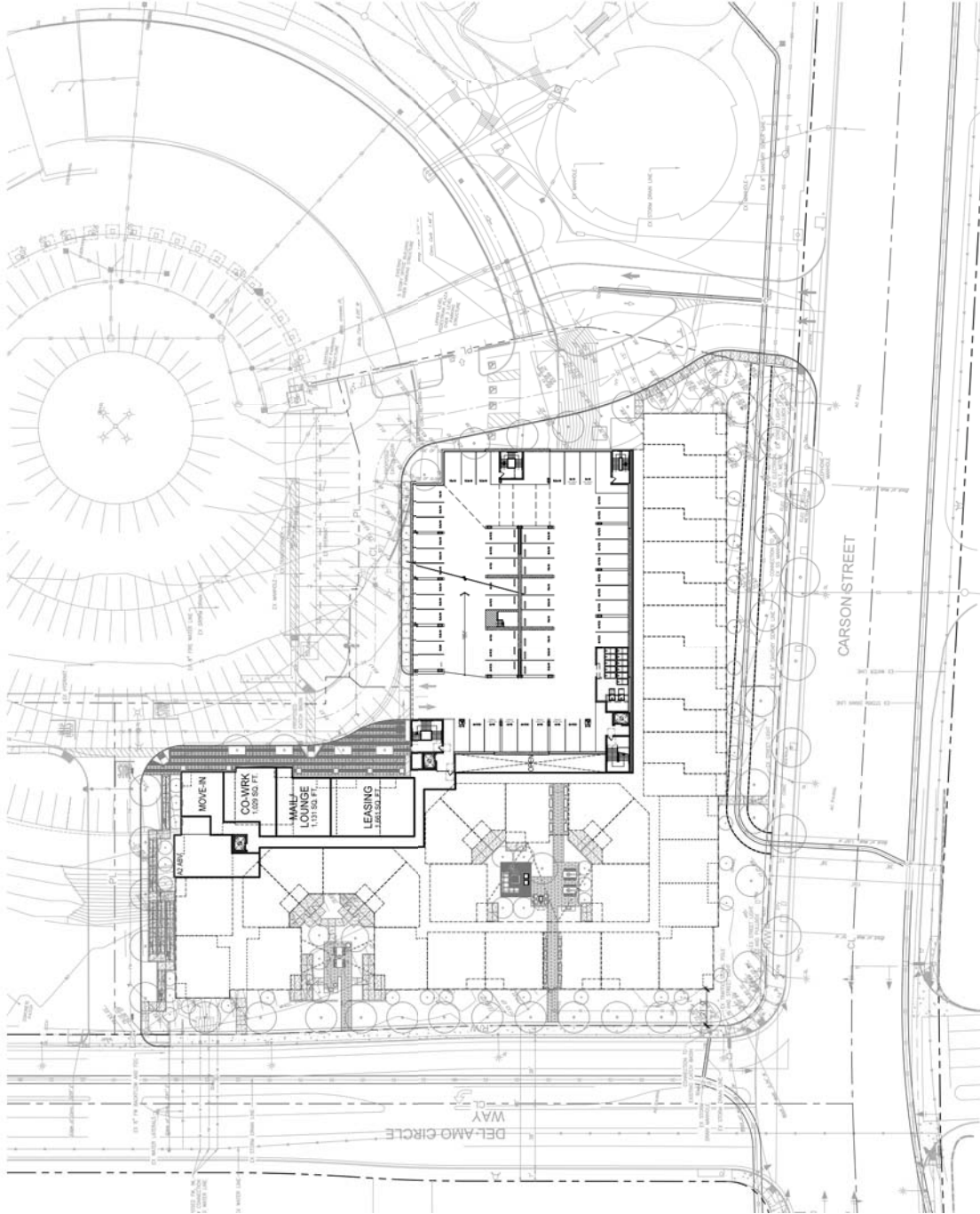


FIGURE 2-2
PROPOSED SITE PLAN
 DEL AMO CIRCLE DRIVE APARTMENTS, TORRANCE

SOURCE: AO ARCHITECTS



NO SCALE

LINSCOTT
 LAW &
 GREENSPAN
 engineers

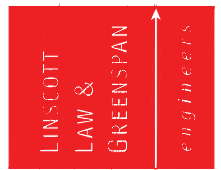


- ACCESSIBLE RAMP TO DEL AMO CIRCLE
- THE BACKYARD
 - expanded private patios
 - festival lights
 - bbq
 - dining tables
 - access to Del Amo Circle
- GARDEN COURTYARD
 - freight lounge
 - bbq
 - dining tables
 - expanded private patios
 - specimen tree
 - festival lights
- LEASING PLAZA
 - enhanced paving
 - trees in courtyards
 - pottery
- SHORT TERM BIKE PARKING (6)
- ROOFTOP TERRACE
 - 27 x 37' pool
 - 16 x 11' spa
 - outdoor fitness
 - club lounge w/ freight
 - outdoor kitchen w/ bbq
- POOL EQUIP GARAGE BELOW
- CLUB
- FITNESS
- MOVE IN
- CO-WORK
- MAIL / LOUNGE
- LEASING
- STREET TREES AT 50' O.C. WITH TURF PARKWAY
- 7' WIDE CURB ADJACENT PUBLIC SIDEWALK
- DEL AMO CIRCLE
- CARSON STREET

n:\4500\2224525 - del amo circle drive apartments, torrance\dwg\4525 f2-3.dwg LPP 09:53:34 03-14-2022 aguilan



NO SCALE

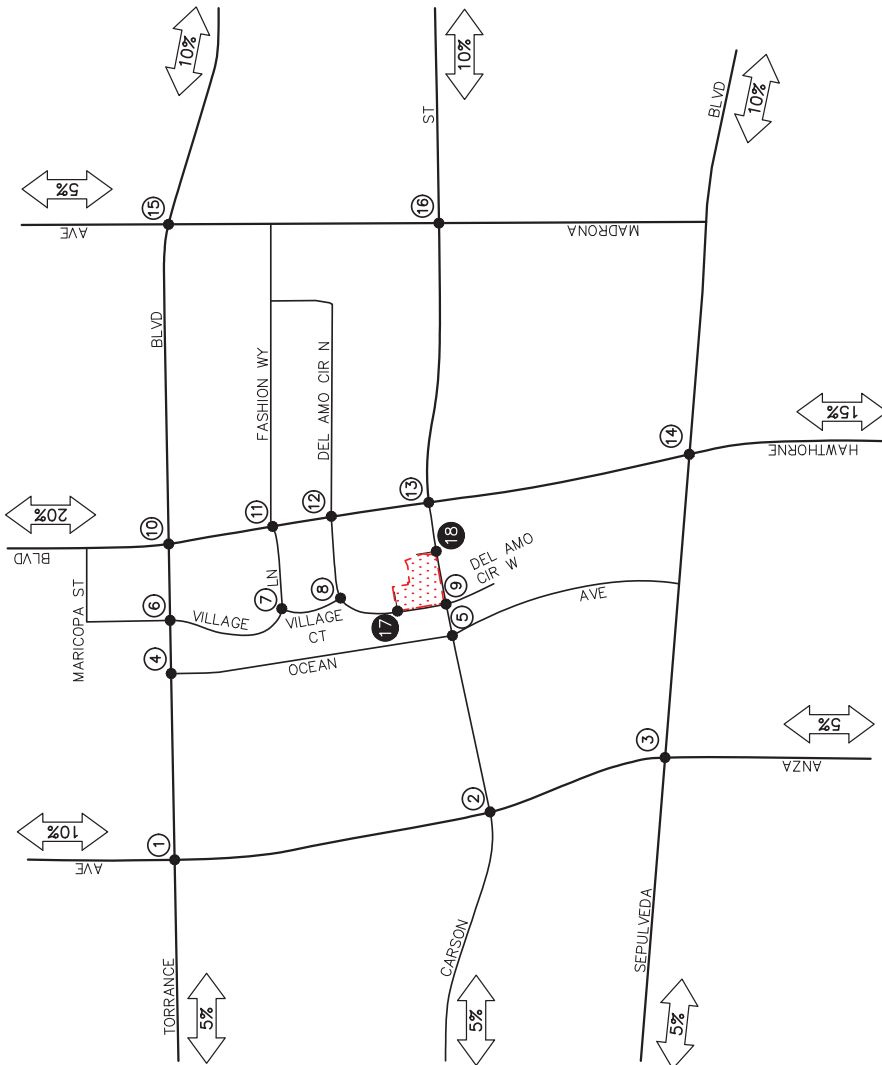
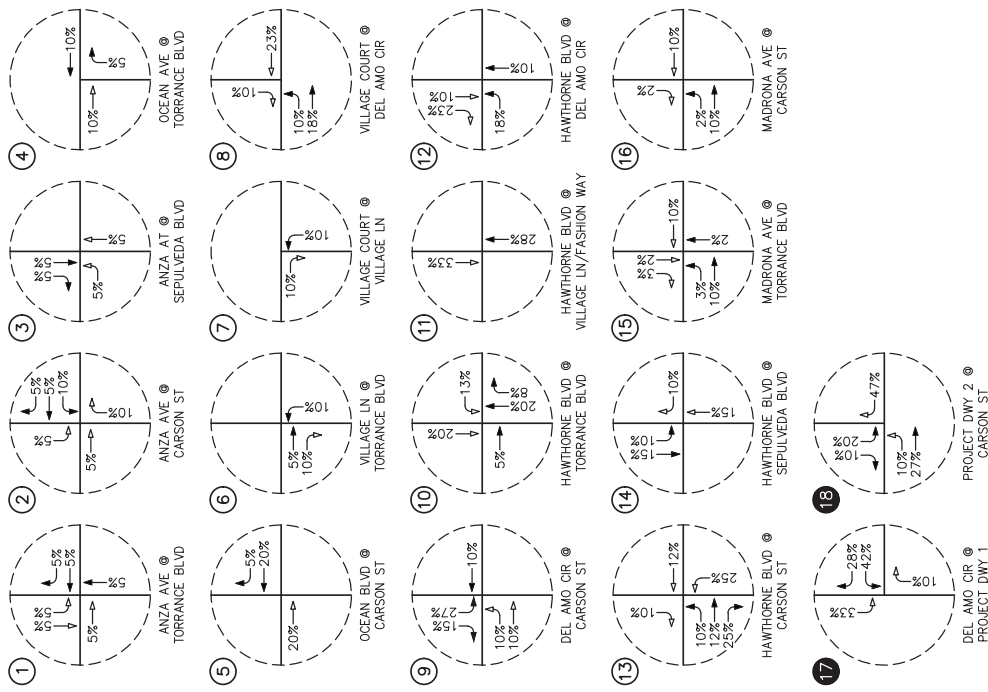


SOURCE: MJS LANDSCAPE ARCHITECTURE

FIGURE 2-3

PROJECT CONCEPTUAL LANDSCAPE PLAN

DEL AMO CIRCLE DRIVE APARTMENTS, TORRANCE



KEY
 ← = INBOUND PERCENTAGE
 → = OUTBOUND PERCENTAGE
 = PROJECT SITE

THE CITY OF TORRANCE
 LAW & POLICE DEPARTMENT
 1000 N. TORRANCE BLVD.
 TORRANCE, CA 90503
 (562) 205-1000
 www.torranceca.gov

 NO SCALE

FIGURE 5-1
PROJECT TRAFFIC DISTRIBUTION PATTERN
 DEL AMO CIRCLE DRIVE APARTMENTS, TORRANCE

TABLE 2-1
PROJECT DEVELOPMENT SUMMARY²
DEL AMO CIRCLE APARTMENTS, TORRANCE

| Project Description | Number of Dwelling Units (DU) | Number of Beds / Parking Spaces |
|---|-------------------------------|---------------------------------|
| <i>Proposed Development</i> | | |
| <i>Residential Apartments (Parcel A)</i> | | |
| ○ Studio (628 SF – 676 SF) | 35 DU | 35 beds |
| ○ 1 Bedroom (678 SF – 778 SF) | 66 DU | 66 beds |
| ○ 1 Bedroom + Den (935 SF) | 30 DU | 30 Beds |
| ○ 2 Bedroom (1,030 Sf – 1,119 SF) | <u>69 DU</u> | <u>138 beds</u> |
| <i>Totals</i> | <i>200 DU</i> | <i>269 beds</i> |
| <i>Parking Structure Parking Supply by Level</i> | | |
| ▪ Subterranean | --- | 15 spaces |
| ▪ Ground | --- | 53 spaces |
| ▪ Level 1 | --- | 61 spaces |
| ▪ Level 2 | --- | 61 spaces |
| ▪ Level 3 | --- | 61 spaces |
| ▪ Level 4 | --- | 61 spaces |
| ▪ Level 5 | --- | 61 spaces |
| ▪ Level 6 | --- | 61 spaces |
| ▪ Level 7 | --- | <u>6 spaces</u> |
| <i>Total Parking</i> | --- | <i>440 spaces</i> |

² Source: Architects Orange / Site Plan /Development tabulation, as of 02/18/2022.

TABLE 5-1
PROJECT TRAFFIC GENERATION FORECAST³
DEL AMO CIRCLE APARTMENTS, TORRANCE

| Description | Daily 2-Way | AM Peak Hour | | | PM Peak Hour | | |
|---|----------------|--------------|------|-------|--------------|------|-------|
| | | Enter | Exit | Total | Enter | Exit | Total |
| <u>Proposed Trip Generation Rates:</u> | | | | | | | |
| <ul style="list-style-type: none"> ▪ ITE 221: Multifamily Housing Mid Rise Not Close to Rail Transit (TE/DU) | 4.54 | 23% | 77% | 0.37 | 61% | 39% | 0.39 |
| <u>Proposed Trip Generation Forecast:</u> | | | | | | | |
| <ul style="list-style-type: none"> ▪ Multifamily Housing Mid Rise (200 DU) | 908 | 17 | 57 | 74 | 48 | 30 | 78 |

³ Source: *Trip Generation*, 11th Edition, Institute of Transportation Engineers (ITE), Washington, D.C. (2021).

TABLE 5-2
PROJECT DIRECTIONAL DISTRIBUTION PATTERN

| Distribution Percentage | Orientation/Direction |
|-------------------------|---|
| 20% | To/from the north via Hawthorne Boulevard |
| 15% | To/from the south via Hawthorne Boulevard |
| 5% | To/from the north via Madrona Avenue |
| 10% | To/from the north via Anza Avenue |
| 5% | To/from the south via Anza Avenue |
| 10% | To/from the east via Torrance Boulevard |
| 5% | To/from the west via Torrance Boulevard |
| 10% | To/from the east via Carson Street |
| 5% | To/from the west via Carson Street |
| 10% | To/from the east via Sepulveda Boulevard |
| 5% | To/from the west via Sepulveda Boulevard |
| 100% | Total |

APPENDIX B
EXISTING TRAFFIC COUNT DATA

City of Torrance
 N/S: Anza Avenue
 E/W: Torrance Boulevard
 Weather: Clear

File Name : 01_TOR_Anza_Torr AM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 1

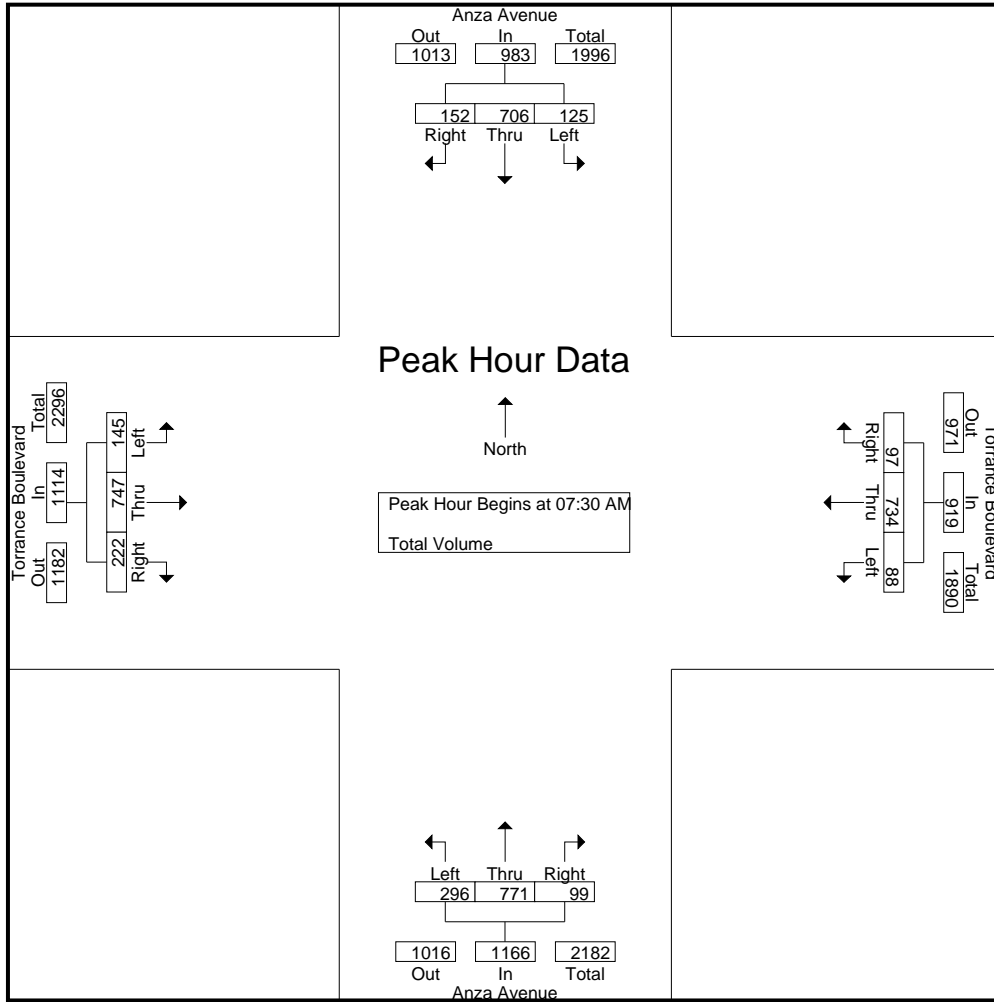
Groups Printed- Total Volume

| Start Time | Anza Avenue Southbound | | | | Torrance Boulevard Westbound | | | | Anza Avenue Northbound | | | | Torrance Boulevard Eastbound | | | | Int. Total |
|-------------|------------------------|------|-------|------------|------------------------------|------|-------|------------|------------------------|------|-------|------------|------------------------------|------|-------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| 07:00 AM | 7 | 58 | 11 | 76 | 10 | 130 | 14 | 154 | 40 | 101 | 12 | 153 | 11 | 89 | 19 | 119 | 502 |
| 07:15 AM | 12 | 93 | 27 | 132 | 14 | 177 | 16 | 207 | 35 | 110 | 15 | 160 | 27 | 142 | 25 | 194 | 693 |
| 07:30 AM | 15 | 133 | 45 | 193 | 25 | 226 | 24 | 275 | 95 | 233 | 26 | 354 | 38 | 190 | 46 | 274 | 1096 |
| 07:45 AM | 45 | 226 | 51 | 322 | 24 | 192 | 32 | 248 | 94 | 245 | 26 | 365 | 47 | 222 | 81 | 350 | 1285 |
| Total | 79 | 510 | 134 | 723 | 73 | 725 | 86 | 884 | 264 | 689 | 79 | 1032 | 123 | 643 | 171 | 937 | 3576 |
| 08:00 AM | 39 | 189 | 35 | 263 | 13 | 169 | 20 | 202 | 63 | 174 | 32 | 269 | 39 | 189 | 66 | 294 | 1028 |
| 08:15 AM | 26 | 158 | 21 | 205 | 26 | 147 | 21 | 194 | 44 | 119 | 15 | 178 | 21 | 146 | 29 | 196 | 773 |
| 08:30 AM | 24 | 171 | 27 | 222 | 42 | 173 | 25 | 240 | 37 | 182 | 26 | 245 | 28 | 166 | 34 | 228 | 935 |
| 08:45 AM | 44 | 154 | 30 | 228 | 17 | 161 | 25 | 203 | 55 | 139 | 23 | 217 | 35 | 199 | 50 | 284 | 932 |
| Total | 133 | 672 | 113 | 918 | 98 | 650 | 91 | 839 | 199 | 614 | 96 | 909 | 123 | 700 | 179 | 1002 | 3668 |
| Grand Total | 212 | 1182 | 247 | 1641 | 171 | 1375 | 177 | 1723 | 463 | 1303 | 175 | 1941 | 246 | 1343 | 350 | 1939 | 7244 |
| Apprch % | 12.9 | 72 | 15.1 | | 9.9 | 79.8 | 10.3 | | 23.9 | 67.1 | 9 | | 12.7 | 69.3 | 18.1 | | |
| Total % | 2.9 | 16.3 | 3.4 | 22.7 | 2.4 | 19 | 2.4 | 23.8 | 6.4 | 18 | 2.4 | 26.8 | 3.4 | 18.5 | 4.8 | 26.8 | |

| Start Time | Anza Avenue Southbound | | | | Torrance Boulevard Westbound | | | | Anza Avenue Northbound | | | | Torrance Boulevard Eastbound | | | | Int. Total |
|--|------------------------|------------|-----------|------------|------------------------------|------------|-----------|------------|------------------------|------------|-----------|------------|------------------------------|------------|-----------|------------|-------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:30 AM | | | | | | | | | | | | | | | | | |
| 07:30 AM | 15 | 133 | 45 | 193 | 25 | 226 | 24 | 275 | 95 | 233 | 26 | 354 | 38 | 190 | 46 | 274 | 1096 |
| 07:45 AM | 45 | 226 | 51 | 322 | 24 | 192 | 32 | 248 | 94 | 245 | 26 | 365 | 47 | 222 | 81 | 350 | 1285 |
| 08:00 AM | 39 | 189 | 35 | 263 | 13 | 169 | 20 | 202 | 63 | 174 | 32 | 269 | 39 | 189 | 66 | 294 | 1028 |
| 08:15 AM | 26 | 158 | 21 | 205 | 26 | 147 | 21 | 194 | 44 | 119 | 15 | 178 | 21 | 146 | 29 | 196 | 773 |
| Total Volume | 125 | 706 | 152 | 983 | 88 | 734 | 97 | 919 | 296 | 771 | 99 | 1166 | 145 | 747 | 222 | 1114 | 4182 |
| % App. Total | 12.7 | 71.8 | 15.5 | | 9.6 | 79.9 | 10.6 | | 25.4 | 66.1 | 8.5 | | 13 | 67.1 | 19.9 | | |
| PHF | .694 | .781 | .745 | .763 | .846 | .812 | .758 | .835 | .779 | .787 | .773 | .799 | .771 | .841 | .685 | .796 | .814 |

City of Torrance
 N/S: Anza Avenue
 E/W: Torrance Boulevard
 Weather: Clear

File Name : 01_TOR_Anza_Torr AM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

| | 07:45 AM | | | | 07:15 AM | | | | 07:30 AM | | | | 07:30 AM | | | |
|--------------|----------|------|------|------|----------|------|------|------|----------|------|------|------|----------|------|------|------|
| +0 mins. | 45 | 226 | 51 | 322 | 14 | 177 | 16 | 207 | 95 | 233 | 26 | 354 | 38 | 190 | 46 | 274 |
| +15 mins. | 39 | 189 | 35 | 263 | 25 | 226 | 24 | 275 | 94 | 245 | 26 | 365 | 47 | 222 | 81 | 350 |
| +30 mins. | 26 | 158 | 21 | 205 | 24 | 192 | 32 | 248 | 63 | 174 | 32 | 269 | 39 | 189 | 66 | 294 |
| +45 mins. | 24 | 171 | 27 | 222 | 13 | 169 | 20 | 202 | 44 | 119 | 15 | 178 | 21 | 146 | 29 | 196 |
| Total Volume | 134 | 744 | 134 | 1012 | 76 | 764 | 92 | 932 | 296 | 771 | 99 | 1166 | 145 | 747 | 222 | 1114 |
| % App. Total | 13.2 | 73.5 | 13.2 | | 8.2 | 82 | 9.9 | | 25.4 | 66.1 | 8.5 | | 13 | 67.1 | 19.9 | |
| PHF | .744 | .823 | .657 | .786 | .760 | .845 | .719 | .847 | .779 | .787 | .773 | .799 | .771 | .841 | .685 | .796 |

City of Torrance
 N/S: Anza Avenue
 E/W: Torrance Boulevard
 Weather: Clear

File Name : 01_TOR_Anza_Torr PM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 1

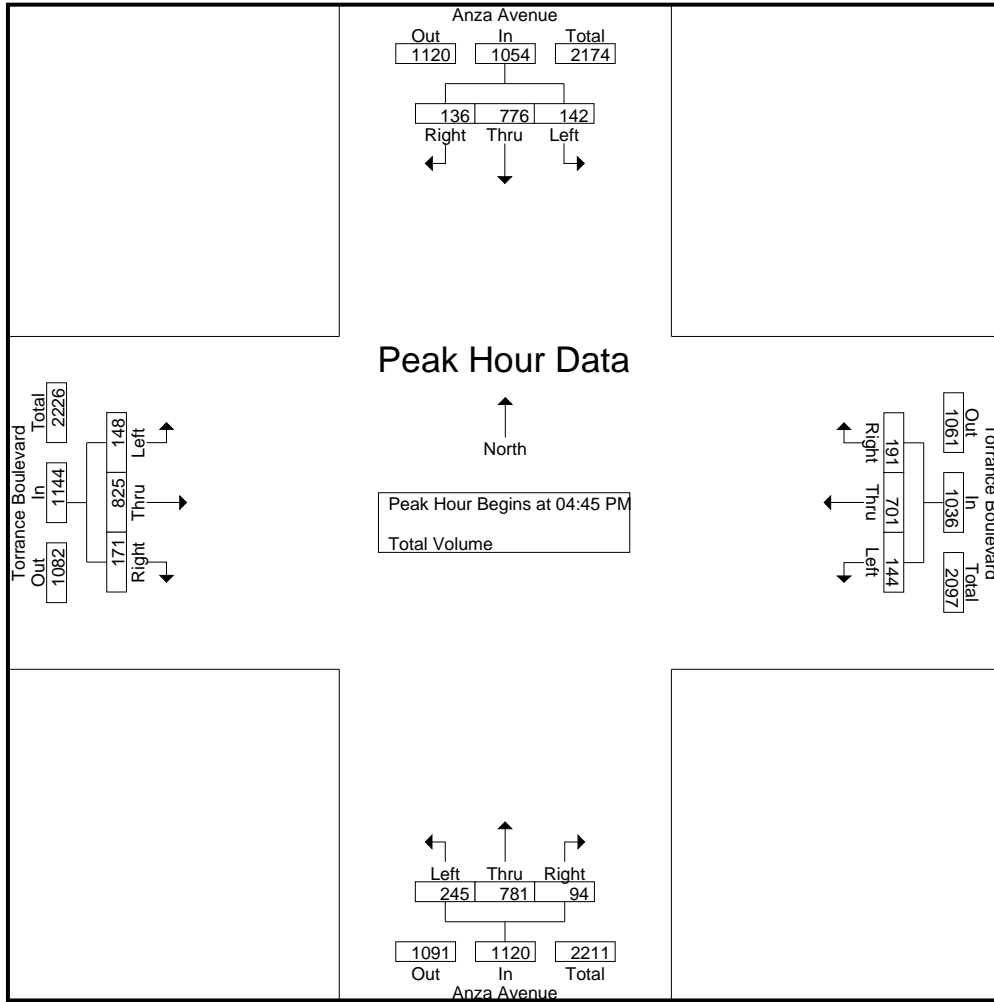
Groups Printed- Total Volume

| Start Time | Anza Avenue Southbound | | | | Torrance Boulevard Westbound | | | | Anza Avenue Northbound | | | | Torrance Boulevard Eastbound | | | | Int. Total |
|-------------|------------------------|------|-------|------------|------------------------------|------|-------|------------|------------------------|------|-------|------------|------------------------------|------|-------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| 04:00 PM | 37 | 176 | 26 | 239 | 36 | 170 | 37 | 243 | 66 | 205 | 20 | 291 | 43 | 197 | 33 | 273 | 1046 |
| 04:15 PM | 33 | 198 | 28 | 259 | 43 | 192 | 29 | 264 | 50 | 175 | 20 | 245 | 40 | 194 | 45 | 279 | 1047 |
| 04:30 PM | 31 | 179 | 26 | 236 | 32 | 166 | 38 | 236 | 72 | 197 | 21 | 290 | 37 | 185 | 40 | 262 | 1024 |
| 04:45 PM | 41 | 198 | 37 | 276 | 36 | 188 | 50 | 274 | 56 | 157 | 24 | 237 | 41 | 208 | 50 | 299 | 1086 |
| Total | 142 | 751 | 117 | 1010 | 147 | 716 | 154 | 1017 | 244 | 734 | 85 | 1063 | 161 | 784 | 168 | 1113 | 4203 |
| 05:00 PM | 35 | 189 | 31 | 255 | 29 | 160 | 34 | 223 | 50 | 207 | 23 | 280 | 42 | 200 | 47 | 289 | 1047 |
| 05:15 PM | 26 | 211 | 41 | 278 | 34 | 162 | 56 | 252 | 55 | 203 | 24 | 282 | 24 | 208 | 43 | 275 | 1087 |
| 05:30 PM | 40 | 178 | 27 | 245 | 45 | 191 | 51 | 287 | 84 | 214 | 23 | 321 | 41 | 209 | 31 | 281 | 1134 |
| 05:45 PM | 31 | 197 | 28 | 256 | 31 | 188 | 41 | 260 | 47 | 145 | 18 | 210 | 28 | 172 | 31 | 231 | 957 |
| Total | 132 | 775 | 127 | 1034 | 139 | 701 | 182 | 1022 | 236 | 769 | 88 | 1093 | 135 | 789 | 152 | 1076 | 4225 |
| Grand Total | 274 | 1526 | 244 | 2044 | 286 | 1417 | 336 | 2039 | 480 | 1503 | 173 | 2156 | 296 | 1573 | 320 | 2189 | 8428 |
| Apprch % | 13.4 | 74.7 | 11.9 | | 14 | 69.5 | 16.5 | | 22.3 | 69.7 | 8 | | 13.5 | 71.9 | 14.6 | | |
| Total % | 3.3 | 18.1 | 2.9 | 24.3 | 3.4 | 16.8 | 4 | 24.2 | 5.7 | 17.8 | 2.1 | 25.6 | 3.5 | 18.7 | 3.8 | 26 | |

| Start Time | Anza Avenue Southbound | | | | Torrance Boulevard Westbound | | | | Anza Avenue Northbound | | | | Torrance Boulevard Eastbound | | | | Int. Total |
|--|------------------------|------------|-----------|------------|------------------------------|------------|-----------|------------|------------------------|------------|-----------|------------|------------------------------|------------|-----------|------------|-------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:45 PM | | | | | | | | | | | | | | | | | |
| 04:45 PM | 41 | 198 | 37 | 276 | 36 | 188 | 50 | 274 | 56 | 157 | 24 | 237 | 41 | 208 | 50 | 299 | 1086 |
| 05:00 PM | 35 | 189 | 31 | 255 | 29 | 160 | 34 | 223 | 50 | 207 | 23 | 280 | 42 | 200 | 47 | 289 | 1047 |
| 05:15 PM | 26 | 211 | 41 | 278 | 34 | 162 | 56 | 252 | 55 | 203 | 24 | 282 | 24 | 208 | 43 | 275 | 1087 |
| 05:30 PM | 40 | 178 | 27 | 245 | 45 | 191 | 51 | 287 | 84 | 214 | 23 | 321 | 41 | 209 | 31 | 281 | 1134 |
| Total Volume | 142 | 776 | 136 | 1054 | 144 | 701 | 191 | 1036 | 245 | 781 | 94 | 1120 | 148 | 825 | 171 | 1144 | 4354 |
| % App. Total | 13.5 | 73.6 | 12.9 | | 13.9 | 67.7 | 18.4 | | 21.9 | 69.7 | 8.4 | | 12.9 | 72.1 | 14.9 | | |
| PHF | .866 | .919 | .829 | .948 | .800 | .918 | .853 | .902 | .729 | .912 | .979 | .872 | .881 | .987 | .855 | .957 | .960 |

City of Torrance
 N/S: Anza Avenue
 E/W: Torrance Boulevard
 Weather: Clear

File Name : 01_TOR_Anza_Torr PM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

| | 04:45 PM | | | | 04:45 PM | | | | 04:45 PM | | | | 04:45 PM | | | |
|--------------|----------|------|------|------|----------|------|------|------|----------|------|------|------|----------|------|------|------|
| +0 mins. | 41 | 198 | 37 | 276 | 36 | 188 | 50 | 274 | 56 | 157 | 24 | 237 | 41 | 208 | 50 | 299 |
| +15 mins. | 35 | 189 | 31 | 255 | 29 | 160 | 34 | 223 | 50 | 207 | 23 | 280 | 42 | 200 | 47 | 289 |
| +30 mins. | 26 | 211 | 41 | 278 | 34 | 162 | 56 | 252 | 55 | 203 | 24 | 282 | 24 | 208 | 43 | 275 |
| +45 mins. | 40 | 178 | 27 | 245 | 45 | 191 | 51 | 287 | 84 | 214 | 23 | 321 | 41 | 209 | 31 | 281 |
| Total Volume | 142 | 776 | 136 | 1054 | 144 | 701 | 191 | 1036 | 245 | 781 | 94 | 1120 | 148 | 825 | 171 | 1144 |
| % App. Total | 13.5 | 73.6 | 12.9 | | 13.9 | 67.7 | 18.4 | | 21.9 | 69.7 | 8.4 | | 12.9 | 72.1 | 14.9 | |
| PHF | .866 | .919 | .829 | .948 | .800 | .918 | .853 | .902 | .729 | .912 | .979 | .872 | .881 | .987 | .855 | .957 |

City of Torrance
 N/S: Anza Avenue
 E/W: Carson Street
 Weather: Clear

File Name : 02_TOR_Anza_Carson AM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 1

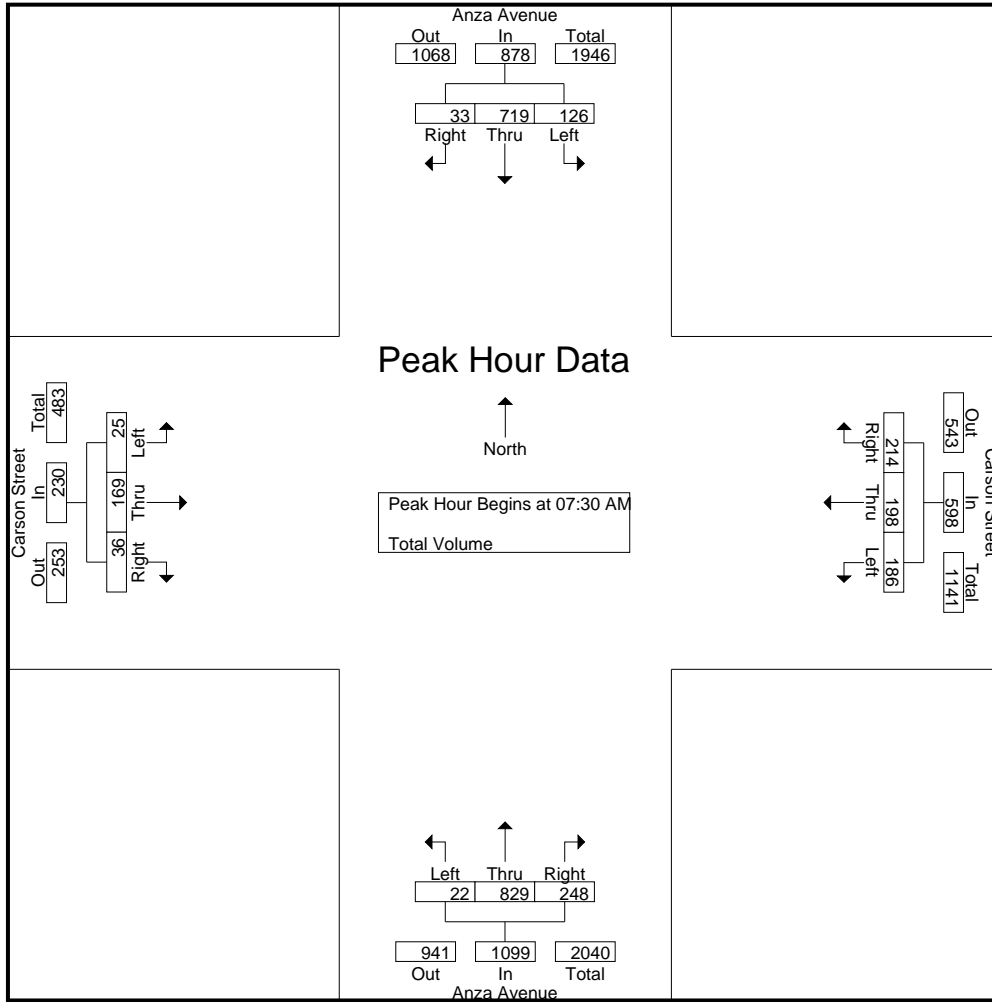
Groups Printed- Total Volume

| Start Time | Anza Avenue Southbound | | | | Carson Street Westbound | | | | Anza Avenue Northbound | | | | Carson Street Eastbound | | | | Int. Total |
|-------------|------------------------|------|-------|------------|-------------------------|------|-------|------------|------------------------|------|-------|------------|-------------------------|------|-------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| 07:00 AM | 14 | 60 | 2 | 76 | 17 | 17 | 15 | 49 | 1 | 118 | 24 | 143 | 2 | 20 | 4 | 26 | 294 |
| 07:15 AM | 13 | 99 | 1 | 113 | 35 | 37 | 31 | 103 | 7 | 129 | 33 | 169 | 4 | 21 | 7 | 32 | 417 |
| 07:30 AM | 18 | 145 | 8 | 171 | 63 | 48 | 67 | 178 | 7 | 274 | 51 | 332 | 4 | 49 | 10 | 63 | 744 |
| 07:45 AM | 38 | 206 | 7 | 251 | 59 | 54 | 63 | 176 | 5 | 212 | 70 | 287 | 12 | 46 | 10 | 68 | 782 |
| Total | 83 | 510 | 18 | 611 | 174 | 156 | 176 | 506 | 20 | 733 | 178 | 931 | 22 | 136 | 31 | 189 | 2237 |
| 08:00 AM | 47 | 213 | 5 | 265 | 30 | 60 | 51 | 141 | 4 | 175 | 84 | 263 | 6 | 45 | 8 | 59 | 728 |
| 08:15 AM | 23 | 155 | 13 | 191 | 34 | 36 | 33 | 103 | 6 | 168 | 43 | 217 | 3 | 29 | 8 | 40 | 551 |
| 08:30 AM | 25 | 181 | 4 | 210 | 38 | 65 | 31 | 134 | 16 | 220 | 47 | 283 | 8 | 47 | 17 | 72 | 699 |
| 08:45 AM | 52 | 208 | 4 | 264 | 27 | 32 | 25 | 84 | 12 | 156 | 62 | 230 | 5 | 43 | 12 | 60 | 638 |
| Total | 147 | 757 | 26 | 930 | 129 | 193 | 140 | 462 | 38 | 719 | 236 | 993 | 22 | 164 | 45 | 231 | 2616 |
| Grand Total | 230 | 1267 | 44 | 1541 | 303 | 349 | 316 | 968 | 58 | 1452 | 414 | 1924 | 44 | 300 | 76 | 420 | 4853 |
| Apprch % | 14.9 | 82.2 | 2.9 | | 31.3 | 36.1 | 32.6 | | 3 | 75.5 | 21.5 | | 10.5 | 71.4 | 18.1 | | |
| Total % | 4.7 | 26.1 | 0.9 | 31.8 | 6.2 | 7.2 | 6.5 | 19.9 | 1.2 | 29.9 | 8.5 | 39.6 | 0.9 | 6.2 | 1.6 | 8.7 | |

| Start Time | Anza Avenue Southbound | | | | Carson Street Westbound | | | | Anza Avenue Northbound | | | | Carson Street Eastbound | | | | Int. Total |
|--|------------------------|------------|-----------|------------|-------------------------|-----------|-----------|------------|------------------------|------------|-----------|------------|-------------------------|-----------|-----------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:30 AM | | | | | | | | | | | | | | | | | |
| 07:30 AM | 18 | 145 | 8 | 171 | 63 | 48 | 67 | 178 | 7 | 274 | 51 | 332 | 4 | 49 | 10 | 63 | 744 |
| 07:45 AM | 38 | 206 | 7 | 251 | 59 | 54 | 63 | 176 | 5 | 212 | 70 | 287 | 12 | 46 | 10 | 68 | 782 |
| 08:00 AM | 47 | 213 | 5 | 265 | 30 | 60 | 51 | 141 | 4 | 175 | 84 | 263 | 6 | 45 | 8 | 59 | 728 |
| 08:15 AM | 23 | 155 | 13 | 191 | 34 | 36 | 33 | 103 | 6 | 168 | 43 | 217 | 3 | 29 | 8 | 40 | 551 |
| Total Volume | 126 | 719 | 33 | 878 | 186 | 198 | 214 | 598 | 22 | 829 | 248 | 1099 | 25 | 169 | 36 | 230 | 2805 |
| % App. Total | 14.4 | 81.9 | 3.8 | | 31.1 | 33.1 | 35.8 | | 2 | 75.4 | 22.6 | | 10.9 | 73.5 | 15.7 | | |
| PHF | .670 | .844 | .635 | .828 | .738 | .825 | .799 | .840 | .786 | .756 | .738 | .828 | .521 | .862 | .900 | .846 | .897 |

City of Torrance
 N/S: Anza Avenue
 E/W: Carson Street
 Weather: Clear

File Name : 02_TOR_Anza_Carson AM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

| | 08:00 AM | | | | 07:15 AM | | | | 07:30 AM | | | | 07:45 AM | | | |
|--------------|-----------|------------|-----------|------------|-----------|-----------|-----------|------------|----------|------------|-----------|------------|-----------|-----------|-----------|-----------|
| +0 mins. | 47 | 213 | 5 | 265 | 35 | 37 | 31 | 103 | 7 | 274 | 51 | 332 | 12 | 46 | 10 | 68 |
| +15 mins. | 23 | 155 | 13 | 191 | 63 | 48 | 67 | 178 | 5 | 212 | 70 | 287 | 6 | 45 | 8 | 59 |
| +30 mins. | 25 | 181 | 4 | 210 | 59 | 54 | 63 | 176 | 4 | 175 | 84 | 263 | 3 | 29 | 8 | 40 |
| +45 mins. | 52 | 208 | 4 | 264 | 30 | 60 | 51 | 141 | 6 | 168 | 43 | 217 | 8 | 47 | 17 | 72 |
| Total Volume | 147 | 757 | 26 | 930 | 187 | 199 | 212 | 598 | 22 | 829 | 248 | 1099 | 29 | 167 | 43 | 239 |
| % App. Total | 15.8 | 81.4 | 2.8 | | 31.3 | 33.3 | 35.5 | | 2 | 75.4 | 22.6 | | 12.1 | 69.9 | 18 | |
| PHF | .707 | .888 | .500 | .877 | .742 | .829 | .791 | .840 | .786 | .756 | .738 | .828 | .604 | .888 | .632 | .830 |

City of Torrance
 N/S: Anza Avenue
 E/W: Carson Street
 Weather: Clear

File Name : 02_TOR_Anza_Carson PM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 1

Groups Printed- Total Volume

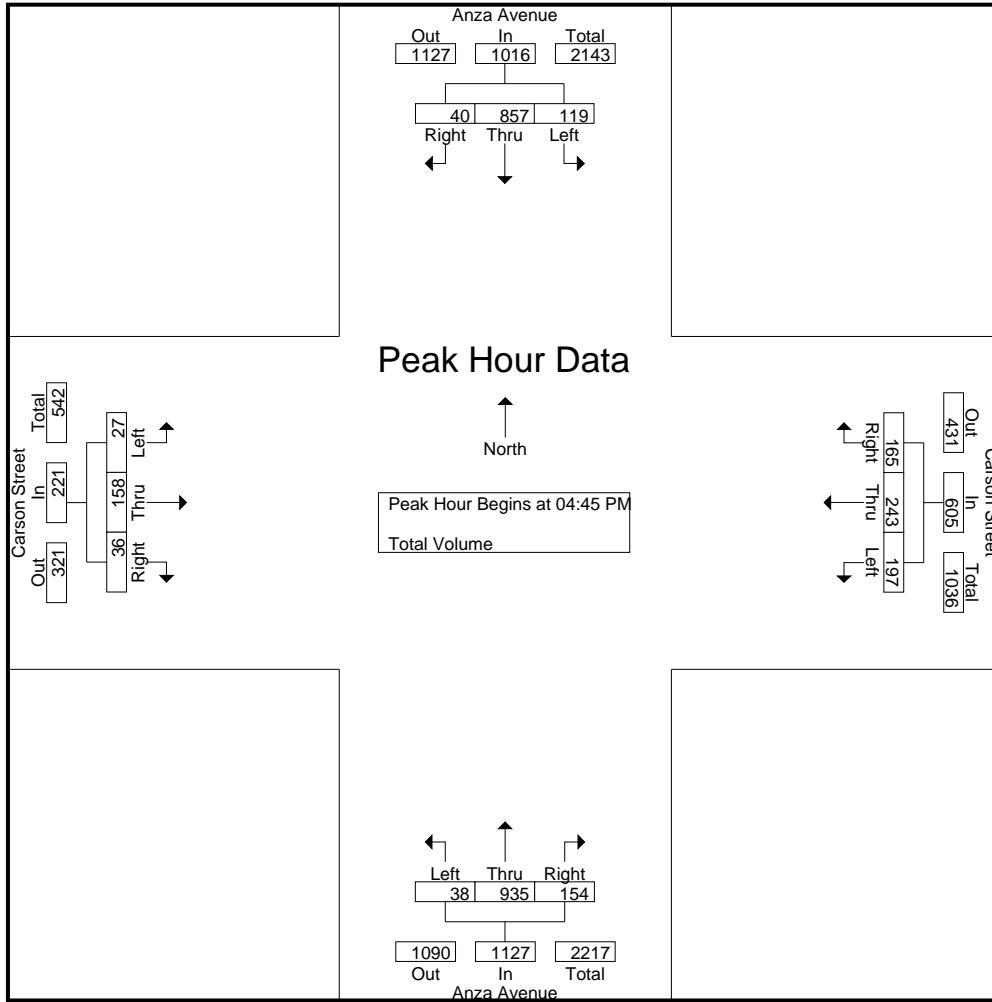
| Start Time | Anza Avenue Southbound | | | | Carson Street Westbound | | | | Anza Avenue Northbound | | | | Carson Street Eastbound | | | | Int. Total |
|-------------|------------------------|------|-------|------------|-------------------------|------|-------|------------|------------------------|------|-------|------------|-------------------------|------|-------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| 04:00 PM | 37 | 184 | 9 | 230 | 47 | 54 | 50 | 151 | 5 | 225 | 41 | 271 | 5 | 53 | 10 | 68 | 720 |
| 04:15 PM | 51 | 204 | 12 | 267 | 43 | 47 | 35 | 125 | 7 | 247 | 50 | 304 | 4 | 38 | 6 | 48 | 744 |
| 04:30 PM | 28 | 189 | 8 | 225 | 53 | 62 | 50 | 165 | 12 | 185 | 41 | 238 | 6 | 37 | 2 | 45 | 673 |
| 04:45 PM | 47 | 229 | 8 | 284 | 56 | 61 | 34 | 151 | 11 | 242 | 40 | 293 | 3 | 34 | 15 | 52 | 780 |
| Total | 163 | 806 | 37 | 1006 | 199 | 224 | 169 | 592 | 35 | 899 | 172 | 1106 | 18 | 162 | 33 | 213 | 2917 |
| 05:00 PM | 31 | 190 | 9 | 230 | 50 | 63 | 42 | 155 | 11 | 203 | 36 | 250 | 3 | 51 | 10 | 64 | 699 |
| 05:15 PM | 23 | 244 | 12 | 279 | 52 | 56 | 38 | 146 | 4 | 257 | 42 | 303 | 7 | 46 | 7 | 60 | 788 |
| 05:30 PM | 18 | 194 | 11 | 223 | 39 | 63 | 51 | 153 | 12 | 233 | 36 | 281 | 14 | 27 | 4 | 45 | 702 |
| 05:45 PM | 32 | 206 | 7 | 245 | 38 | 46 | 31 | 115 | 7 | 175 | 39 | 221 | 8 | 37 | 10 | 55 | 636 |
| Total | 104 | 834 | 39 | 977 | 179 | 228 | 162 | 569 | 34 | 868 | 153 | 1055 | 32 | 161 | 31 | 224 | 2825 |
| Grand Total | 267 | 1640 | 76 | 1983 | 378 | 452 | 331 | 1161 | 69 | 1767 | 325 | 2161 | 50 | 323 | 64 | 437 | 5742 |
| Apprch % | 13.5 | 82.7 | 3.8 | | 32.6 | 38.9 | 28.5 | | 3.2 | 81.8 | 15 | | 11.4 | 73.9 | 14.6 | | |
| Total % | 4.6 | 28.6 | 1.3 | 34.5 | 6.6 | 7.9 | 5.8 | 20.2 | 1.2 | 30.8 | 5.7 | 37.6 | 0.9 | 5.6 | 1.1 | 7.6 | |

| Start Time | Anza Avenue Southbound | | | | Carson Street Westbound | | | | Anza Avenue Northbound | | | | Carson Street Eastbound | | | | Int. Total |
|--------------|------------------------|------------|-----------|------------|-------------------------|-----------|-----------|------------|------------------------|------------|-----------|------------|-------------------------|-----------|-----------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| 04:45 PM | 47 | 229 | 8 | 284 | 56 | 61 | 34 | 151 | 11 | 242 | 40 | 293 | 3 | 34 | 15 | 52 | 780 |
| 05:00 PM | 31 | 190 | 9 | 230 | 50 | 63 | 42 | 155 | 11 | 203 | 36 | 250 | 3 | 51 | 10 | 64 | 699 |
| 05:15 PM | 23 | 244 | 12 | 279 | 52 | 56 | 38 | 146 | 4 | 257 | 42 | 303 | 7 | 46 | 7 | 60 | 788 |
| 05:30 PM | 18 | 194 | 11 | 223 | 39 | 63 | 51 | 153 | 12 | 233 | 36 | 281 | 14 | 27 | 4 | 45 | 702 |
| Total Volume | 119 | 857 | 40 | 1016 | 197 | 243 | 165 | 605 | 38 | 935 | 154 | 1127 | 27 | 158 | 36 | 221 | 2969 |
| % App. Total | 11.7 | 84.4 | 3.9 | | 32.6 | 40.2 | 27.3 | | 3.4 | 83 | 13.7 | | 12.2 | 71.5 | 16.3 | | |
| PHF | .633 | .878 | .833 | .894 | .879 | .964 | .809 | .976 | .792 | .910 | .917 | .930 | .482 | .775 | .600 | .863 | .942 |

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:45 PM

City of Torrance
 N/S: Anza Avenue
 E/W: Carson Street
 Weather: Clear

File Name : 02_TOR_Anza_Carson PM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

| | 04:30 PM | | | | 04:30 PM | | | | 04:45 PM | | | | 05:00 PM | | | |
|--------------|-----------|------------|-----------|------------|-----------|-----------|-----------|------------|-----------|------------|-----------|------------|-----------|-----------|-----------|-----------|
| +0 mins. | 28 | 189 | 8 | 225 | 53 | 62 | 50 | 165 | 11 | 242 | 40 | 293 | 3 | 51 | 10 | 64 |
| +15 mins. | 47 | 229 | 8 | 284 | 56 | 61 | 34 | 151 | 11 | 203 | 36 | 250 | 7 | 46 | 7 | 60 |
| +30 mins. | 31 | 190 | 9 | 230 | 50 | 63 | 42 | 155 | 4 | 257 | 42 | 303 | 14 | 27 | 4 | 45 |
| +45 mins. | 23 | 244 | 12 | 279 | 52 | 56 | 38 | 146 | 12 | 233 | 36 | 281 | 8 | 37 | 10 | 55 |
| Total Volume | 129 | 852 | 37 | 1018 | 211 | 242 | 164 | 617 | 38 | 935 | 154 | 1127 | 32 | 161 | 31 | 224 |
| % App. Total | 12.7 | 83.7 | 3.6 | | 34.2 | 39.2 | 26.6 | | 3.4 | 83 | 13.7 | | 14.3 | 71.9 | 13.8 | |
| PHF | .686 | .873 | .771 | .896 | .942 | .960 | .820 | .935 | .792 | .910 | .917 | .930 | .571 | .789 | .775 | .875 |

City of Torrance
 N/S: Anza Avenue
 E/W: Sepulveda Boulevard
 Weather: Clear

File Name : 03_TOR_Anza_Sep AM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 1

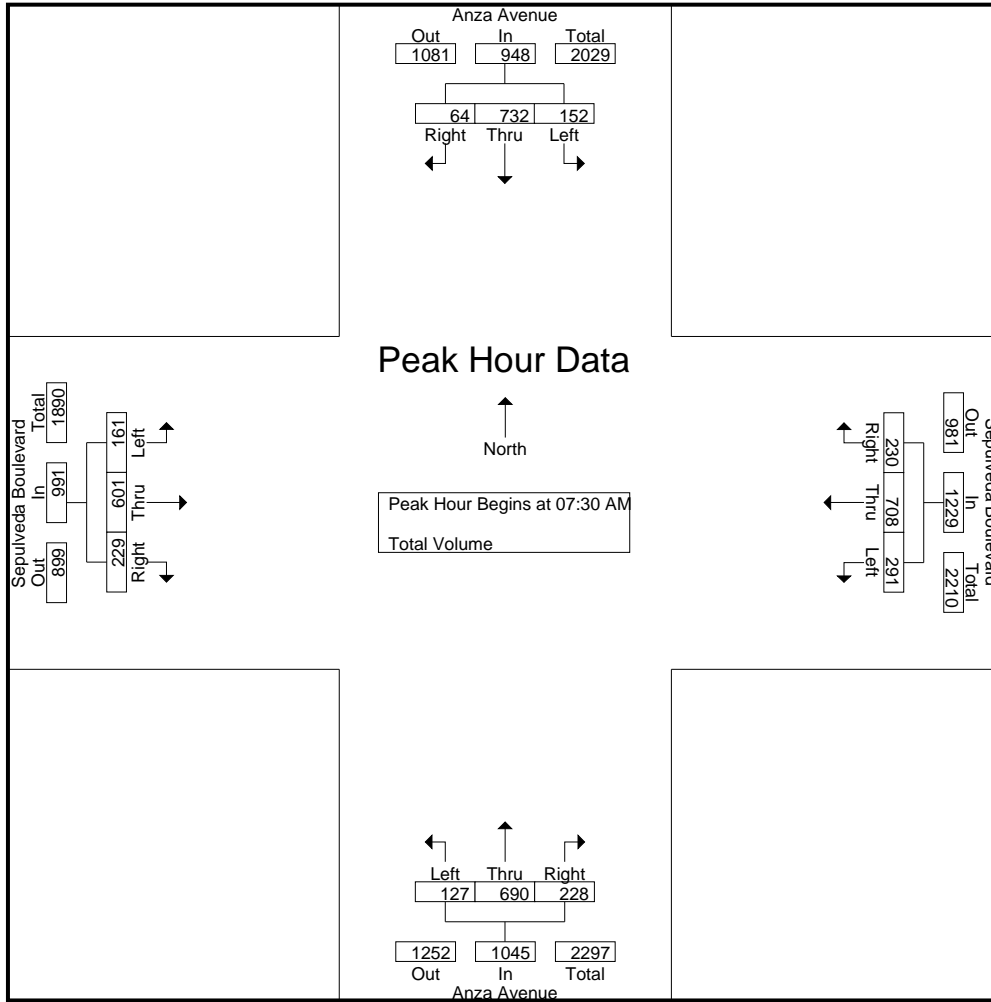
Groups Printed- Total Volume

| Start Time | Anza Avenue Southbound | | | | Sepulveda Boulevard Westbound | | | | Anza Avenue Northbound | | | | Sepulveda Boulevard Eastbound | | | | Int. Total |
|-------------|------------------------|------|-------|------------|-------------------------------|------|-------|------------|------------------------|------|-------|------------|-------------------------------|------|-------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| 07:00 AM | 18 | 69 | 6 | 93 | 27 | 107 | 36 | 170 | 21 | 89 | 29 | 139 | 26 | 67 | 24 | 117 | 519 |
| 07:15 AM | 19 | 121 | 10 | 150 | 52 | 164 | 48 | 264 | 14 | 104 | 30 | 148 | 30 | 78 | 43 | 151 | 713 |
| 07:30 AM | 30 | 159 | 11 | 200 | 91 | 168 | 87 | 346 | 29 | 179 | 59 | 267 | 31 | 120 | 47 | 198 | 1011 |
| 07:45 AM | 39 | 222 | 24 | 285 | 99 | 173 | 60 | 332 | 38 | 203 | 58 | 299 | 39 | 168 | 52 | 259 | 1175 |
| Total | 106 | 571 | 51 | 728 | 269 | 612 | 231 | 1112 | 102 | 575 | 176 | 853 | 126 | 433 | 166 | 725 | 3418 |
| 08:00 AM | 57 | 184 | 15 | 256 | 51 | 168 | 41 | 260 | 35 | 171 | 74 | 280 | 46 | 162 | 70 | 278 | 1074 |
| 08:15 AM | 26 | 167 | 14 | 207 | 50 | 199 | 42 | 291 | 25 | 137 | 37 | 199 | 45 | 151 | 60 | 256 | 953 |
| 08:30 AM | 44 | 180 | 17 | 241 | 50 | 163 | 74 | 287 | 16 | 136 | 44 | 196 | 52 | 143 | 49 | 244 | 968 |
| 08:45 AM | 59 | 181 | 9 | 249 | 42 | 174 | 54 | 270 | 28 | 134 | 43 | 205 | 47 | 151 | 66 | 264 | 988 |
| Total | 186 | 712 | 55 | 953 | 193 | 704 | 211 | 1108 | 104 | 578 | 198 | 880 | 190 | 607 | 245 | 1042 | 3983 |
| Grand Total | 292 | 1283 | 106 | 1681 | 462 | 1316 | 442 | 2220 | 206 | 1153 | 374 | 1733 | 316 | 1040 | 411 | 1767 | 7401 |
| Apprch % | 17.4 | 76.3 | 6.3 | | 20.8 | 59.3 | 19.9 | | 11.9 | 66.5 | 21.6 | | 17.9 | 58.9 | 23.3 | | |
| Total % | 3.9 | 17.3 | 1.4 | 22.7 | 6.2 | 17.8 | 6 | 30 | 2.8 | 15.6 | 5.1 | 23.4 | 4.3 | 14.1 | 5.6 | 23.9 | |

| Start Time | Anza Avenue Southbound | | | | Sepulveda Boulevard Westbound | | | | Anza Avenue Northbound | | | | Sepulveda Boulevard Eastbound | | | | Int. Total |
|--|------------------------|------------|-----------|------------|-------------------------------|------------|-----------|------------|------------------------|------------|-----------|------------|-------------------------------|------------|-----------|------------|-------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:30 AM | | | | | | | | | | | | | | | | | |
| 07:30 AM | 30 | 159 | 11 | 200 | 91 | 168 | 87 | 346 | 29 | 179 | 59 | 267 | 31 | 120 | 47 | 198 | 1011 |
| 07:45 AM | 39 | 222 | 24 | 285 | 99 | 173 | 60 | 332 | 38 | 203 | 58 | 299 | 39 | 168 | 52 | 259 | 1175 |
| 08:00 AM | 57 | 184 | 15 | 256 | 51 | 168 | 41 | 260 | 35 | 171 | 74 | 280 | 46 | 162 | 70 | 278 | 1074 |
| 08:15 AM | 26 | 167 | 14 | 207 | 50 | 199 | 42 | 291 | 25 | 137 | 37 | 199 | 45 | 151 | 60 | 256 | 953 |
| Total Volume | 152 | 732 | 64 | 948 | 291 | 708 | 230 | 1229 | 127 | 690 | 228 | 1045 | 161 | 601 | 229 | 991 | 4213 |
| % App. Total | 16 | 77.2 | 6.8 | | 23.7 | 57.6 | 18.7 | | 12.2 | 66 | 21.8 | | 16.2 | 60.6 | 23.1 | | |
| PHF | .667 | .824 | .667 | .832 | .735 | .889 | .661 | .888 | .836 | .850 | .770 | .874 | .875 | .894 | .818 | .891 | .896 |

City of Torrance
 N/S: Anza Avenue
 E/W: Sepulveda Boulevard
 Weather: Clear

File Name : 03_TOR_Anza_Sep AM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

| | 07:45 AM | | | | 07:30 AM | | | | 07:30 AM | | | | 08:00 AM | | | |
|--------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|
| +0 mins. | 39 | 222 | 24 | 285 | 91 | 168 | 87 | 346 | 29 | 179 | 59 | 267 | 46 | 162 | 70 | 278 |
| +15 mins. | 57 | 184 | 15 | 256 | 99 | 173 | 60 | 332 | 38 | 203 | 58 | 299 | 45 | 151 | 60 | 256 |
| +30 mins. | 26 | 167 | 14 | 207 | 51 | 168 | 41 | 260 | 35 | 171 | 74 | 280 | 52 | 143 | 49 | 244 |
| +45 mins. | 44 | 180 | 17 | 241 | 50 | 199 | 42 | 291 | 25 | 137 | 37 | 199 | 47 | 151 | 66 | 264 |
| Total Volume | 166 | 753 | 70 | 989 | 291 | 708 | 230 | 1229 | 127 | 690 | 228 | 1045 | 190 | 607 | 245 | 1042 |
| % App. Total | 16.8 | 76.1 | 7.1 | | 23.7 | 57.6 | 18.7 | | 12.2 | 66 | 21.8 | | 18.2 | 58.3 | 23.5 | |
| PHF | .728 | .848 | .729 | .868 | .735 | .889 | .661 | .888 | .836 | .850 | .770 | .874 | .913 | .937 | .875 | .937 |

City of Torrance
 N/S: Anza Avenue
 E/W: Sepulveda Boulevard
 Weather: Clear

File Name : 03_TOR_Anza_Sep PM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 1

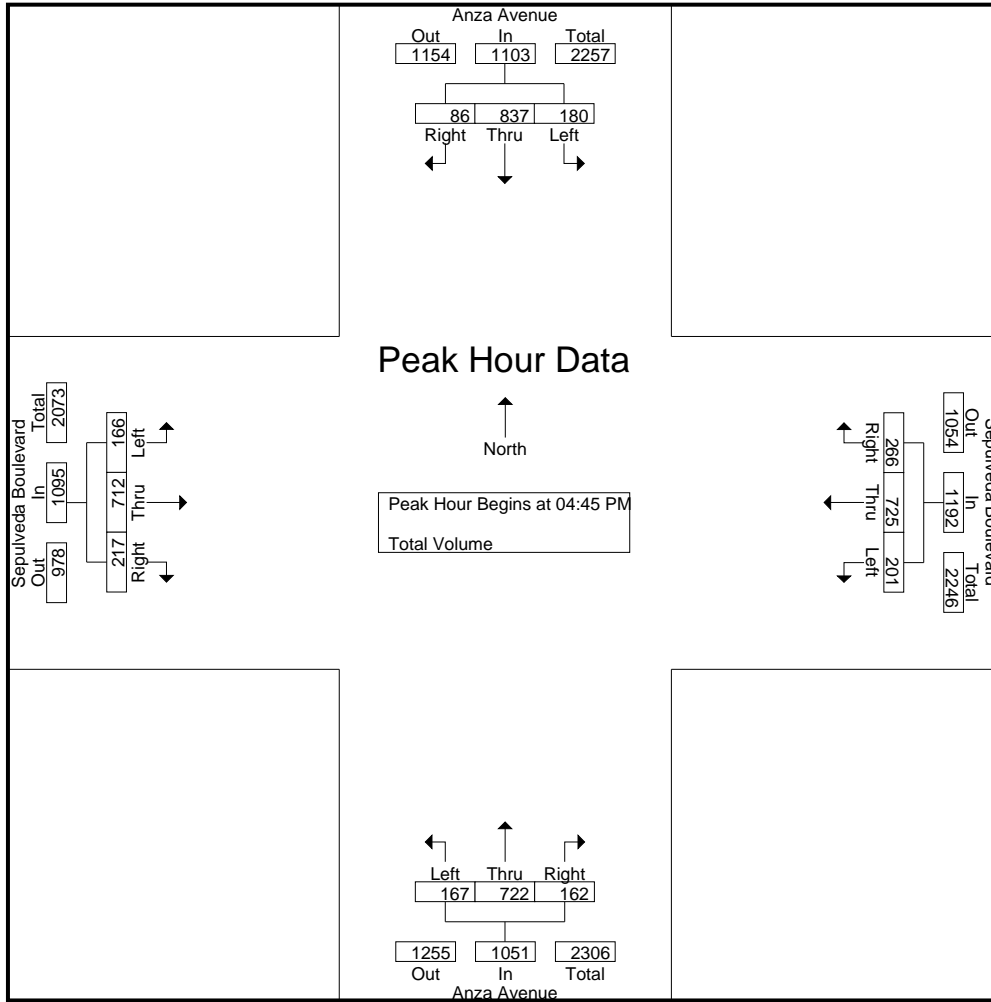
Groups Printed- Total Volume

| Start Time | Anza Avenue Southbound | | | | Sepulveda Boulevard Westbound | | | | Anza Avenue Northbound | | | | Sepulveda Boulevard Eastbound | | | | Int. Total |
|-------------|------------------------|------|-------|------------|-------------------------------|------|-------|------------|------------------------|------|-------|------------|-------------------------------|------|-------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| 04:00 PM | 49 | 185 | 13 | 247 | 44 | 151 | 59 | 254 | 40 | 194 | 63 | 297 | 30 | 159 | 61 | 250 | 1048 |
| 04:15 PM | 41 | 189 | 25 | 255 | 62 | 166 | 72 | 300 | 28 | 187 | 63 | 278 | 43 | 191 | 55 | 289 | 1122 |
| 04:30 PM | 35 | 199 | 19 | 253 | 33 | 168 | 52 | 253 | 42 | 167 | 55 | 264 | 46 | 157 | 62 | 265 | 1035 |
| 04:45 PM | 42 | 209 | 16 | 267 | 58 | 203 | 71 | 332 | 38 | 165 | 45 | 248 | 47 | 179 | 73 | 299 | 1146 |
| Total | 167 | 782 | 73 | 1022 | 197 | 688 | 254 | 1139 | 148 | 713 | 226 | 1087 | 166 | 686 | 251 | 1103 | 4351 |
| 05:00 PM | 43 | 191 | 19 | 253 | 52 | 188 | 62 | 302 | 45 | 163 | 32 | 240 | 35 | 204 | 43 | 282 | 1077 |
| 05:15 PM | 47 | 241 | 29 | 317 | 53 | 183 | 67 | 303 | 37 | 191 | 41 | 269 | 54 | 186 | 49 | 289 | 1178 |
| 05:30 PM | 48 | 196 | 22 | 266 | 38 | 151 | 66 | 255 | 47 | 203 | 44 | 294 | 30 | 143 | 52 | 225 | 1040 |
| 05:45 PM | 43 | 191 | 14 | 248 | 54 | 161 | 57 | 272 | 31 | 137 | 37 | 205 | 33 | 173 | 56 | 262 | 987 |
| Total | 181 | 819 | 84 | 1084 | 197 | 683 | 252 | 1132 | 160 | 694 | 154 | 1008 | 152 | 706 | 200 | 1058 | 4282 |
| Grand Total | 348 | 1601 | 157 | 2106 | 394 | 1371 | 506 | 2271 | 308 | 1407 | 380 | 2095 | 318 | 1392 | 451 | 2161 | 8633 |
| Apprch % | 16.5 | 76 | 7.5 | | 17.3 | 60.4 | 22.3 | | 14.7 | 67.2 | 18.1 | | 14.7 | 64.4 | 20.9 | | |
| Total % | 4 | 18.5 | 1.8 | 24.4 | 4.6 | 15.9 | 5.9 | 26.3 | 3.6 | 16.3 | 4.4 | 24.3 | 3.7 | 16.1 | 5.2 | 25 | |

| Start Time | Anza Avenue Southbound | | | | Sepulveda Boulevard Westbound | | | | Anza Avenue Northbound | | | | Sepulveda Boulevard Eastbound | | | | Int. Total |
|--|------------------------|------------|-----------|------------|-------------------------------|------------|-----------|------------|------------------------|------------|-----------|------------|-------------------------------|------------|-----------|------------|-------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:45 PM | | | | | | | | | | | | | | | | | |
| 04:45 PM | 42 | 209 | 16 | 267 | 58 | 203 | 71 | 332 | 38 | 165 | 45 | 248 | 47 | 179 | 73 | 299 | 1146 |
| 05:00 PM | 43 | 191 | 19 | 253 | 52 | 188 | 62 | 302 | 45 | 163 | 32 | 240 | 35 | 204 | 43 | 282 | 1077 |
| 05:15 PM | 47 | 241 | 29 | 317 | 53 | 183 | 67 | 303 | 37 | 191 | 41 | 269 | 54 | 186 | 49 | 289 | 1178 |
| 05:30 PM | 48 | 196 | 22 | 266 | 38 | 151 | 66 | 255 | 47 | 203 | 44 | 294 | 30 | 143 | 52 | 225 | 1040 |
| Total Volume | 180 | 837 | 86 | 1103 | 201 | 725 | 266 | 1192 | 167 | 722 | 162 | 1051 | 166 | 712 | 217 | 1095 | 4441 |
| % App. Total | 16.3 | 75.9 | 7.8 | | 16.9 | 60.8 | 22.3 | | 15.9 | 68.7 | 15.4 | | 15.2 | 65 | 19.8 | | |
| PHF | .938 | .868 | .741 | .870 | .866 | .893 | .937 | .898 | .888 | .889 | .900 | .894 | .769 | .873 | .743 | .916 | .942 |

City of Torrance
 N/S: Anza Avenue
 E/W: Sepulveda Boulevard
 Weather: Clear

File Name : 03_TOR_Anza_Sep PM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

| | 04:45 PM | | | | 04:45 PM | | | | 04:00 PM | | | | 04:15 PM | | | |
|--------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|
| +0 mins. | 42 | 209 | 16 | 267 | 58 | 203 | 71 | 332 | 40 | 194 | 63 | 297 | 43 | 191 | 55 | 289 |
| +15 mins. | 43 | 191 | 19 | 253 | 52 | 188 | 62 | 302 | 28 | 187 | 63 | 278 | 46 | 157 | 62 | 265 |
| +30 mins. | 47 | 241 | 29 | 317 | 53 | 183 | 67 | 303 | 42 | 167 | 55 | 264 | 47 | 179 | 73 | 299 |
| +45 mins. | 48 | 196 | 22 | 266 | 38 | 151 | 66 | 255 | 38 | 165 | 45 | 248 | 35 | 204 | 43 | 282 |
| Total Volume | 180 | 837 | 86 | 1103 | 201 | 725 | 266 | 1192 | 148 | 713 | 226 | 1087 | 171 | 731 | 233 | 1135 |
| % App. Total | 16.3 | 75.9 | 7.8 | | 16.9 | 60.8 | 22.3 | | 13.6 | 65.6 | 20.8 | | 15.1 | 64.4 | 20.5 | |
| PHF | .938 | .868 | .741 | .870 | .866 | .893 | .937 | .898 | .881 | .919 | .897 | .915 | .910 | .896 | .798 | .949 |

City of Torrance
 N/S: Ocean Avenue
 E/W: Torrance Boulevard
 Weather: Clear

File Name : 14_TOR_Ocean_Torr AM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 1

Groups Printed- Total Volume

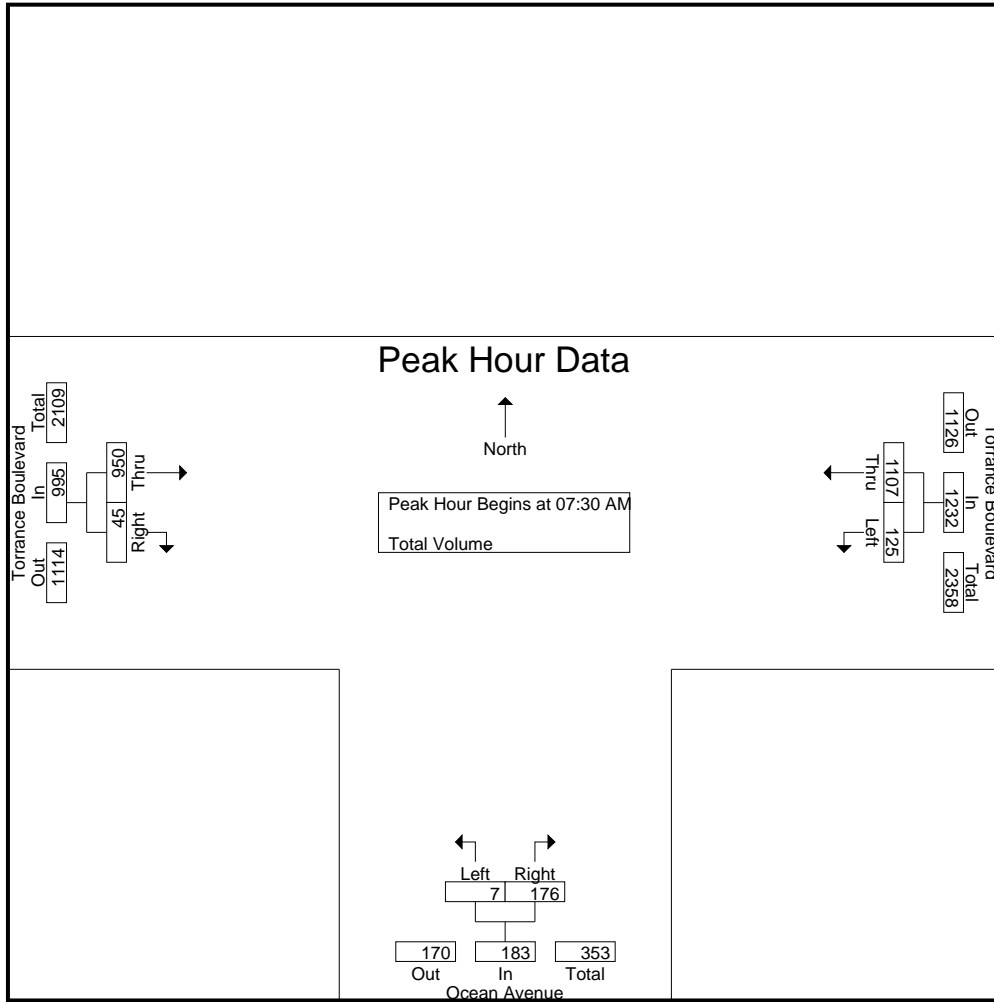
| Start Time | Torrance Boulevard Westbound | | | Ocean Avenue Northbound | | | Torrance Boulevard Eastbound | | | Int. Total |
|-------------|------------------------------|------|------------|-------------------------|-------|------------|------------------------------|-------|------------|------------|
| | Left | Thru | App. Total | Left | Right | App. Total | Thru | Right | App. Total | |
| 07:00 AM | 3 | 214 | 217 | 0 | 8 | 8 | 104 | 1 | 105 | 330 |
| 07:15 AM | 7 | 239 | 246 | 1 | 10 | 11 | 165 | 1 | 166 | 423 |
| 07:30 AM | 27 | 339 | 366 | 1 | 23 | 24 | 248 | 9 | 257 | 647 |
| 07:45 AM | 49 | 291 | 340 | 3 | 57 | 60 | 271 | 19 | 290 | 690 |
| Total | 86 | 1083 | 1169 | 5 | 98 | 103 | 788 | 30 | 818 | 2090 |
| 08:00 AM | 40 | 226 | 266 | 2 | 85 | 87 | 232 | 13 | 245 | 598 |
| 08:15 AM | 9 | 251 | 260 | 1 | 11 | 12 | 199 | 4 | 203 | 475 |
| 08:30 AM | 6 | 298 | 304 | 4 | 16 | 20 | 225 | 3 | 228 | 552 |
| 08:45 AM | 8 | 260 | 268 | 1 | 9 | 10 | 302 | 4 | 306 | 584 |
| Total | 63 | 1035 | 1098 | 8 | 121 | 129 | 958 | 24 | 982 | 2209 |
| Grand Total | 149 | 2118 | 2267 | 13 | 219 | 232 | 1746 | 54 | 1800 | 4299 |
| Apprch % | 6.6 | 93.4 | | 5.6 | 94.4 | | 97 | 3 | | |
| Total % | 3.5 | 49.3 | 52.7 | 0.3 | 5.1 | 5.4 | 40.6 | 1.3 | 41.9 | |

| Start Time | Torrance Boulevard Westbound | | | Ocean Avenue Northbound | | | Torrance Boulevard Eastbound | | | Int. Total |
|--------------|------------------------------|------------|------------|-------------------------|-----------|------------|------------------------------|-----------|------------|------------|
| | Left | Thru | App. Total | Left | Right | App. Total | Thru | Right | App. Total | |
| 07:30 AM | 27 | 339 | 366 | 1 | 23 | 24 | 248 | 9 | 257 | 647 |
| 07:45 AM | 49 | 291 | 340 | 3 | 57 | 60 | 271 | 19 | 290 | 690 |
| 08:00 AM | 40 | 226 | 266 | 2 | 85 | 87 | 232 | 13 | 245 | 598 |
| 08:15 AM | 9 | 251 | 260 | 1 | 11 | 12 | 199 | 4 | 203 | 475 |
| Total Volume | 125 | 1107 | 1232 | 7 | 176 | 183 | 950 | 45 | 995 | 2410 |
| % App. Total | 10.1 | 89.9 | | 3.8 | 96.2 | | 95.5 | 4.5 | | |
| PHF | .638 | .816 | .842 | .583 | .518 | .526 | .876 | .592 | .858 | .873 |

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:30 AM

City of Torrance
 N/S: Ocean Avenue
 E/W: Torrance Boulevard
 Weather: Clear

File Name : 14_TOR_Ocean_Torr AM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

| | 07:30 AM | | | 07:30 AM | | | 07:30 AM | | |
|--------------|-----------|------------|------------|----------|-----------|-----------|------------|-----------|------------|
| +0 mins. | 27 | 339 | 366 | 1 | 23 | 24 | 248 | 9 | 257 |
| +15 mins. | 49 | 291 | 340 | 3 | 57 | 60 | 271 | 19 | 290 |
| +30 mins. | 40 | 226 | 266 | 2 | 85 | 87 | 232 | 13 | 245 |
| +45 mins. | 9 | 251 | 260 | 1 | 11 | 12 | 199 | 4 | 203 |
| Total Volume | 125 | 1107 | 1232 | 7 | 176 | 183 | 950 | 45 | 995 |
| % App. Total | 10.1 | 89.9 | | 3.8 | 96.2 | | 95.5 | 4.5 | |
| PHF | .638 | .816 | .842 | .583 | .518 | .526 | .876 | .592 | .858 |

City of Torrance
 N/S: Ocean Avenue
 E/W: Torrance Boulevard
 Weather: Clear

File Name : 14_TOR_Ocean_Torr PM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 1

Groups Printed- Total Volume

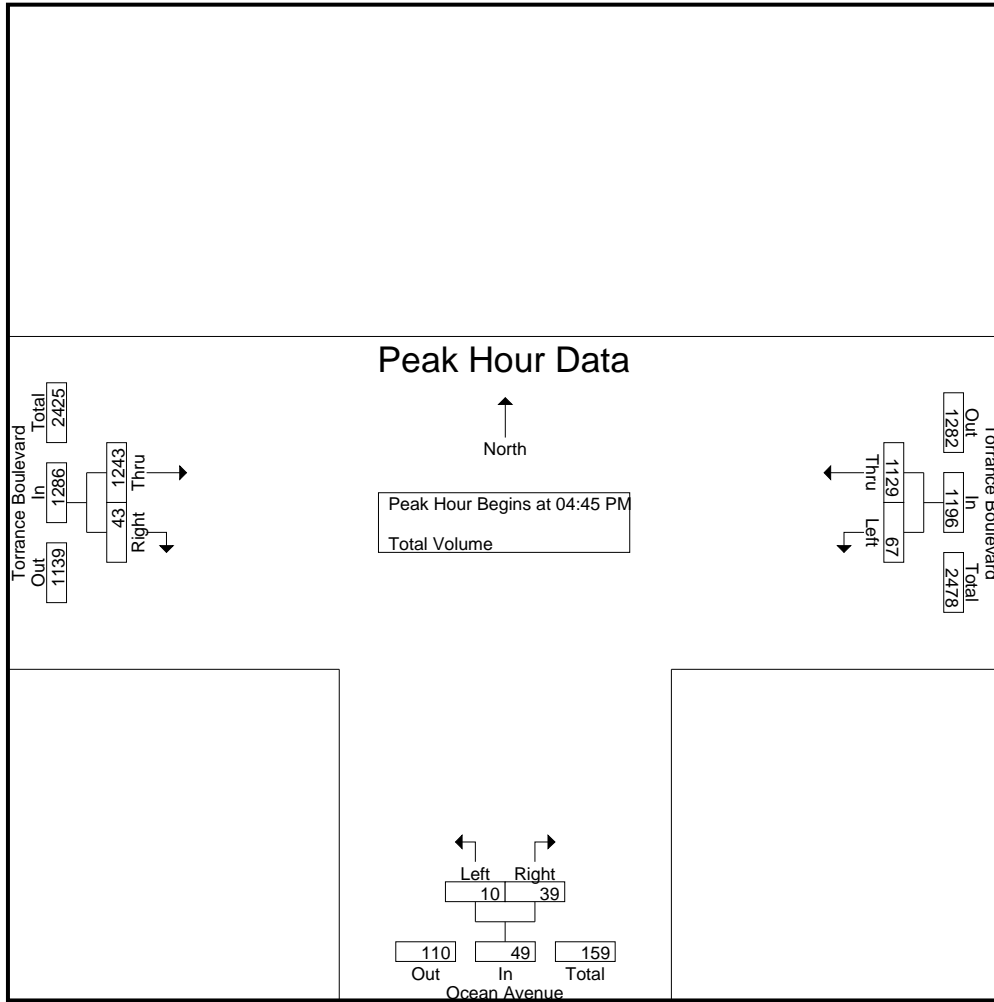
| Start Time | Torrance Boulevard Westbound | | | Ocean Avenue Northbound | | | Torrance Boulevard Eastbound | | | Int. Total |
|-------------|------------------------------|------|------------|-------------------------|-------|------------|------------------------------|-------|------------|------------|
| | Left | Thru | App. Total | Left | Right | App. Total | Thru | Right | App. Total | |
| 04:00 PM | 14 | 237 | 251 | 0 | 14 | 14 | 296 | 12 | 308 | 573 |
| 04:15 PM | 11 | 285 | 296 | 0 | 9 | 9 | 284 | 5 | 289 | 594 |
| 04:30 PM | 18 | 270 | 288 | 2 | 9 | 11 | 265 | 4 | 269 | 568 |
| 04:45 PM | 14 | 292 | 306 | 2 | 13 | 15 | 325 | 12 | 337 | 658 |
| Total | 57 | 1084 | 1141 | 4 | 45 | 49 | 1170 | 33 | 1203 | 2393 |
| 05:00 PM | 19 | 250 | 269 | 2 | 9 | 11 | 305 | 12 | 317 | 597 |
| 05:15 PM | 19 | 304 | 323 | 5 | 8 | 13 | 312 | 10 | 322 | 658 |
| 05:30 PM | 15 | 283 | 298 | 1 | 9 | 10 | 301 | 9 | 310 | 618 |
| 05:45 PM | 10 | 280 | 290 | 1 | 9 | 10 | 247 | 6 | 253 | 553 |
| Total | 63 | 1117 | 1180 | 9 | 35 | 44 | 1165 | 37 | 1202 | 2426 |
| Grand Total | 120 | 2201 | 2321 | 13 | 80 | 93 | 2335 | 70 | 2405 | 4819 |
| Apprch % | 5.2 | 94.8 | | 14 | 86 | | 97.1 | 2.9 | | |
| Total % | 2.5 | 45.7 | 48.2 | 0.3 | 1.7 | 1.9 | 48.5 | 1.5 | 49.9 | |

| Start Time | Torrance Boulevard Westbound | | | Ocean Avenue Northbound | | | Torrance Boulevard Eastbound | | | Int. Total |
|--------------|------------------------------|------|------------|-------------------------|-------|------------|------------------------------|-------|------------|------------|
| | Left | Thru | App. Total | Left | Right | App. Total | Thru | Right | App. Total | |
| 04:45 PM | 14 | 292 | 306 | 2 | 13 | 15 | 325 | 12 | 337 | 658 |
| 05:00 PM | 19 | 250 | 269 | 2 | 9 | 11 | 305 | 12 | 317 | 597 |
| 05:15 PM | 19 | 304 | 323 | 5 | 8 | 13 | 312 | 10 | 322 | 658 |
| 05:30 PM | 15 | 283 | 298 | 1 | 9 | 10 | 301 | 9 | 310 | 618 |
| Total Volume | 67 | 1129 | 1196 | 10 | 39 | 49 | 1243 | 43 | 1286 | 2531 |
| % App. Total | 5.6 | 94.4 | | 20.4 | 79.6 | | 96.7 | 3.3 | | |
| PHF | .882 | .928 | .926 | .500 | .750 | .817 | .956 | .896 | .954 | .962 |

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:45 PM

City of Torrance
 N/S: Ocean Avenue
 E/W: Torrance Boulevard
 Weather: Clear

File Name : 14_TOR_Ocean_Torr PM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

| | 04:45 PM | | | 04:30 PM | | | 04:45 PM | | |
|--------------|-----------|------------|------------|----------|-----------|-----------|------------|-----------|------------|
| +0 mins. | 14 | 292 | 306 | 2 | 9 | 11 | 325 | 12 | 337 |
| +15 mins. | 19 | 250 | 269 | 2 | 13 | 15 | 305 | 12 | 317 |
| +30 mins. | 19 | 304 | 323 | 2 | 9 | 11 | 312 | 10 | 322 |
| +45 mins. | 15 | 283 | 298 | 5 | 8 | 13 | 301 | 9 | 310 |
| Total Volume | 67 | 1129 | 1196 | 11 | 39 | 50 | 1243 | 43 | 1286 |
| % App. Total | 5.6 | 94.4 | | 22 | 78 | | 96.7 | 3.3 | |
| PHF | .882 | .928 | .926 | .550 | .750 | .833 | .956 | .896 | .954 |

City of Torrance
 N/S: Ocean Avenue
 E/W: Carson Street
 Weather: Clear

File Name : 15_TOR_Ocean_Carson AM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 1

Groups Printed- Total Volume

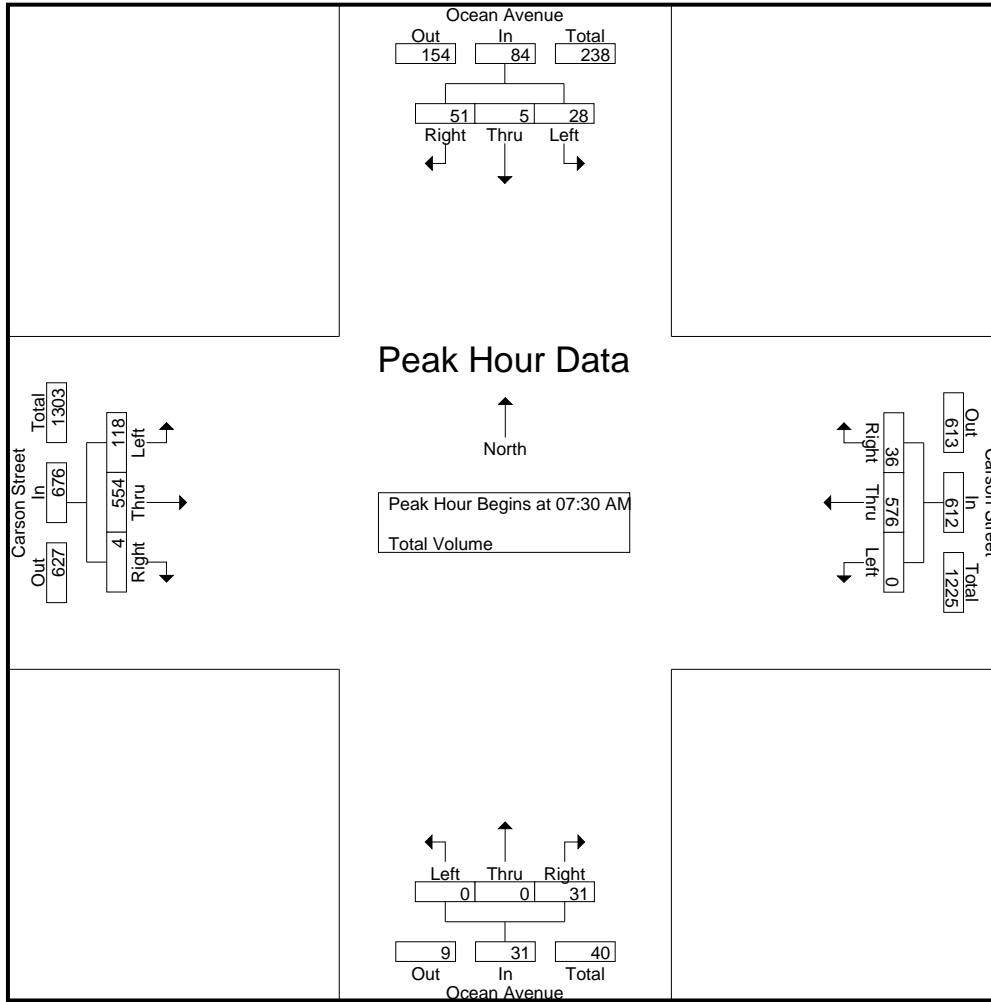
| Start Time | Ocean Avenue Southbound | | | | Carson Street Westbound | | | | Ocean Avenue Northbound | | | | Carson Street Eastbound | | | | Int. Total |
|-------------|-------------------------|------|-------|------------|-------------------------|------|-------|------------|-------------------------|------|-------|------------|-------------------------|------|-------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| 07:00 AM | 4 | 0 | 1 | 5 | 1 | 55 | 2 | 58 | 0 | 0 | 19 | 19 | 1 | 58 | 1 | 60 | 142 |
| 07:15 AM | 3 | 1 | 3 | 7 | 0 | 101 | 2 | 103 | 0 | 0 | 5 | 5 | 3 | 67 | 0 | 70 | 185 |
| 07:30 AM | 3 | 3 | 8 | 14 | 0 | 193 | 7 | 200 | 0 | 0 | 6 | 6 | 5 | 106 | 0 | 111 | 331 |
| 07:45 AM | 5 | 0 | 18 | 23 | 0 | 153 | 11 | 164 | 0 | 0 | 13 | 13 | 63 | 158 | 2 | 223 | 423 |
| Total | 15 | 4 | 30 | 49 | 1 | 502 | 22 | 525 | 0 | 0 | 43 | 43 | 72 | 389 | 3 | 464 | 1081 |
| 08:00 AM | 13 | 1 | 25 | 39 | 0 | 123 | 10 | 133 | 0 | 0 | 6 | 6 | 49 | 197 | 1 | 247 | 425 |
| 08:15 AM | 7 | 1 | 0 | 8 | 0 | 107 | 8 | 115 | 0 | 0 | 6 | 6 | 1 | 93 | 1 | 95 | 224 |
| 08:30 AM | 5 | 1 | 5 | 11 | 0 | 125 | 7 | 132 | 0 | 0 | 9 | 9 | 3 | 116 | 2 | 121 | 273 |
| 08:45 AM | 10 | 0 | 1 | 11 | 0 | 91 | 2 | 93 | 0 | 0 | 10 | 10 | 3 | 155 | 1 | 159 | 273 |
| Total | 35 | 3 | 31 | 69 | 0 | 446 | 27 | 473 | 0 | 0 | 31 | 31 | 56 | 561 | 5 | 622 | 1195 |
| Grand Total | 50 | 7 | 61 | 118 | 1 | 948 | 49 | 998 | 0 | 0 | 74 | 74 | 128 | 950 | 8 | 1086 | 2276 |
| Apprch % | 42.4 | 5.9 | 51.7 | | 0.1 | 95 | 4.9 | | 0 | 0 | 100 | | 11.8 | 87.5 | 0.7 | | |
| Total % | 2.2 | 0.3 | 2.7 | 5.2 | 0 | 41.7 | 2.2 | 43.8 | 0 | 0 | 3.3 | 3.3 | 5.6 | 41.7 | 0.4 | 47.7 | |

| Start Time | Ocean Avenue Southbound | | | | Carson Street Westbound | | | | Ocean Avenue Northbound | | | | Carson Street Eastbound | | | | Int. Total |
|--------------|-------------------------|----------|-----------|------------|-------------------------|------------|-----------|------------|-------------------------|------|-----------|------------|-------------------------|------------|----------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| 07:30 AM | 3 | 3 | 8 | 14 | 0 | 193 | 7 | 200 | 0 | 0 | 6 | 6 | 5 | 106 | 0 | 111 | 331 |
| 07:45 AM | 5 | 0 | 18 | 23 | 0 | 153 | 11 | 164 | 0 | 0 | 13 | 13 | 63 | 158 | 2 | 223 | 423 |
| 08:00 AM | 13 | 1 | 25 | 39 | 0 | 123 | 10 | 133 | 0 | 0 | 6 | 6 | 49 | 197 | 1 | 247 | 425 |
| 08:15 AM | 7 | 1 | 0 | 8 | 0 | 107 | 8 | 115 | 0 | 0 | 6 | 6 | 1 | 93 | 1 | 95 | 224 |
| Total Volume | 28 | 5 | 51 | 84 | 0 | 576 | 36 | 612 | 0 | 0 | 31 | 31 | 118 | 554 | 4 | 676 | 1403 |
| % App. Total | 33.3 | 6 | 60.7 | | 0 | 94.1 | 5.9 | | 0 | 0 | 100 | | 17.5 | 82 | 0.6 | | |
| PHF | .538 | .417 | .510 | .538 | .000 | .746 | .818 | .765 | .000 | .000 | .596 | .596 | .468 | .703 | .500 | .684 | .825 |

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:30 AM

City of Torrance
 N/S: Ocean Avenue
 E/W: Carson Street
 Weather: Clear

File Name : 15_TOR_Ocean_Carson AM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

| | 07:30 AM | | | | 07:30 AM | | | | 07:00 AM | | | | 07:45 AM | | | |
|--------------|----------|------|------|------|----------|------|------|------|----------|------|------|------|----------|------|------|------|
| +0 mins. | 3 | 3 | 8 | 14 | 0 | 193 | 7 | 200 | 0 | 0 | 19 | 19 | 63 | 158 | 2 | 223 |
| +15 mins. | 5 | 0 | 18 | 23 | 0 | 153 | 11 | 164 | 0 | 0 | 5 | 5 | 49 | 197 | 1 | 247 |
| +30 mins. | 13 | 1 | 25 | 39 | 0 | 123 | 10 | 133 | 0 | 0 | 6 | 6 | 1 | 93 | 1 | 95 |
| +45 mins. | 7 | 1 | 0 | 8 | 0 | 107 | 8 | 115 | 0 | 0 | 13 | 13 | 3 | 116 | 2 | 121 |
| Total Volume | 28 | 5 | 51 | 84 | 0 | 576 | 36 | 612 | 0 | 0 | 43 | 43 | 116 | 564 | 6 | 686 |
| % App. Total | 33.3 | 6 | 60.7 | | 0 | 94.1 | 5.9 | | 0 | 0 | 100 | | 16.9 | 82.2 | 0.9 | |
| PHF | .538 | .417 | .510 | .538 | .000 | .746 | .818 | .765 | .000 | .000 | .566 | .566 | .460 | .716 | .750 | .694 |

City of Torrance
 N/S: Ocean Avenue
 E/W: Carson Street
 Weather: Clear

File Name : 15_TOR_Ocean_Carson PM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 1

Groups Printed- Total Volume

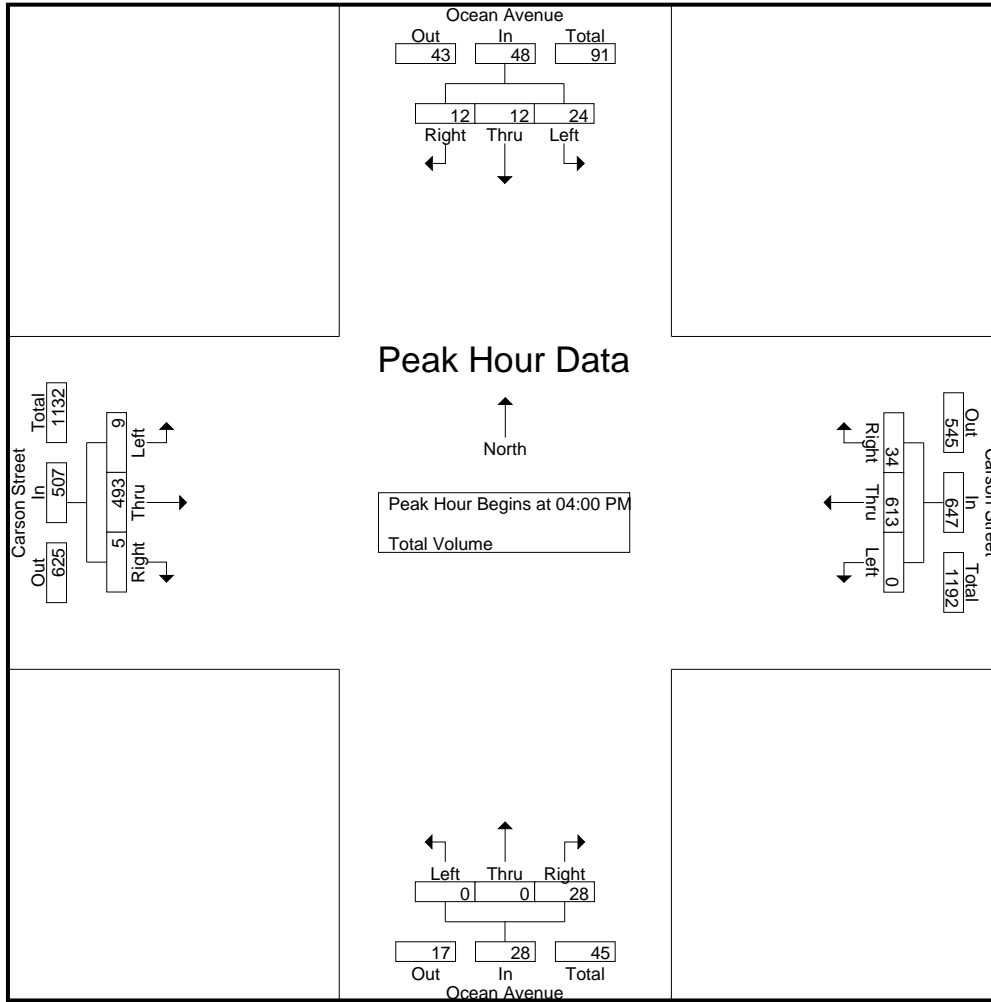
| Start Time | Ocean Avenue Southbound | | | | Carson Street Westbound | | | | Ocean Avenue Northbound | | | | Carson Street Eastbound | | | | Int. Total |
|-------------|-------------------------|------|-------|------------|-------------------------|------|-------|------------|-------------------------|------|-------|------------|-------------------------|------|-------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| 04:00 PM | 5 | 2 | 2 | 9 | 0 | 144 | 6 | 150 | 0 | 0 | 9 | 9 | 4 | 134 | 3 | 141 | 309 |
| 04:15 PM | 5 | 3 | 4 | 12 | 0 | 133 | 12 | 145 | 0 | 0 | 8 | 8 | 0 | 133 | 0 | 133 | 298 |
| 04:30 PM | 5 | 1 | 4 | 10 | 0 | 174 | 6 | 180 | 0 | 0 | 5 | 5 | 2 | 107 | 2 | 111 | 306 |
| 04:45 PM | 9 | 6 | 2 | 17 | 0 | 162 | 10 | 172 | 0 | 0 | 6 | 6 | 3 | 119 | 0 | 122 | 317 |
| Total | 24 | 12 | 12 | 48 | 0 | 613 | 34 | 647 | 0 | 0 | 28 | 28 | 9 | 493 | 5 | 507 | 1230 |
| 05:00 PM | 11 | 4 | 6 | 21 | 0 | 161 | 9 | 170 | 0 | 0 | 3 | 3 | 1 | 107 | 2 | 110 | 304 |
| 05:15 PM | 11 | 3 | 9 | 23 | 0 | 148 | 12 | 160 | 0 | 0 | 6 | 6 | 3 | 101 | 1 | 105 | 294 |
| 05:30 PM | 3 | 6 | 2 | 11 | 0 | 142 | 8 | 150 | 0 | 0 | 4 | 4 | 3 | 82 | 2 | 87 | 252 |
| 05:45 PM | 7 | 3 | 3 | 13 | 1 | 115 | 5 | 121 | 0 | 0 | 7 | 7 | 2 | 101 | 1 | 104 | 245 |
| Total | 32 | 16 | 20 | 68 | 1 | 566 | 34 | 601 | 0 | 0 | 20 | 20 | 9 | 391 | 6 | 406 | 1095 |
| Grand Total | 56 | 28 | 32 | 116 | 1 | 1179 | 68 | 1248 | 0 | 0 | 48 | 48 | 18 | 884 | 11 | 913 | 2325 |
| Apprch % | 48.3 | 24.1 | 27.6 | | 0.1 | 94.5 | 5.4 | | 0 | 0 | 100 | | 2 | 96.8 | 1.2 | | |
| Total % | 2.4 | 1.2 | 1.4 | 5 | 0 | 50.7 | 2.9 | 53.7 | 0 | 0 | 2.1 | 2.1 | 0.8 | 38 | 0.5 | 39.3 | |

| Start Time | Ocean Avenue Southbound | | | | Carson Street Westbound | | | | Ocean Avenue Northbound | | | | Carson Street Eastbound | | | | Int. Total |
|--------------|-------------------------|----------|----------|------------|-------------------------|------------|-----------|------------|-------------------------|------|----------|------------|-------------------------|------------|----------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| 04:00 PM | 5 | 2 | 2 | 9 | 0 | 144 | 6 | 150 | 0 | 0 | 9 | 9 | 4 | 134 | 3 | 141 | 309 |
| 04:15 PM | 5 | 3 | 4 | 12 | 0 | 133 | 12 | 145 | 0 | 0 | 8 | 8 | 0 | 133 | 0 | 133 | 298 |
| 04:30 PM | 5 | 1 | 4 | 10 | 0 | 174 | 6 | 180 | 0 | 0 | 5 | 5 | 2 | 107 | 2 | 111 | 306 |
| 04:45 PM | 9 | 6 | 2 | 17 | 0 | 162 | 10 | 172 | 0 | 0 | 6 | 6 | 3 | 119 | 0 | 122 | 317 |
| Total Volume | 24 | 12 | 12 | 48 | 0 | 613 | 34 | 647 | 0 | 0 | 28 | 28 | 9 | 493 | 5 | 507 | 1230 |
| % App. Total | 50 | 25 | 25 | | 0 | 94.7 | 5.3 | | 0 | 0 | 100 | | 1.8 | 97.2 | 1 | | |
| PHF | .667 | .500 | .750 | .706 | .000 | .881 | .708 | .899 | .000 | .000 | .778 | .778 | .563 | .920 | .417 | .899 | .970 |

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:00 PM

City of Torrance
 N/S: Ocean Avenue
 E/W: Carson Street
 Weather: Clear

File Name : 15_TOR_Ocean_Carson PM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

| | 04:45 PM | | | | 04:30 PM | | | | 04:00 PM | | | | 04:00 PM | | | |
|--------------|----------|------|------|------|----------|------|------|------|----------|------|------|------|----------|------|------|------|
| +0 mins. | 9 | 6 | 2 | 17 | 0 | 174 | 6 | 180 | 0 | 0 | 9 | 9 | 4 | 134 | 3 | 141 |
| +15 mins. | 11 | 4 | 6 | 21 | 0 | 162 | 10 | 172 | 0 | 0 | 8 | 8 | 0 | 133 | 0 | 133 |
| +30 mins. | 11 | 3 | 9 | 23 | 0 | 161 | 9 | 170 | 0 | 0 | 5 | 5 | 2 | 107 | 2 | 111 |
| +45 mins. | 3 | 6 | 2 | 11 | 0 | 148 | 12 | 160 | 0 | 0 | 6 | 6 | 3 | 119 | 0 | 122 |
| Total Volume | 34 | 19 | 19 | 72 | 0 | 645 | 37 | 682 | 0 | 0 | 28 | 28 | 9 | 493 | 5 | 507 |
| % App. Total | 47.2 | 26.4 | 26.4 | | 0 | 94.6 | 5.4 | | 0 | 0 | 100 | | 1.8 | 97.2 | 1 | |
| PHF | .773 | .792 | .528 | .783 | .000 | .927 | .771 | .947 | .000 | .000 | .778 | .778 | .563 | .920 | .417 | .899 |

City of Torrance
 N/S: Plaza Lane/Village Lane
 E/W: Torrance Boulevard
 Weather: Clear

File Name : 01_TOR_Village_Tor AM
 Site Code : 05722330
 Start Date : 4/26/2022
 Page No : 1

Groups Printed- Total Volume

| Start Time | Plaza Lane Southbound | | | | Torrance Boulevard Westbound | | | | Village Lane Northbound | | | | Torrance Boulevard Eastbound | | | | Int. Total |
|-------------|-----------------------|------|-------|------------|------------------------------|------|-------|------------|-------------------------|------|-------|------------|------------------------------|------|-------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| 07:00 AM | 9 | 1 | 3 | 13 | 8 | 208 | 26 | 242 | 13 | 0 | 8 | 21 | 1 | 106 | 9 | 116 | 392 |
| 07:15 AM | 9 | 1 | 3 | 13 | 7 | 192 | 19 | 218 | 12 | 1 | 14 | 27 | 3 | 162 | 15 | 180 | 438 |
| 07:30 AM | 41 | 1 | 4 | 46 | 17 | 275 | 20 | 312 | 18 | 2 | 13 | 33 | 3 | 206 | 17 | 226 | 617 |
| 07:45 AM | 14 | 2 | 2 | 18 | 20 | 277 | 27 | 324 | 16 | 3 | 12 | 31 | 6 | 284 | 24 | 314 | 687 |
| Total | 73 | 5 | 12 | 90 | 52 | 952 | 92 | 1096 | 59 | 6 | 47 | 112 | 13 | 758 | 65 | 836 | 2134 |
| 08:00 AM | 9 | 1 | 1 | 11 | 27 | 194 | 28 | 249 | 26 | 2 | 18 | 46 | 8 | 182 | 30 | 220 | 526 |
| 08:15 AM | 5 | 0 | 2 | 7 | 28 | 249 | 25 | 302 | 22 | 2 | 17 | 41 | 3 | 166 | 27 | 196 | 546 |
| 08:30 AM | 9 | 2 | 3 | 14 | 13 | 275 | 12 | 300 | 14 | 0 | 19 | 33 | 3 | 201 | 26 | 230 | 577 |
| 08:45 AM | 10 | 0 | 6 | 16 | 34 | 285 | 31 | 350 | 26 | 3 | 21 | 50 | 10 | 285 | 41 | 336 | 752 |
| Total | 33 | 3 | 12 | 48 | 102 | 1003 | 96 | 1201 | 88 | 7 | 75 | 170 | 24 | 834 | 124 | 982 | 2401 |
| Grand Total | 106 | 8 | 24 | 138 | 154 | 1955 | 188 | 2297 | 147 | 13 | 122 | 282 | 37 | 1592 | 189 | 1818 | 4535 |
| Apprch % | 76.8 | 5.8 | 17.4 | | 6.7 | 85.1 | 8.2 | | 52.1 | 4.6 | 43.3 | | 2 | 87.6 | 10.4 | | |
| Total % | 2.3 | 0.2 | 0.5 | 3 | 3.4 | 43.1 | 4.1 | 50.7 | 3.2 | 0.3 | 2.7 | 6.2 | 0.8 | 35.1 | 4.2 | 40.1 | |

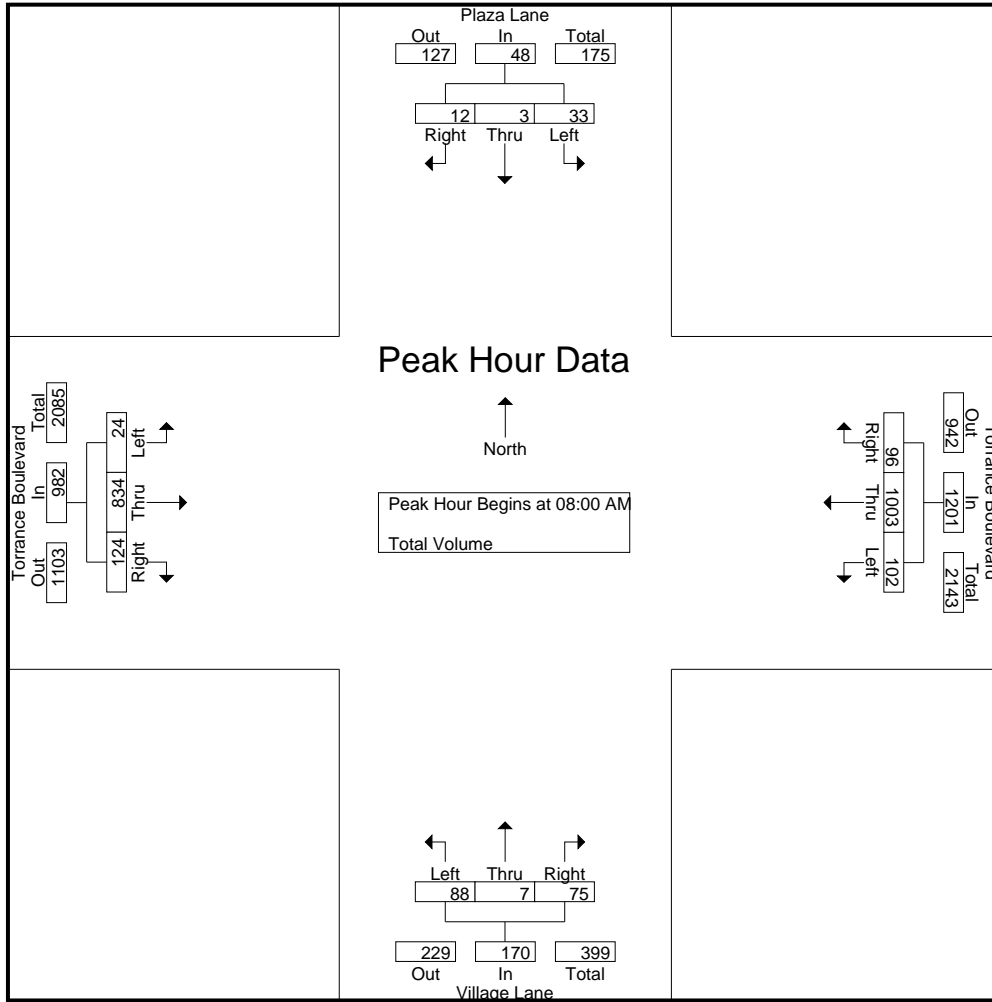
| Start Time | Plaza Lane Southbound | | | | Torrance Boulevard Westbound | | | | Village Lane Northbound | | | | Torrance Boulevard Eastbound | | | | Int. Total |
|--------------|-----------------------|------|----------|------------|------------------------------|------------|-----------|------------|-------------------------|----------|-----------|------------|------------------------------|------------|-----------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| 08:00 AM | 9 | 1 | 1 | 11 | 27 | 194 | 28 | 249 | 26 | 2 | 18 | 46 | 8 | 182 | 30 | 220 | 526 |
| 08:15 AM | 5 | 0 | 2 | 7 | 28 | 249 | 25 | 302 | 22 | 2 | 17 | 41 | 3 | 166 | 27 | 196 | 546 |
| 08:30 AM | 9 | 2 | 3 | 14 | 13 | 275 | 12 | 300 | 14 | 0 | 19 | 33 | 3 | 201 | 26 | 230 | 577 |
| 08:45 AM | 10 | 0 | 6 | 16 | 34 | 285 | 31 | 350 | 26 | 3 | 21 | 50 | 10 | 285 | 41 | 336 | 752 |
| Total Volume | 33 | 3 | 12 | 48 | 102 | 1003 | 96 | 1201 | 88 | 7 | 75 | 170 | 24 | 834 | 124 | 982 | 2401 |
| % App. Total | 68.8 | 6.2 | 25 | | 8.5 | 83.5 | 8 | | 51.8 | 4.1 | 44.1 | | 2.4 | 84.9 | 12.6 | | |
| PHF | .825 | .375 | .500 | .750 | .750 | .880 | .774 | .858 | .846 | .583 | .893 | .850 | .600 | .732 | .756 | .731 | .798 |

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 08:00 AM

City of Torrance
 N/S: Plaza Lane/Village Lane
 E/W: Torrance Boulevard
 Weather: Clear

File Name : 01_TOR_Village_Tor AM
 Site Code : 05722330
 Start Date : 4/26/2022
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

| | 07:00 AM | | | | 08:00 AM | | | | 08:00 AM | | | | 08:00 AM | | | |
|--------------|-----------|----------|----------|-----------|-----------|------------|-----------|------------|-----------|----------|-----------|-----------|-----------|------------|-----------|------------|
| +0 mins. | 9 | 1 | 3 | 13 | 27 | 194 | 28 | 249 | 26 | 2 | 18 | 46 | 8 | 182 | 30 | 220 |
| +15 mins. | 9 | 1 | 3 | 13 | 28 | 249 | 25 | 302 | 22 | 2 | 17 | 41 | 3 | 166 | 27 | 196 |
| +30 mins. | 41 | 1 | 4 | 46 | 13 | 275 | 12 | 300 | 14 | 0 | 19 | 33 | 3 | 201 | 26 | 230 |
| +45 mins. | 14 | 2 | 2 | 18 | 34 | 285 | 31 | 350 | 26 | 3 | 21 | 50 | 10 | 285 | 41 | 336 |
| Total Volume | 73 | 5 | 12 | 90 | 102 | 1003 | 96 | 1201 | 88 | 7 | 75 | 170 | 24 | 834 | 124 | 982 |
| % App. Total | 81.1 | 5.6 | 13.3 | | 8.5 | 83.5 | 8 | | 51.8 | 4.1 | 44.1 | | 2.4 | 84.9 | 12.6 | |
| PHF | .445 | .625 | .750 | .489 | .750 | .880 | .774 | .858 | .846 | .583 | .893 | .850 | .600 | .732 | .756 | .731 |

City of Torrance
 N/S: Plaza Lane/Village Lane
 E/W: Torrance Boulevard
 Weather: Clear

File Name : 01_TOR_Village_Tor PM
 Site Code : 05722330
 Start Date : 4/26/2022
 Page No : 1

Groups Printed- Total Volume

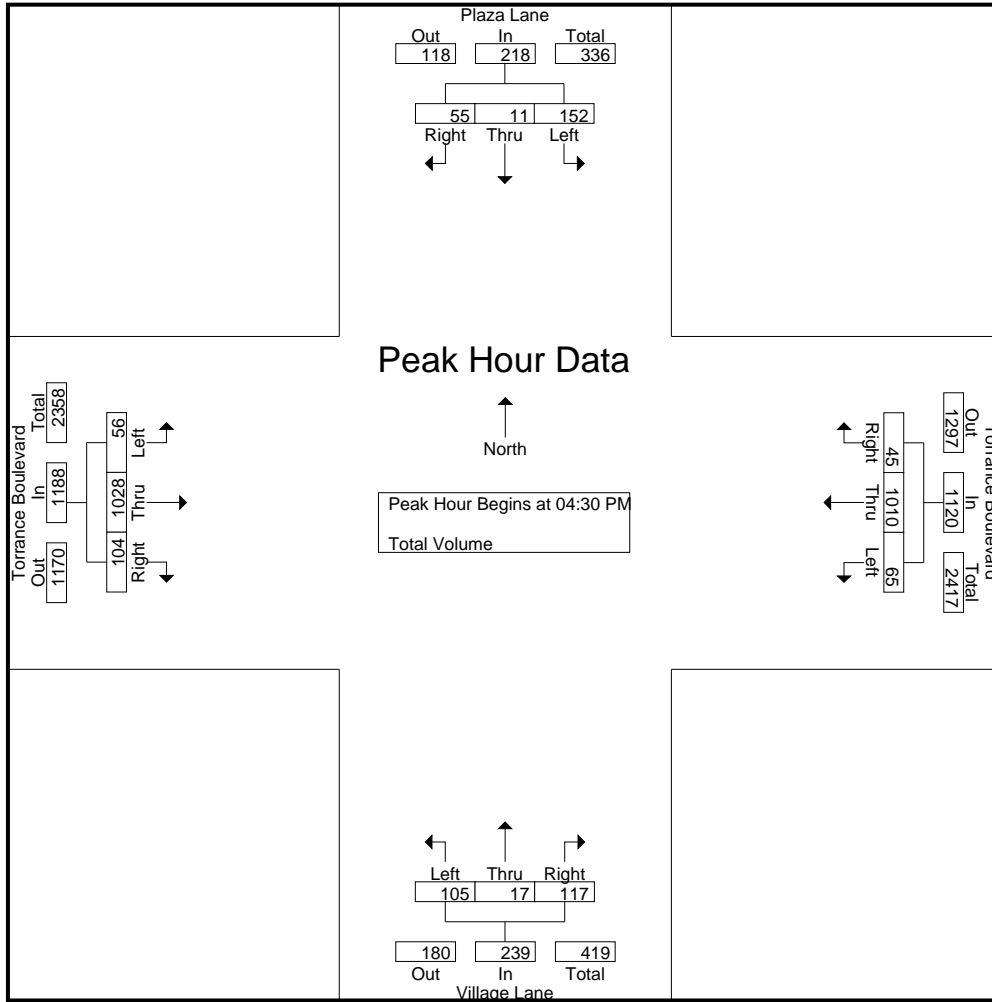
| Start Time | Plaza Lane Southbound | | | | Torrance Boulevard Westbound | | | | Village Lane Northbound | | | | Torrance Boulevard Eastbound | | | | Int. Total |
|-------------|-----------------------|------|-------|------------|------------------------------|------|-------|------------|-------------------------|------|-------|------------|------------------------------|------|-------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| 04:00 PM | 43 | 4 | 16 | 63 | 15 | 258 | 13 | 286 | 31 | 7 | 17 | 55 | 19 | 267 | 26 | 312 | 716 |
| 04:15 PM | 33 | 2 | 14 | 49 | 20 | 228 | 13 | 261 | 18 | 4 | 21 | 43 | 14 | 243 | 28 | 285 | 638 |
| 04:30 PM | 49 | 2 | 16 | 67 | 15 | 227 | 12 | 254 | 30 | 3 | 23 | 56 | 12 | 223 | 25 | 260 | 637 |
| 04:45 PM | 31 | 3 | 16 | 50 | 16 | 297 | 13 | 326 | 22 | 3 | 29 | 54 | 13 | 284 | 24 | 321 | 751 |
| Total | 156 | 11 | 62 | 229 | 66 | 1010 | 51 | 1127 | 101 | 17 | 90 | 208 | 58 | 1017 | 103 | 1178 | 2742 |
| 05:00 PM | 43 | 3 | 12 | 58 | 14 | 212 | 12 | 238 | 31 | 7 | 49 | 87 | 14 | 283 | 28 | 325 | 708 |
| 05:15 PM | 29 | 3 | 11 | 43 | 20 | 274 | 8 | 302 | 22 | 4 | 16 | 42 | 17 | 238 | 27 | 282 | 669 |
| 05:30 PM | 44 | 3 | 17 | 64 | 12 | 229 | 14 | 255 | 25 | 5 | 26 | 56 | 12 | 211 | 19 | 242 | 617 |
| 05:45 PM | 32 | 1 | 17 | 50 | 18 | 234 | 10 | 262 | 26 | 4 | 16 | 46 | 13 | 234 | 21 | 268 | 626 |
| Total | 148 | 10 | 57 | 215 | 64 | 949 | 44 | 1057 | 104 | 20 | 107 | 231 | 56 | 966 | 95 | 1117 | 2620 |
| Grand Total | 304 | 21 | 119 | 444 | 130 | 1959 | 95 | 2184 | 205 | 37 | 197 | 439 | 114 | 1983 | 198 | 2295 | 5362 |
| Apprch % | 68.5 | 4.7 | 26.8 | | 6 | 89.7 | 4.3 | | 46.7 | 8.4 | 44.9 | | 5 | 86.4 | 8.6 | | |
| Total % | 5.7 | 0.4 | 2.2 | 8.3 | 2.4 | 36.5 | 1.8 | 40.7 | 3.8 | 0.7 | 3.7 | 8.2 | 2.1 | 37 | 3.7 | 42.8 | |

| Start Time | Plaza Lane Southbound | | | | Torrance Boulevard Westbound | | | | Village Lane Northbound | | | | Torrance Boulevard Eastbound | | | | Int. Total |
|--------------|-----------------------|----------|-------|------------|------------------------------|------------|-----------|------------|-------------------------|----------|-----------|------------|------------------------------|------------|-----------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| 04:30 PM | 49 | 2 | 16 | 67 | 15 | 227 | 12 | 254 | 30 | 3 | 23 | 56 | 12 | 223 | 25 | 260 | 637 |
| 04:45 PM | 31 | 3 | 16 | 50 | 16 | 297 | 13 | 326 | 22 | 3 | 29 | 54 | 13 | 284 | 24 | 321 | 751 |
| 05:00 PM | 43 | 3 | 12 | 58 | 14 | 212 | 12 | 238 | 31 | 7 | 49 | 87 | 14 | 283 | 28 | 325 | 708 |
| 05:15 PM | 29 | 3 | 11 | 43 | 20 | 274 | 8 | 302 | 22 | 4 | 16 | 42 | 17 | 238 | 27 | 282 | 669 |
| Total Volume | 152 | 11 | 55 | 218 | 65 | 1010 | 45 | 1120 | 105 | 17 | 117 | 239 | 56 | 1028 | 104 | 1188 | 2765 |
| % App. Total | 69.7 | 5 | 25.2 | | 5.8 | 90.2 | 4 | | 43.9 | 7.1 | 49 | | 4.7 | 86.5 | 8.8 | | |
| PHF | .776 | .917 | .859 | .813 | .813 | .850 | .865 | .859 | .847 | .607 | .597 | .687 | .824 | .905 | .929 | .914 | .920 |

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:30 PM

City of Torrance
 N/S: Plaza Lane/Village Lane
 E/W: Torrance Boulevard
 Weather: Clear

File Name : 01_TOR_Village_Tor PM
 Site Code : 05722330
 Start Date : 4/26/2022
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

| | 04:00 PM | | | | 04:00 PM | | | | 04:15 PM | | | | 04:15 PM | | | |
|--------------|-----------|----------|-----------|-----------|-----------|------------|-----------|------------|-----------|----------|-----------|-----------|-----------|------------|-----------|------------|
| +0 mins. | 43 | 4 | 16 | 63 | 15 | 258 | 13 | 286 | 18 | 4 | 21 | 43 | 14 | 243 | 28 | 285 |
| +15 mins. | 33 | 2 | 14 | 49 | 20 | 228 | 13 | 261 | 30 | 3 | 23 | 56 | 12 | 223 | 25 | 260 |
| +30 mins. | 49 | 2 | 16 | 67 | 15 | 227 | 12 | 254 | 22 | 3 | 29 | 54 | 13 | 284 | 24 | 321 |
| +45 mins. | 31 | 3 | 16 | 50 | 16 | 297 | 13 | 326 | 31 | 7 | 49 | 87 | 14 | 283 | 28 | 325 |
| Total Volume | 156 | 11 | 62 | 229 | 66 | 1010 | 51 | 1127 | 101 | 17 | 122 | 240 | 53 | 1033 | 105 | 1191 |
| % App. Total | 68.1 | 4.8 | 27.1 | | 5.9 | 89.6 | 4.5 | | 42.1 | 7.1 | 50.8 | | 4.5 | 86.7 | 8.8 | |
| PHF | .796 | .688 | .969 | .854 | .825 | .850 | .981 | .864 | .815 | .607 | .622 | .690 | .946 | .909 | .938 | .916 |

City of Torrance
 N/S: Village Court
 E/W: Village Lane
 Weather: Clear

File Name : 02_TOR_Village_VIII AM
 Site Code : 05722330
 Start Date : 4/26/2022
 Page No : 1

Groups Printed- Total Volume

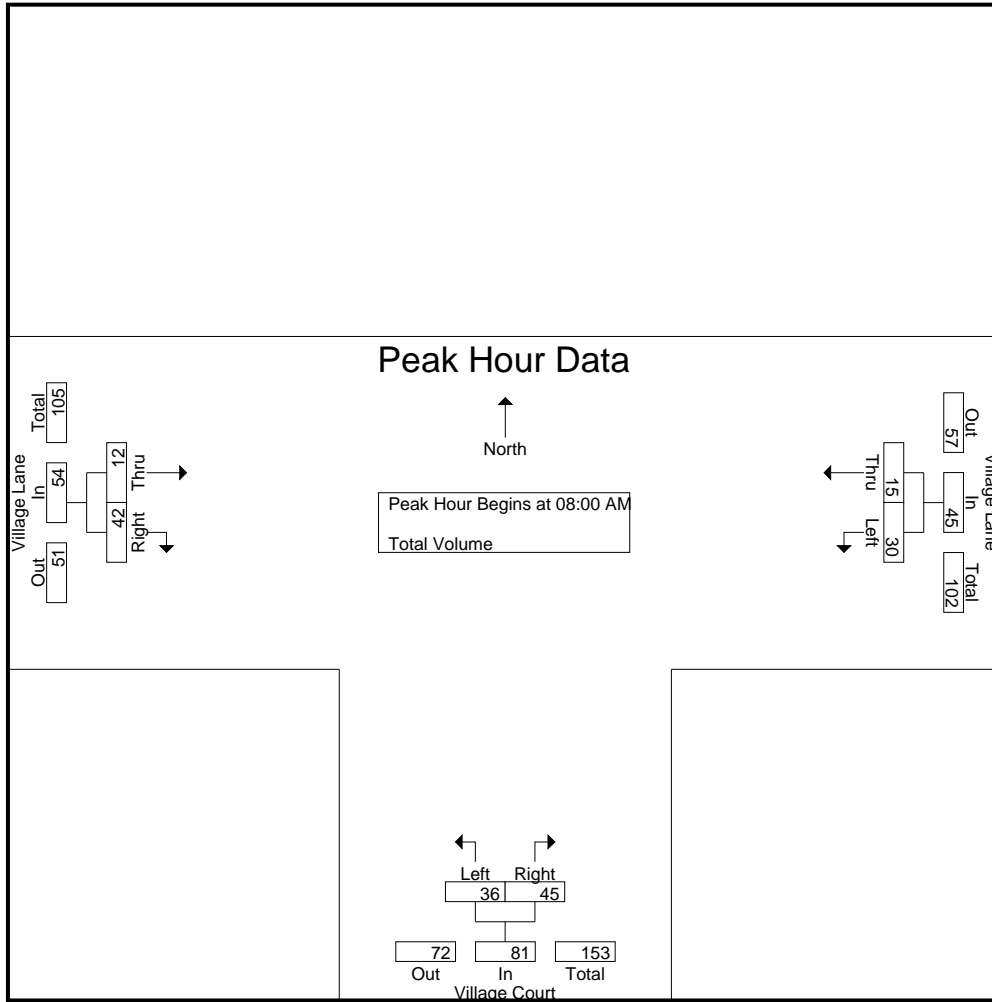
| Start Time | Village Lane Westbound | | | Village Court Northbound | | | Village Lane Eastbound | | | Int. Total |
|-------------|------------------------|------|------------|--------------------------|-------|------------|------------------------|-------|------------|------------|
| | Left | Thru | App. Total | Left | Right | App. Total | Thru | Right | App. Total | |
| 07:00 AM | 4 | 1 | 5 | 9 | 1 | 10 | 0 | 4 | 4 | 19 |
| 07:15 AM | 5 | 1 | 6 | 4 | 4 | 8 | 0 | 6 | 6 | 20 |
| 07:30 AM | 5 | 4 | 9 | 4 | 5 | 9 | 0 | 4 | 4 | 22 |
| 07:45 AM | 4 | 6 | 10 | 6 | 9 | 15 | 3 | 8 | 11 | 36 |
| Total | 18 | 12 | 30 | 23 | 19 | 42 | 3 | 22 | 25 | 97 |
| 08:00 AM | 8 | 4 | 12 | 5 | 6 | 11 | 4 | 12 | 16 | 39 |
| 08:15 AM | 6 | 3 | 9 | 12 | 11 | 23 | 4 | 9 | 13 | 45 |
| 08:30 AM | 10 | 4 | 14 | 7 | 20 | 27 | 0 | 9 | 9 | 50 |
| 08:45 AM | 6 | 4 | 10 | 12 | 8 | 20 | 4 | 12 | 16 | 46 |
| Total | 30 | 15 | 45 | 36 | 45 | 81 | 12 | 42 | 54 | 180 |
| Grand Total | 48 | 27 | 75 | 59 | 64 | 123 | 15 | 64 | 79 | 277 |
| Apprch % | 64 | 36 | | 48 | 52 | | 19 | 81 | | |
| Total % | 17.3 | 9.7 | 27.1 | 21.3 | 23.1 | 44.4 | 5.4 | 23.1 | 28.5 | |

| Start Time | Village Lane Westbound | | | Village Court Northbound | | | Village Lane Eastbound | | | Int. Total |
|--------------|------------------------|----------|------------|--------------------------|-----------|------------|------------------------|-----------|------------|------------|
| | Left | Thru | App. Total | Left | Right | App. Total | Thru | Right | App. Total | |
| 08:00 AM | 8 | 4 | 12 | 5 | 6 | 11 | 4 | 12 | 16 | 39 |
| 08:15 AM | 6 | 3 | 9 | 12 | 11 | 23 | 4 | 9 | 13 | 45 |
| 08:30 AM | 10 | 4 | 14 | 7 | 20 | 27 | 0 | 9 | 9 | 50 |
| 08:45 AM | 6 | 4 | 10 | 12 | 8 | 20 | 4 | 12 | 16 | 46 |
| Total Volume | 30 | 15 | 45 | 36 | 45 | 81 | 12 | 42 | 54 | 180 |
| % App. Total | 66.7 | 33.3 | | 44.4 | 55.6 | | 22.2 | 77.8 | | |
| PHF | .750 | .938 | .804 | .750 | .563 | .750 | .750 | .875 | .844 | .900 |

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 08:00 AM

City of Torrance
 N/S: Village Court
 E/W: Village Lane
 Weather: Clear

File Name : 02_TOR_Village_VIII AM
 Site Code : 05722330
 Start Date : 4/26/2022
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

| | 07:45 AM | | | 08:00 AM | | | 08:00 AM | | |
|--------------|-----------|----------|-----------|-----------|-----------|-----------|----------|-----------|-----------|
| +0 mins. | 4 | 6 | 10 | 5 | 6 | 11 | 4 | 12 | 16 |
| +15 mins. | 8 | 4 | 12 | 12 | 11 | 23 | 4 | 9 | 13 |
| +30 mins. | 6 | 3 | 9 | 7 | 20 | 27 | 0 | 9 | 9 |
| +45 mins. | 10 | 4 | 14 | 12 | 8 | 20 | 4 | 12 | 16 |
| Total Volume | 28 | 17 | 45 | 36 | 45 | 81 | 12 | 42 | 54 |
| % App. Total | 62.2 | 37.8 | | 44.4 | 55.6 | | 22.2 | 77.8 | |
| PHF | .700 | .708 | .804 | .750 | .563 | .750 | .750 | .875 | .844 |

City of Torrance
 N/S: Village Court
 E/W: Village Lane
 Weather: Clear

File Name : 02_TOR_Village_Vill PM
 Site Code : 05722330
 Start Date : 4/26/2022
 Page No : 1

Groups Printed- Total Volume

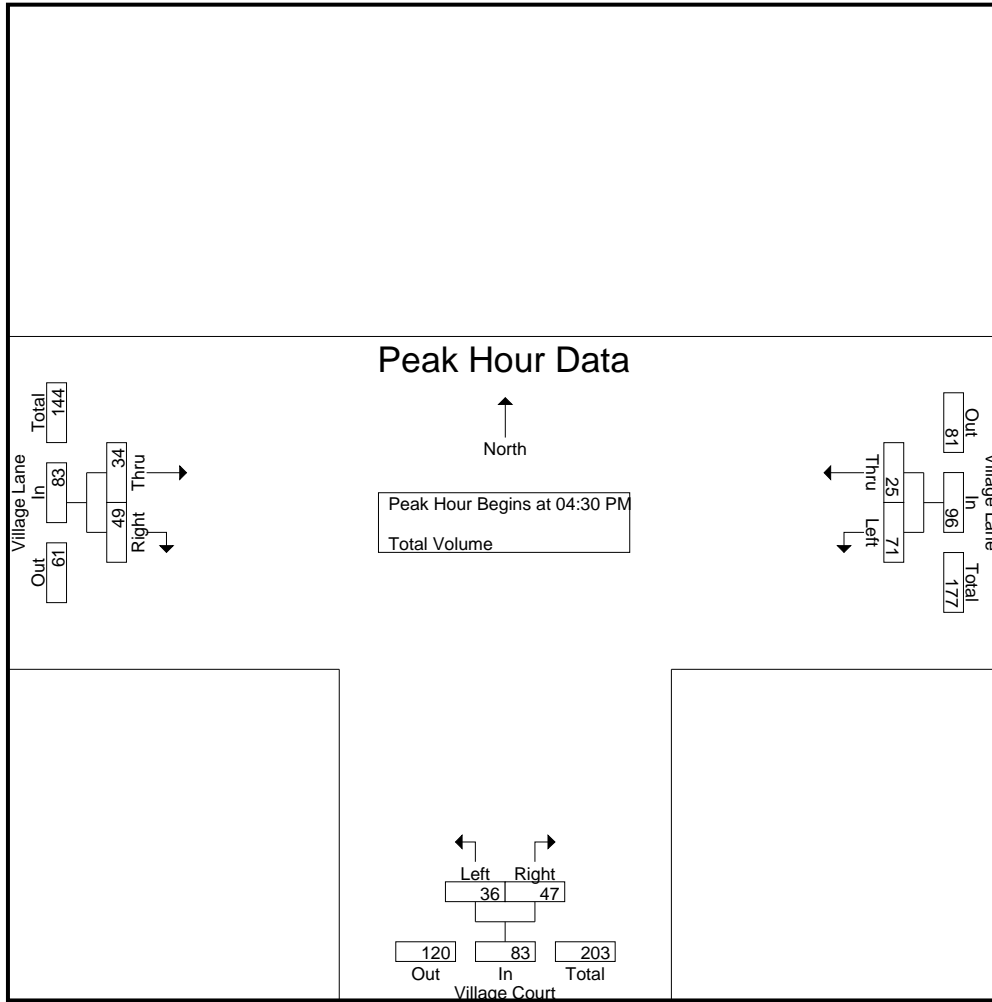
| Start Time | Village Lane Westbound | | | Village Court Northbound | | | Village Lane Eastbound | | | Int. Total |
|-------------|------------------------|------|------------|--------------------------|-------|------------|------------------------|-------|------------|------------|
| | Left | Thru | App. Total | Left | Right | App. Total | Thru | Right | App. Total | |
| 04:00 PM | 6 | 6 | 12 | 8 | 9 | 17 | 3 | 16 | 19 | 48 |
| 04:15 PM | 12 | 6 | 18 | 10 | 10 | 20 | 6 | 13 | 19 | 57 |
| 04:30 PM | 15 | 8 | 23 | 7 | 11 | 18 | 5 | 9 | 14 | 55 |
| 04:45 PM | 15 | 2 | 17 | 8 | 10 | 18 | 4 | 16 | 20 | 55 |
| Total | 48 | 22 | 70 | 33 | 40 | 73 | 18 | 54 | 72 | 215 |
| 05:00 PM | 22 | 10 | 32 | 12 | 12 | 24 | 11 | 14 | 25 | 81 |
| 05:15 PM | 19 | 5 | 24 | 9 | 14 | 23 | 14 | 10 | 24 | 71 |
| 05:30 PM | 5 | 4 | 9 | 11 | 11 | 22 | 1 | 18 | 19 | 50 |
| 05:45 PM | 13 | 6 | 19 | 6 | 6 | 12 | 6 | 16 | 22 | 53 |
| Total | 59 | 25 | 84 | 38 | 43 | 81 | 32 | 58 | 90 | 255 |
| Grand Total | 107 | 47 | 154 | 71 | 83 | 154 | 50 | 112 | 162 | 470 |
| Apprch % | 69.5 | 30.5 | | 46.1 | 53.9 | | 30.9 | 69.1 | | |
| Total % | 22.8 | 10 | 32.8 | 15.1 | 17.7 | 32.8 | 10.6 | 23.8 | 34.5 | |

| Start Time | Village Lane Westbound | | | Village Court Northbound | | | Village Lane Eastbound | | | Int. Total |
|--------------|------------------------|-----------|------------|--------------------------|-----------|------------|------------------------|-----------|------------|------------|
| | Left | Thru | App. Total | Left | Right | App. Total | Thru | Right | App. Total | |
| 04:30 PM | 15 | 8 | 23 | 7 | 11 | 18 | 5 | 9 | 14 | 55 |
| 04:45 PM | 15 | 2 | 17 | 8 | 10 | 18 | 4 | 16 | 20 | 55 |
| 05:00 PM | 22 | 10 | 32 | 12 | 12 | 24 | 11 | 14 | 25 | 81 |
| 05:15 PM | 19 | 5 | 24 | 9 | 14 | 23 | 14 | 10 | 24 | 71 |
| Total Volume | 71 | 25 | 96 | 36 | 47 | 83 | 34 | 49 | 83 | 262 |
| % App. Total | 74 | 26 | | 43.4 | 56.6 | | 41 | 59 | | |
| PHF | .807 | .625 | .750 | .750 | .839 | .865 | .607 | .766 | .830 | .809 |

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:30 PM

City of Torrance
 N/S: Village Court
 E/W: Village Lane
 Weather: Clear

File Name : 02_TOR_Village_VIII PM
 Site Code : 05722330
 Start Date : 4/26/2022
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

| | 04:30 PM | | | 04:45 PM | | | 05:00 PM | | |
|--------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| +0 mins. | 15 | 8 | 23 | 8 | 10 | 18 | 11 | 14 | 25 |
| +15 mins. | 15 | 2 | 17 | 12 | 12 | 24 | 14 | 10 | 24 |
| +30 mins. | 22 | 10 | 32 | 9 | 14 | 23 | 1 | 18 | 19 |
| +45 mins. | 19 | 5 | 24 | 11 | 11 | 22 | 6 | 16 | 22 |
| Total Volume | 71 | 25 | 96 | 40 | 47 | 87 | 32 | 58 | 90 |
| % App. Total | 74 | 26 | | 46 | 54 | | 35.6 | 64.4 | |
| PHF | .807 | .625 | .750 | .833 | .839 | .906 | .571 | .806 | .900 |

City of Torrance
 N/S: Village Court
 E/W: Del Amo Circle West
 Weather: Clear

File Name : 03_TOR_Village_Del AM
 Site Code : 05722330
 Start Date : 4/26/2022
 Page No : 1

Groups Printed- Total Volume

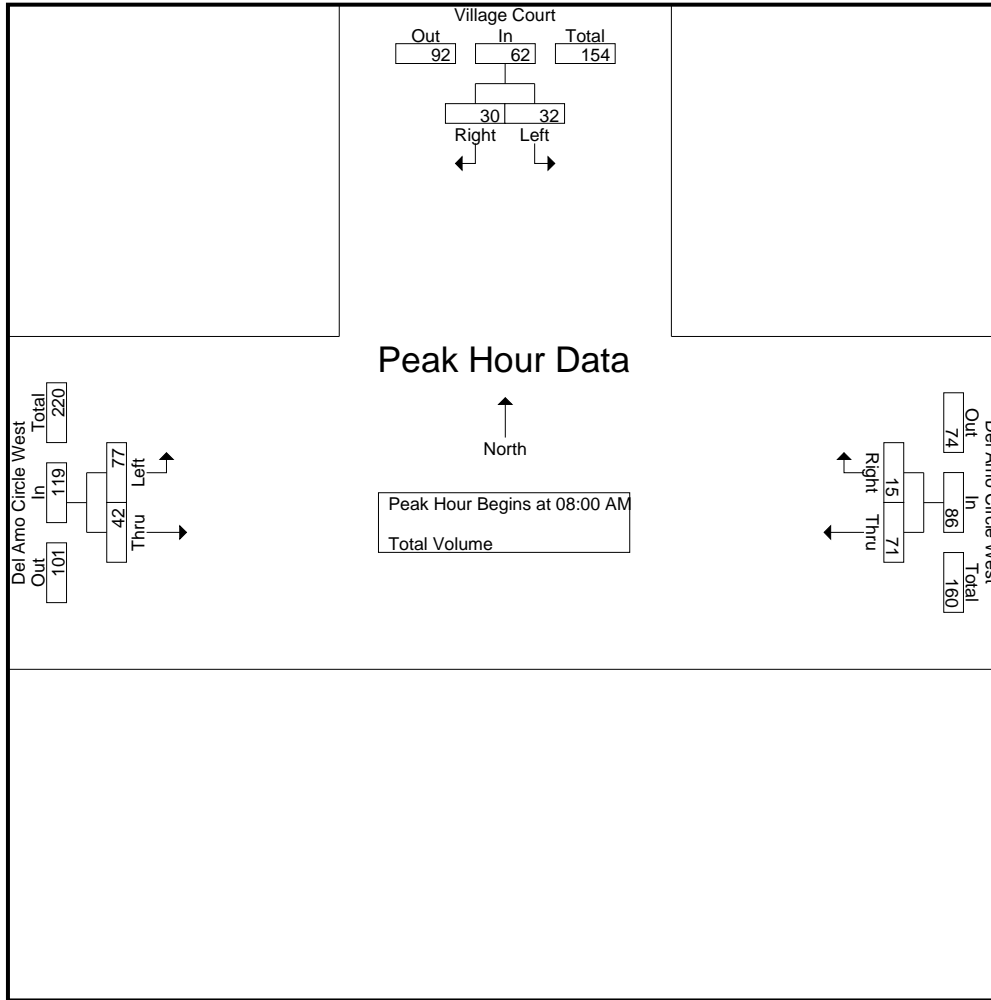
| Start Time | Village Court Southbound | | | Del Amo Circle West Westbound | | | Del Amo Circle West Eastbound | | | Int. Total |
|-------------|--------------------------|-------|------------|-------------------------------|-------|------------|-------------------------------|------|------------|------------|
| | Left | Right | App. Total | Thru | Right | App. Total | Left | Thru | App. Total | |
| 07:00 AM | 2 | 4 | 6 | 10 | 0 | 10 | 6 | 10 | 16 | 32 |
| 07:15 AM | 2 | 7 | 9 | 11 | 3 | 14 | 6 | 4 | 10 | 33 |
| 07:30 AM | 6 | 3 | 9 | 9 | 3 | 12 | 6 | 11 | 17 | 38 |
| 07:45 AM | 4 | 7 | 11 | 21 | 4 | 25 | 12 | 11 | 23 | 59 |
| Total | 14 | 21 | 35 | 51 | 10 | 61 | 30 | 36 | 66 | 162 |
| 08:00 AM | 5 | 8 | 13 | 8 | 3 | 11 | 14 | 9 | 23 | 47 |
| 08:15 AM | 10 | 7 | 17 | 17 | 5 | 22 | 22 | 12 | 34 | 73 |
| 08:30 AM | 9 | 6 | 15 | 29 | 2 | 31 | 28 | 10 | 38 | 84 |
| 08:45 AM | 8 | 9 | 17 | 17 | 5 | 22 | 13 | 11 | 24 | 63 |
| Total | 32 | 30 | 62 | 71 | 15 | 86 | 77 | 42 | 119 | 267 |
| Grand Total | 46 | 51 | 97 | 122 | 25 | 147 | 107 | 78 | 185 | 429 |
| Apprch % | 47.4 | 52.6 | | 83 | 17 | | 57.8 | 42.2 | | |
| Total % | 10.7 | 11.9 | 22.6 | 28.4 | 5.8 | 34.3 | 24.9 | 18.2 | 43.1 | |

| Start Time | Village Court Southbound | | | Del Amo Circle West Westbound | | | Del Amo Circle West Eastbound | | | Int. Total |
|--------------|--------------------------|----------|------------|-------------------------------|----------|------------|-------------------------------|-----------|------------|------------|
| | Left | Right | App. Total | Thru | Right | App. Total | Left | Thru | App. Total | |
| 08:00 AM | 5 | 8 | 13 | 8 | 3 | 11 | 14 | 9 | 23 | 47 |
| 08:15 AM | 10 | 7 | 17 | 17 | 5 | 22 | 22 | 12 | 34 | 73 |
| 08:30 AM | 9 | 6 | 15 | 29 | 2 | 31 | 28 | 10 | 38 | 84 |
| 08:45 AM | 8 | 9 | 17 | 17 | 5 | 22 | 13 | 11 | 24 | 63 |
| Total Volume | 32 | 30 | 62 | 71 | 15 | 86 | 77 | 42 | 119 | 267 |
| % App. Total | 51.6 | 48.4 | | 82.6 | 17.4 | | 64.7 | 35.3 | | |
| PHF | .800 | .833 | .912 | .612 | .750 | .694 | .688 | .875 | .783 | .795 |

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 08:00 AM

City of Torrance
 N/S: Village Court
 E/W: Del Amo Circle West
 Weather: Clear

File Name : 03_TOR_Village_Del AM
 Site Code : 05722330
 Start Date : 4/26/2022
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

| | 08:00 AM | | | 07:45 AM | | | 08:00 AM | | |
|--------------|-----------|----------|-----------|-----------|----------|-----------|-----------|-----------|-----------|
| +0 mins. | 5 | 8 | 13 | 21 | 4 | 25 | 14 | 9 | 23 |
| +15 mins. | 10 | 7 | 17 | 8 | 3 | 11 | 22 | 12 | 34 |
| +30 mins. | 9 | 6 | 15 | 17 | 5 | 22 | 28 | 10 | 38 |
| +45 mins. | 8 | 9 | 17 | 29 | 2 | 31 | 13 | 11 | 24 |
| Total Volume | 32 | 30 | 62 | 75 | 14 | 89 | 77 | 42 | 119 |
| % App. Total | 51.6 | 48.4 | | 84.3 | 15.7 | | 64.7 | 35.3 | |
| PHF | .800 | .833 | .912 | .647 | .700 | .718 | .688 | .875 | .783 |

City of Torrance
 N/S: Village Court
 E/W: Del Amo Circle West
 Weather: Clear

File Name : 03_TOR_Village_Del PM
 Site Code : 05722330
 Start Date : 4/26/2022
 Page No : 1

Groups Printed- Total Volume

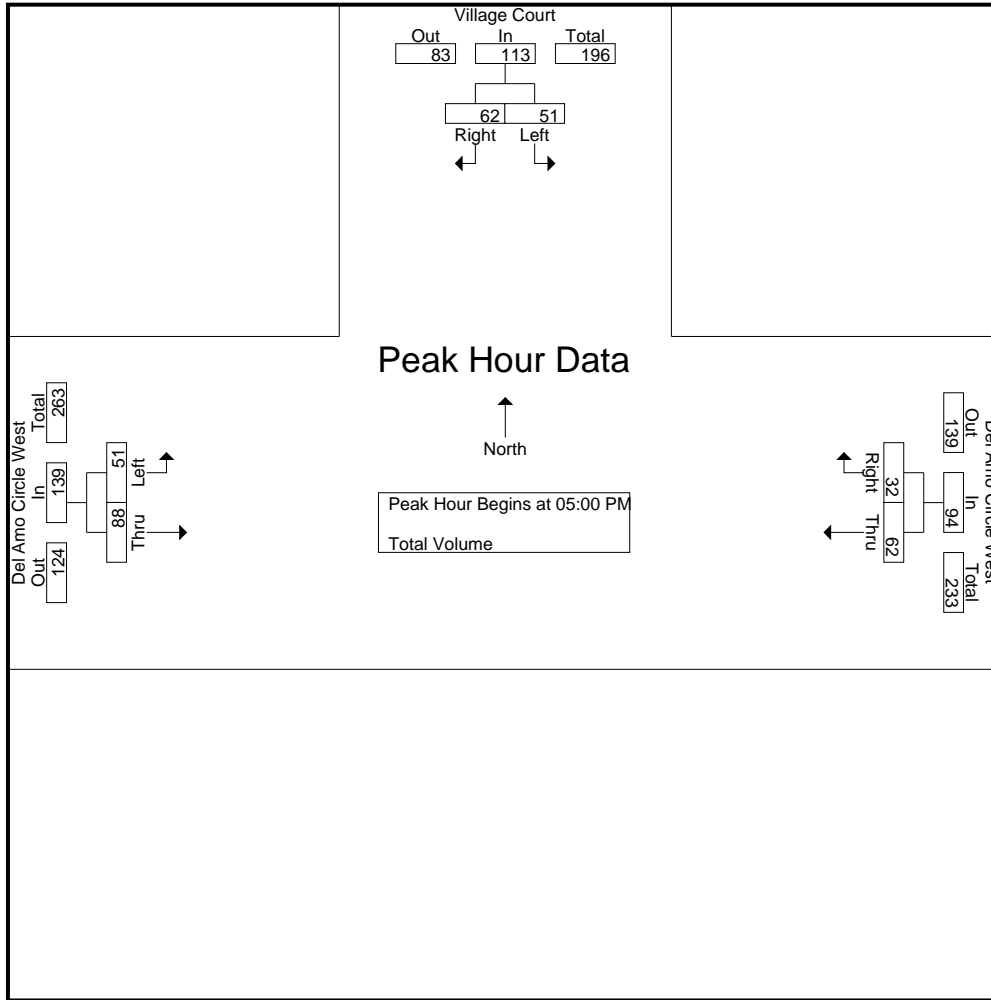
| Start Time | Village Court Southbound | | | Del Amo Circle West Westbound | | | Del Amo Circle West Eastbound | | | Int. Total |
|-------------|--------------------------|-------|------------|-------------------------------|-------|------------|-------------------------------|------|------------|------------|
| | Left | Right | App. Total | Thru | Right | App. Total | Left | Thru | App. Total | |
| 04:00 PM | 9 | 11 | 20 | 12 | 4 | 16 | 14 | 19 | 33 | 69 |
| 04:15 PM | 9 | 9 | 18 | 19 | 9 | 28 | 19 | 4 | 23 | 69 |
| 04:30 PM | 7 | 17 | 24 | 13 | 7 | 20 | 17 | 15 | 32 | 76 |
| 04:45 PM | 6 | 11 | 17 | 24 | 4 | 28 | 13 | 15 | 28 | 73 |
| Total | 31 | 48 | 79 | 68 | 24 | 92 | 63 | 53 | 116 | 287 |
| 05:00 PM | 15 | 27 | 42 | 15 | 10 | 25 | 16 | 20 | 36 | 103 |
| 05:15 PM | 10 | 12 | 22 | 10 | 7 | 17 | 15 | 20 | 35 | 74 |
| 05:30 PM | 13 | 13 | 26 | 17 | 11 | 28 | 13 | 26 | 39 | 93 |
| 05:45 PM | 13 | 10 | 23 | 20 | 4 | 24 | 7 | 22 | 29 | 76 |
| Total | 51 | 62 | 113 | 62 | 32 | 94 | 51 | 88 | 139 | 346 |
| Grand Total | 82 | 110 | 192 | 130 | 56 | 186 | 114 | 141 | 255 | 633 |
| Apprch % | 42.7 | 57.3 | | 69.9 | 30.1 | | 44.7 | 55.3 | | |
| Total % | 13 | 17.4 | 30.3 | 20.5 | 8.8 | 29.4 | 18 | 22.3 | 40.3 | |

| Start Time | Village Court Southbound | | | Del Amo Circle West Westbound | | | Del Amo Circle West Eastbound | | | Int. Total |
|--------------|--------------------------|-----------|------------|-------------------------------|-----------|------------|-------------------------------|-----------|------------|------------|
| | Left | Right | App. Total | Thru | Right | App. Total | Left | Thru | App. Total | |
| 05:00 PM | 15 | 27 | 42 | 15 | 10 | 25 | 16 | 20 | 36 | 103 |
| 05:15 PM | 10 | 12 | 22 | 10 | 7 | 17 | 15 | 20 | 35 | 74 |
| 05:30 PM | 13 | 13 | 26 | 17 | 11 | 28 | 13 | 26 | 39 | 93 |
| 05:45 PM | 13 | 10 | 23 | 20 | 4 | 24 | 7 | 22 | 29 | 76 |
| Total Volume | 51 | 62 | 113 | 62 | 32 | 94 | 51 | 88 | 139 | 346 |
| % App. Total | 45.1 | 54.9 | | 66 | 34 | | 36.7 | 63.3 | | |
| PHF | .850 | .574 | .673 | .775 | .727 | .839 | .797 | .846 | .891 | .840 |

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 05:00 PM

City of Torrance
 N/S: Village Court
 E/W: Del Amo Circle West
 Weather: Clear

File Name : 03_TOR_Village_Del PM
 Site Code : 05722330
 Start Date : 4/26/2022
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

| | 05:00 PM | | | 04:15 PM | | | 05:00 PM | | |
|--------------|----------|------|------|----------|------|------|----------|------|------|
| +0 mins. | 15 | 27 | 42 | 19 | 9 | 28 | 16 | 20 | 36 |
| +15 mins. | 10 | 12 | 22 | 13 | 7 | 20 | 15 | 20 | 35 |
| +30 mins. | 13 | 13 | 26 | 24 | 4 | 28 | 13 | 26 | 39 |
| +45 mins. | 13 | 10 | 23 | 15 | 10 | 25 | 7 | 22 | 29 |
| Total Volume | 51 | 62 | 113 | 71 | 30 | 101 | 51 | 88 | 139 |
| % App. Total | 45.1 | 54.9 | | 70.3 | 29.7 | | 36.7 | 63.3 | |
| PHF | .850 | .574 | .673 | .740 | .750 | .902 | .797 | .846 | .891 |

City of Torrance
 N/S: Village Court
 E/W: Del Amo Circle W
 Weather: Clear

File Name : 04_TOR_Village_Del Amo AM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 1

Groups Printed- Total Volume

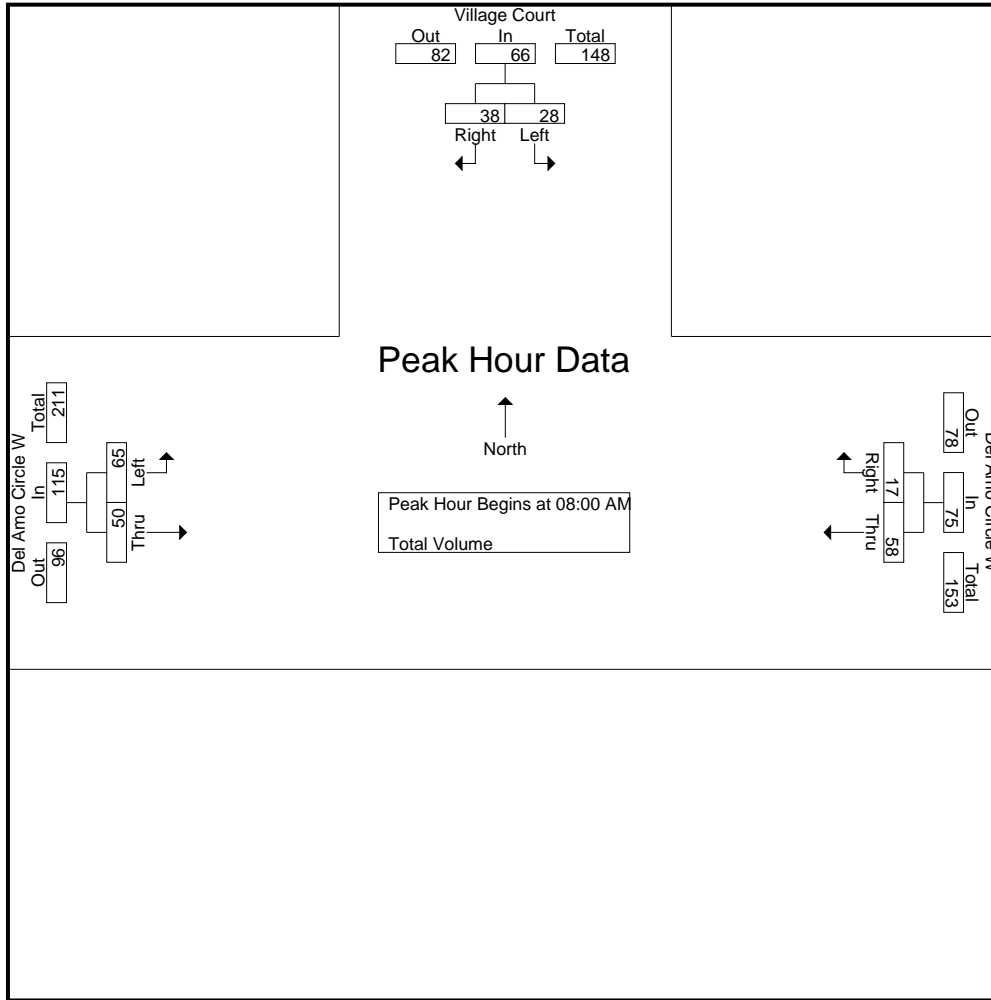
| Start Time | Village Court Southbound | | | Del Amo Circle W Westbound | | | Del Amo Circle W Eastbound | | | Int. Total |
|-------------|--------------------------|-------|------------|----------------------------|-------|------------|----------------------------|------|------------|------------|
| | Left | Right | App. Total | Thru | Right | App. Total | Left | Thru | App. Total | |
| 07:00 AM | 4 | 2 | 6 | 7 | 3 | 10 | 7 | 6 | 13 | 29 |
| 07:15 AM | 6 | 2 | 8 | 8 | 4 | 12 | 6 | 8 | 14 | 34 |
| 07:30 AM | 8 | 2 | 10 | 11 | 6 | 17 | 8 | 13 | 21 | 48 |
| 07:45 AM | 3 | 10 | 13 | 18 | 5 | 23 | 11 | 11 | 22 | 58 |
| Total | 21 | 16 | 37 | 44 | 18 | 62 | 32 | 38 | 70 | 169 |
| 08:00 AM | 5 | 10 | 15 | 10 | 7 | 17 | 9 | 16 | 25 | 57 |
| 08:15 AM | 6 | 8 | 14 | 16 | 3 | 19 | 21 | 8 | 29 | 62 |
| 08:30 AM | 8 | 11 | 19 | 18 | 4 | 22 | 15 | 16 | 31 | 72 |
| 08:45 AM | 9 | 9 | 18 | 14 | 3 | 17 | 20 | 10 | 30 | 65 |
| Total | 28 | 38 | 66 | 58 | 17 | 75 | 65 | 50 | 115 | 256 |
| Grand Total | 49 | 54 | 103 | 102 | 35 | 137 | 97 | 88 | 185 | 425 |
| Apprch % | 47.6 | 52.4 | | 74.5 | 25.5 | | 52.4 | 47.6 | | |
| Total % | 11.5 | 12.7 | 24.2 | 24 | 8.2 | 32.2 | 22.8 | 20.7 | 43.5 | |

| Start Time | Village Court Southbound | | | Del Amo Circle W Westbound | | | Del Amo Circle W Eastbound | | | Int. Total |
|--------------|--------------------------|-----------|------------|----------------------------|----------|------------|----------------------------|-----------|------------|------------|
| | Left | Right | App. Total | Thru | Right | App. Total | Left | Thru | App. Total | |
| 08:00 AM | 5 | 10 | 15 | 10 | 7 | 17 | 9 | 16 | 25 | 57 |
| 08:15 AM | 6 | 8 | 14 | 16 | 3 | 19 | 21 | 8 | 29 | 62 |
| 08:30 AM | 8 | 11 | 19 | 18 | 4 | 22 | 15 | 16 | 31 | 72 |
| 08:45 AM | 9 | 9 | 18 | 14 | 3 | 17 | 20 | 10 | 30 | 65 |
| Total Volume | 28 | 38 | 66 | 58 | 17 | 75 | 65 | 50 | 115 | 256 |
| % App. Total | 42.4 | 57.6 | | 77.3 | 22.7 | | 56.5 | 43.5 | | |
| PHF | .778 | .864 | .868 | .806 | .607 | .852 | .774 | .781 | .927 | .889 |

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 08:00 AM

City of Torrance
 N/S: Village Court
 E/W: Del Amo Circle W
 Weather: Clear

File Name : 04_TOR_Village_Del Amo AM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

| | 08:00 AM | | | 07:45 AM | | | 08:00 AM | | |
|--------------|----------|-----------|-----------|-----------|----------|-----------|-----------|-----------|-----------|
| +0 mins. | 5 | 10 | 15 | 18 | 5 | 23 | 9 | 16 | 25 |
| +15 mins. | 6 | 8 | 14 | 10 | 7 | 17 | 21 | 8 | 29 |
| +30 mins. | 8 | 11 | 19 | 16 | 3 | 19 | 15 | 16 | 31 |
| +45 mins. | 9 | 9 | 18 | 18 | 4 | 22 | 20 | 10 | 30 |
| Total Volume | 28 | 38 | 66 | 62 | 19 | 81 | 65 | 50 | 115 |
| % App. Total | 42.4 | 57.6 | | 76.5 | 23.5 | | 56.5 | 43.5 | |
| PHF | .778 | .864 | .868 | .861 | .679 | .880 | .774 | .781 | .927 |

City of Torrance
 N/S: Village Court
 E/W: Del Amo Circle W
 Weather: Clear

File Name : 04_TOR_Village_Del Amo PM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 1

Groups Printed- Total Volume

| Start Time | Village Court Southbound | | | Del Amo Circle W Westbound | | | Del Amo Circle W Eastbound | | | Int. Total |
|-------------|--------------------------|-------|------------|----------------------------|-------|------------|----------------------------|------|------------|------------|
| | Left | Right | App. Total | Thru | Right | App. Total | Left | Thru | App. Total | |
| 04:00 PM | 7 | 13 | 20 | 15 | 12 | 27 | 12 | 12 | 24 | 71 |
| 04:15 PM | 11 | 9 | 20 | 16 | 7 | 23 | 9 | 14 | 23 | 66 |
| 04:30 PM | 4 | 13 | 17 | 14 | 3 | 17 | 14 | 14 | 28 | 62 |
| 04:45 PM | 10 | 6 | 16 | 27 | 13 | 40 | 13 | 24 | 37 | 93 |
| Total | 32 | 41 | 73 | 72 | 35 | 107 | 48 | 64 | 112 | 292 |
| 05:00 PM | 10 | 12 | 22 | 16 | 10 | 26 | 16 | 29 | 45 | 93 |
| 05:15 PM | 13 | 8 | 21 | 10 | 12 | 22 | 14 | 32 | 46 | 89 |
| 05:30 PM | 11 | 14 | 25 | 15 | 9 | 24 | 9 | 15 | 24 | 73 |
| 05:45 PM | 8 | 8 | 16 | 13 | 6 | 19 | 15 | 16 | 31 | 66 |
| Total | 42 | 42 | 84 | 54 | 37 | 91 | 54 | 92 | 146 | 321 |
| Grand Total | 74 | 83 | 157 | 126 | 72 | 198 | 102 | 156 | 258 | 613 |
| Apprch % | 47.1 | 52.9 | | 63.6 | 36.4 | | 39.5 | 60.5 | | |
| Total % | 12.1 | 13.5 | 25.6 | 20.6 | 11.7 | 32.3 | 16.6 | 25.4 | 42.1 | |

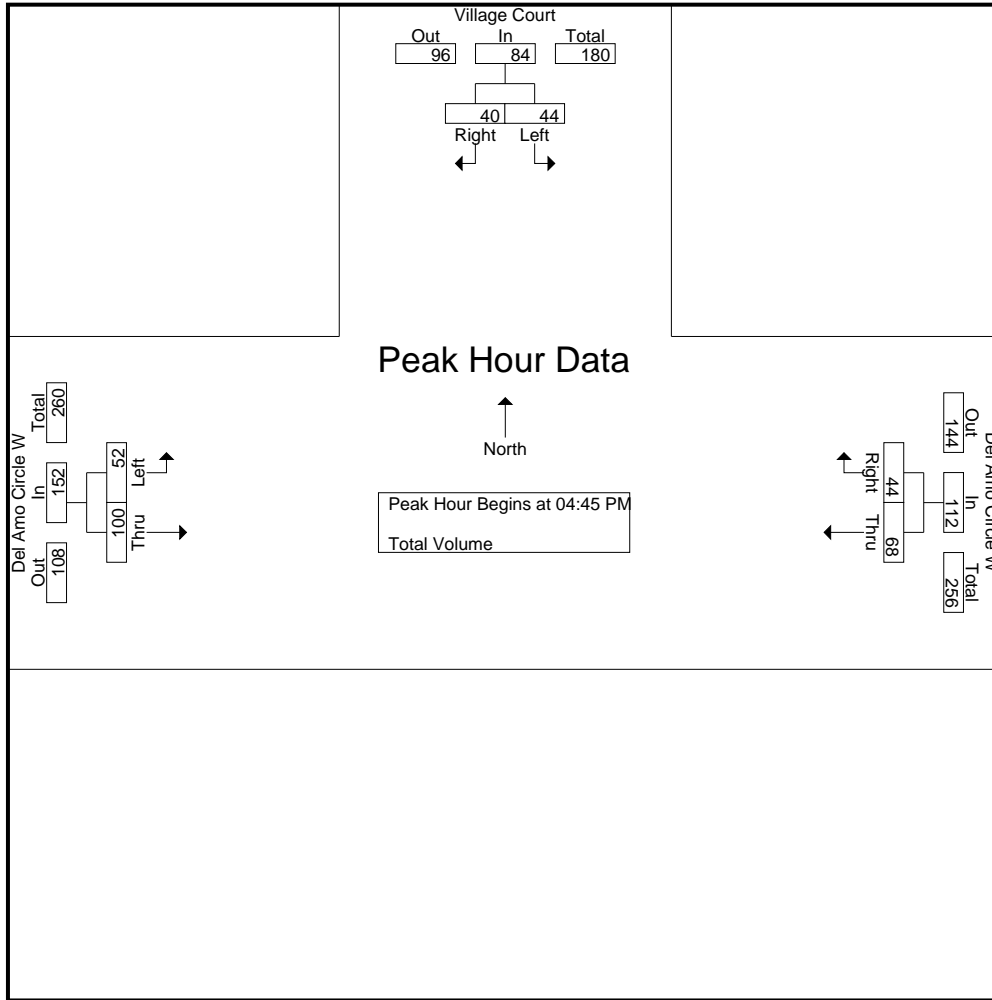
| Start Time | Village Court Southbound | | | Del Amo Circle W Westbound | | | Del Amo Circle W Eastbound | | | Int. Total |
|--------------|--------------------------|-------|------------|----------------------------|-------|------------|----------------------------|------|------------|------------|
| | Left | Right | App. Total | Thru | Right | App. Total | Left | Thru | App. Total | |
| 04:45 PM | 10 | 6 | 16 | 27 | 13 | 40 | 13 | 24 | 37 | 93 |
| 05:00 PM | 10 | 12 | 22 | 16 | 10 | 26 | 16 | 29 | 45 | 93 |
| 05:15 PM | 13 | 8 | 21 | 10 | 12 | 22 | 14 | 32 | 46 | 89 |
| 05:30 PM | 11 | 14 | 25 | 15 | 9 | 24 | 9 | 15 | 24 | 73 |
| Total Volume | 44 | 40 | 84 | 68 | 44 | 112 | 52 | 100 | 152 | 348 |
| % App. Total | 52.4 | 47.6 | | 60.7 | 39.3 | | 34.2 | 65.8 | | |
| PHF | .846 | .714 | .840 | .630 | .846 | .700 | .813 | .781 | .826 | .935 |

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:45 PM

City of Torrance
 N/S: Village Court
 E/W: Del Amo Circle W
 Weather: Clear

File Name : 04_TOR_Village_Del Amo PM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

| | 04:45 PM | | | 04:30 PM | | | | | |
|--------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| +0 mins. | 10 | 6 | 16 | 27 | 13 | 40 | 14 | 14 | 28 |
| +15 mins. | 10 | 12 | 22 | 16 | 10 | 26 | 13 | 24 | 37 |
| +30 mins. | 13 | 8 | 21 | 10 | 12 | 22 | 16 | 29 | 45 |
| +45 mins. | 11 | 14 | 25 | 15 | 9 | 24 | 14 | 32 | 46 |
| Total Volume | 44 | 40 | 84 | 68 | 44 | 112 | 57 | 99 | 156 |
| % App. Total | 52.4 | 47.6 | | 60.7 | 39.3 | | 36.5 | 63.5 | |
| PHF | .846 | .714 | .840 | .630 | .846 | .700 | .891 | .773 | .848 |

City of Torrance
 N/S: Del Amo Circle W
 E/W: Carson Street
 Weather: Clear

File Name : 05_TOR_Del Amo_Carson AM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 1

Groups Printed- Total Volume

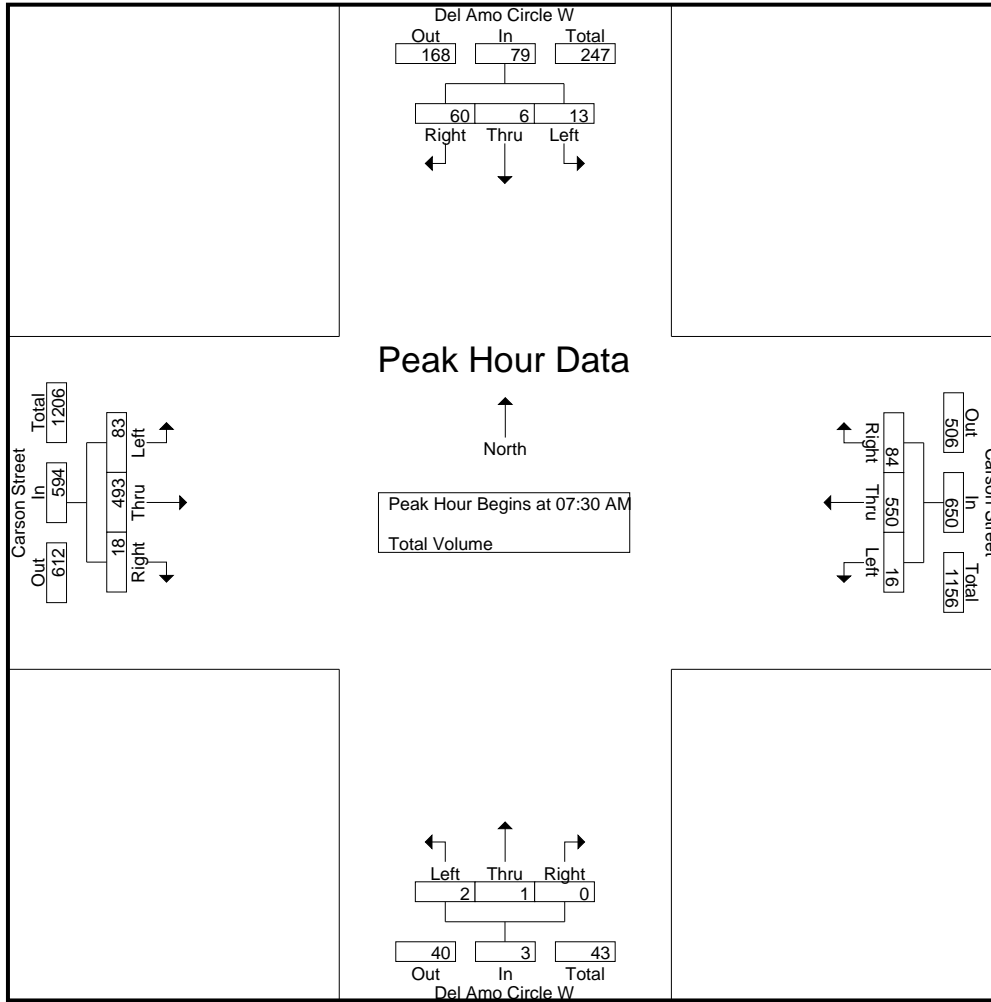
| Start Time | Del Amo Circle W Southbound | | | | Carson Street Westbound | | | | Del Amo Circle W Northbound | | | | Carson Street Eastbound | | | | Int. Total |
|-------------|-----------------------------|------|-------|------------|-------------------------|------|-------|------------|-----------------------------|------|-------|------------|-------------------------|------|-------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| 07:00 AM | 5 | 0 | 1 | 6 | 0 | 46 | 8 | 54 | 1 | 0 | 0 | 1 | 16 | 68 | 0 | 84 | 145 |
| 07:15 AM | 5 | 0 | 8 | 13 | 1 | 97 | 9 | 107 | 1 | 0 | 0 | 1 | 11 | 61 | 0 | 72 | 193 |
| 07:30 AM | 6 | 0 | 11 | 17 | 1 | 183 | 13 | 197 | 0 | 0 | 0 | 0 | 26 | 85 | 3 | 114 | 328 |
| 07:45 AM | 2 | 5 | 18 | 25 | 2 | 151 | 15 | 168 | 0 | 0 | 0 | 0 | 18 | 142 | 5 | 165 | 358 |
| Total | 18 | 5 | 38 | 61 | 4 | 477 | 45 | 526 | 2 | 0 | 0 | 2 | 71 | 356 | 8 | 435 | 1024 |
| 08:00 AM | 1 | 0 | 15 | 16 | 8 | 117 | 26 | 151 | 2 | 1 | 0 | 3 | 23 | 179 | 5 | 207 | 377 |
| 08:15 AM | 4 | 1 | 16 | 21 | 5 | 99 | 30 | 134 | 0 | 0 | 0 | 0 | 16 | 87 | 5 | 108 | 263 |
| 08:30 AM | 6 | 0 | 24 | 30 | 7 | 112 | 27 | 146 | 0 | 0 | 1 | 1 | 33 | 94 | 4 | 131 | 308 |
| 08:45 AM | 9 | 1 | 15 | 25 | 5 | 73 | 38 | 116 | 0 | 1 | 0 | 1 | 25 | 140 | 11 | 176 | 318 |
| Total | 20 | 2 | 70 | 92 | 25 | 401 | 121 | 547 | 2 | 2 | 1 | 5 | 97 | 500 | 25 | 622 | 1266 |
| Grand Total | 38 | 7 | 108 | 153 | 29 | 878 | 166 | 1073 | 4 | 2 | 1 | 7 | 168 | 856 | 33 | 1057 | 2290 |
| Apprch % | 24.8 | 4.6 | 70.6 | | 2.7 | 81.8 | 15.5 | | 57.1 | 28.6 | 14.3 | | 15.9 | 81 | 3.1 | | |
| Total % | 1.7 | 0.3 | 4.7 | 6.7 | 1.3 | 38.3 | 7.2 | 46.9 | 0.2 | 0.1 | 0 | 0.3 | 7.3 | 37.4 | 1.4 | 46.2 | |

| Start Time | Del Amo Circle W Southbound | | | | Carson Street Westbound | | | | Del Amo Circle W Northbound | | | | Carson Street Eastbound | | | | Int. Total |
|--------------|-----------------------------|----------|-----------|------------|-------------------------|------------|-----------|------------|-----------------------------|----------|-------|------------|-------------------------|------------|----------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| 07:30 AM | 6 | 0 | 11 | 17 | 1 | 183 | 13 | 197 | 0 | 0 | 0 | 0 | 26 | 85 | 3 | 114 | 328 |
| 07:45 AM | 2 | 5 | 18 | 25 | 2 | 151 | 15 | 168 | 0 | 0 | 0 | 0 | 18 | 142 | 5 | 165 | 358 |
| 08:00 AM | 1 | 0 | 15 | 16 | 8 | 117 | 26 | 151 | 2 | 1 | 0 | 3 | 23 | 179 | 5 | 207 | 377 |
| 08:15 AM | 4 | 1 | 16 | 21 | 5 | 99 | 30 | 134 | 0 | 0 | 0 | 0 | 16 | 87 | 5 | 108 | 263 |
| Total Volume | 13 | 6 | 60 | 79 | 16 | 550 | 84 | 650 | 2 | 1 | 0 | 3 | 83 | 493 | 18 | 594 | 1326 |
| % App. Total | 16.5 | 7.6 | 75.9 | | 2.5 | 84.6 | 12.9 | | 66.7 | 33.3 | 0 | | 14 | 83 | 3 | | |
| PHF | .542 | .300 | .833 | .790 | .500 | .751 | .700 | .825 | .250 | .250 | .000 | .250 | .798 | .689 | .900 | .717 | .879 |

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:30 AM

City of Torrance
 N/S: Del Amo Circle W
 E/W: Carson Street
 Weather: Clear

File Name : 05_TOR_Del Amo_Carson AM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

| | 07:45 AM | | | | 07:30 AM | | | | 08:00 AM | | | | 08:00 AM | | | |
|--------------|----------|------|------|------|----------|------|------|------|----------|------|------|------|----------|------|------|------|
| +0 mins. | 2 | 5 | 18 | 25 | 1 | 183 | 13 | 197 | 2 | 1 | 0 | 3 | 23 | 179 | 5 | 207 |
| +15 mins. | 1 | 0 | 15 | 16 | 2 | 151 | 15 | 168 | 0 | 0 | 0 | 0 | 16 | 87 | 5 | 108 |
| +30 mins. | 4 | 1 | 16 | 21 | 8 | 117 | 26 | 151 | 0 | 0 | 1 | 1 | 33 | 94 | 4 | 131 |
| +45 mins. | 6 | 0 | 24 | 30 | 5 | 99 | 30 | 134 | 0 | 1 | 0 | 1 | 25 | 140 | 11 | 176 |
| Total Volume | 13 | 6 | 73 | 92 | 16 | 550 | 84 | 650 | 2 | 2 | 1 | 5 | 97 | 500 | 25 | 622 |
| % App. Total | 14.1 | 6.5 | 79.3 | | 2.5 | 84.6 | 12.9 | | 40 | 40 | 20 | | 15.6 | 80.4 | 4 | |
| PHF | .542 | .300 | .760 | .767 | .500 | .751 | .700 | .825 | .250 | .500 | .250 | .417 | .735 | .698 | .568 | .751 |

City of Torrance
 N/S: Del Amo Circle W
 E/W: Carson Street
 Weather: Clear

File Name : 05_TOR_Del Amo_Carson PM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 1

Groups Printed- Total Volume

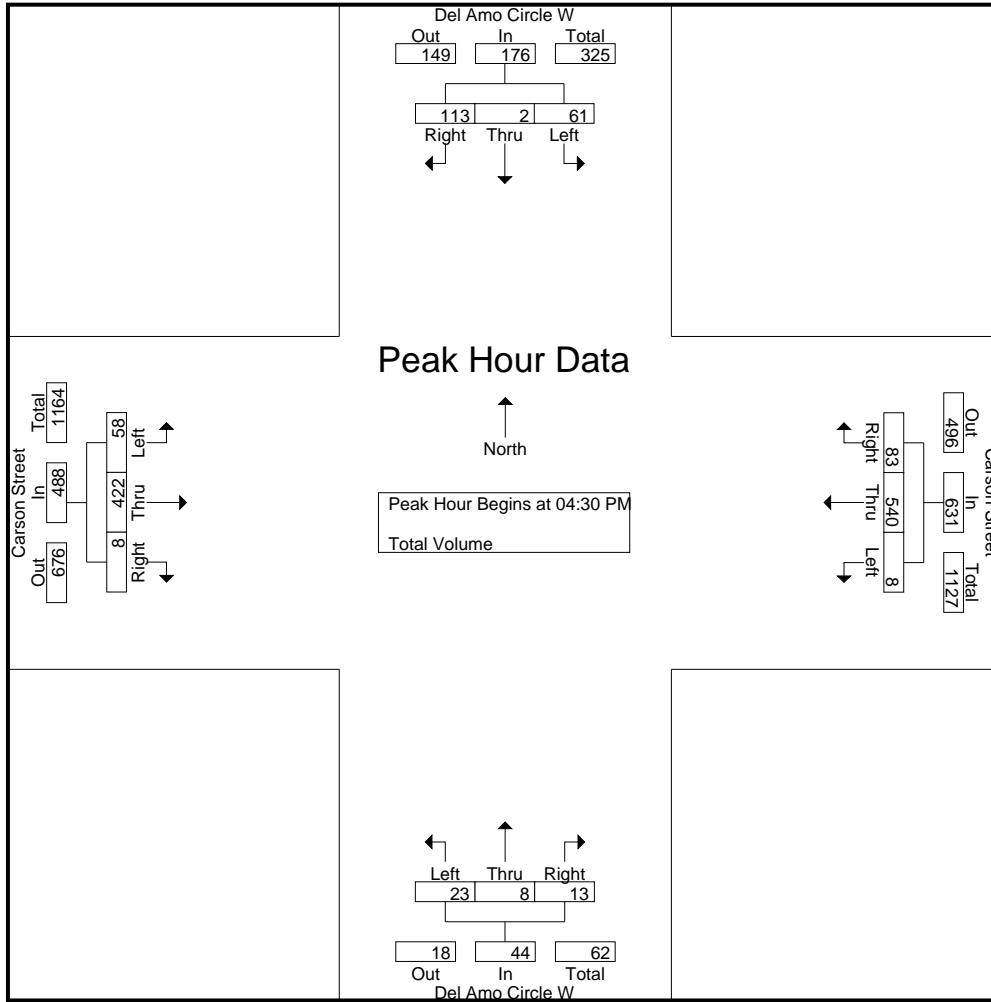
| Start Time | Del Amo Circle W Southbound | | | | Carson Street Westbound | | | | Del Amo Circle W Northbound | | | | Carson Street Eastbound | | | | Int. Total |
|-------------|-----------------------------|------|-------|------------|-------------------------|------|-------|------------|-----------------------------|------|-------|------------|-------------------------|------|-------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| 04:00 PM | 16 | 0 | 26 | 42 | 1 | 122 | 14 | 137 | 1 | 0 | 3 | 4 | 15 | 128 | 3 | 146 | 329 |
| 04:15 PM | 14 | 1 | 27 | 42 | 0 | 115 | 16 | 131 | 3 | 0 | 4 | 7 | 14 | 133 | 1 | 148 | 328 |
| 04:30 PM | 10 | 2 | 34 | 46 | 4 | 141 | 18 | 163 | 2 | 1 | 2 | 5 | 18 | 86 | 2 | 106 | 320 |
| 04:45 PM | 5 | 0 | 38 | 43 | 1 | 141 | 22 | 164 | 1 | 3 | 2 | 6 | 17 | 121 | 2 | 140 | 353 |
| Total | 45 | 3 | 125 | 173 | 6 | 519 | 70 | 595 | 7 | 4 | 11 | 22 | 64 | 468 | 8 | 540 | 1330 |
| 05:00 PM | 23 | 0 | 22 | 45 | 1 | 127 | 23 | 151 | 13 | 2 | 5 | 20 | 8 | 107 | 3 | 118 | 334 |
| 05:15 PM | 23 | 0 | 19 | 42 | 2 | 131 | 20 | 153 | 7 | 2 | 4 | 13 | 15 | 108 | 1 | 124 | 332 |
| 05:30 PM | 21 | 0 | 24 | 45 | 1 | 120 | 15 | 136 | 2 | 0 | 1 | 3 | 12 | 77 | 0 | 89 | 273 |
| 05:45 PM | 8 | 1 | 16 | 25 | 0 | 98 | 21 | 119 | 4 | 1 | 1 | 6 | 16 | 97 | 1 | 114 | 264 |
| Total | 75 | 1 | 81 | 157 | 4 | 476 | 79 | 559 | 26 | 5 | 11 | 42 | 51 | 389 | 5 | 445 | 1203 |
| Grand Total | 120 | 4 | 206 | 330 | 10 | 995 | 149 | 1154 | 33 | 9 | 22 | 64 | 115 | 857 | 13 | 985 | 2533 |
| Apprch % | 36.4 | 1.2 | 62.4 | | 0.9 | 86.2 | 12.9 | | 51.6 | 14.1 | 34.4 | | 11.7 | 87 | 1.3 | | |
| Total % | 4.7 | 0.2 | 8.1 | 13 | 0.4 | 39.3 | 5.9 | 45.6 | 1.3 | 0.4 | 0.9 | 2.5 | 4.5 | 33.8 | 0.5 | 38.9 | |

| Start Time | Del Amo Circle W Southbound | | | | Carson Street Westbound | | | | Del Amo Circle W Northbound | | | | Carson Street Eastbound | | | | Int. Total |
|--------------|-----------------------------|----------|-----------|------------|-------------------------|------------|-----------|------------|-----------------------------|----------|----------|------------|-------------------------|------------|----------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| 04:30 PM | 10 | 2 | 34 | 46 | 4 | 141 | 18 | 163 | 2 | 1 | 2 | 5 | 18 | 86 | 2 | 106 | 320 |
| 04:45 PM | 5 | 0 | 38 | 43 | 1 | 141 | 22 | 164 | 1 | 3 | 2 | 6 | 17 | 121 | 2 | 140 | 353 |
| 05:00 PM | 23 | 0 | 22 | 45 | 1 | 127 | 23 | 151 | 13 | 2 | 5 | 20 | 8 | 107 | 3 | 118 | 334 |
| 05:15 PM | 23 | 0 | 19 | 42 | 2 | 131 | 20 | 153 | 7 | 2 | 4 | 13 | 15 | 108 | 1 | 124 | 332 |
| Total Volume | 61 | 2 | 113 | 176 | 8 | 540 | 83 | 631 | 23 | 8 | 13 | 44 | 58 | 422 | 8 | 488 | 1339 |
| % App. Total | 34.7 | 1.1 | 64.2 | | 1.3 | 85.6 | 13.2 | | 52.3 | 18.2 | 29.5 | | 11.9 | 86.5 | 1.6 | | |
| PHF | .663 | .250 | .743 | .957 | .500 | .957 | .902 | .962 | .442 | .667 | .650 | .550 | .806 | .872 | .667 | .871 | .948 |

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:30 PM

City of Torrance
 N/S: Del Amo Circle W
 E/W: Carson Street
 Weather: Clear

File Name : 05_TOR_Del Amo_Carson PM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

| | 04:15 PM | | | | 04:30 PM | | | | 04:30 PM | | | | 04:00 PM | | | |
|--------------|-----------|----------|-----------|-----------|----------|------------|-----------|------------|-----------|----------|----------|-----------|-----------|------------|----------|------------|
| +0 mins. | 14 | 1 | 27 | 42 | 4 | 141 | 18 | 163 | 2 | 1 | 2 | 5 | 15 | 128 | 3 | 146 |
| +15 mins. | 10 | 2 | 34 | 46 | 1 | 141 | 22 | 164 | 1 | 3 | 2 | 6 | 14 | 133 | 1 | 148 |
| +30 mins. | 5 | 0 | 38 | 43 | 1 | 127 | 23 | 151 | 13 | 2 | 5 | 20 | 18 | 86 | 2 | 106 |
| +45 mins. | 23 | 0 | 22 | 45 | 2 | 131 | 20 | 153 | 7 | 2 | 4 | 13 | 17 | 121 | 2 | 140 |
| Total Volume | 52 | 3 | 121 | 176 | 8 | 540 | 83 | 631 | 23 | 8 | 13 | 44 | 64 | 468 | 8 | 540 |
| % App. Total | 29.5 | 1.7 | 68.8 | | 1.3 | 85.6 | 13.2 | | 52.3 | 18.2 | 29.5 | | 11.9 | 86.7 | 1.5 | |
| PHF | .565 | .375 | .796 | .957 | .500 | .957 | .902 | .962 | .442 | .667 | .650 | .550 | .889 | .880 | .667 | .912 |

City of Torrance
 N/S: Hawthorne Boulevard
 E/W: Torrance Boulevard
 Weather: Clear

File Name : 06_TOR_Haw_Torr AM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 1

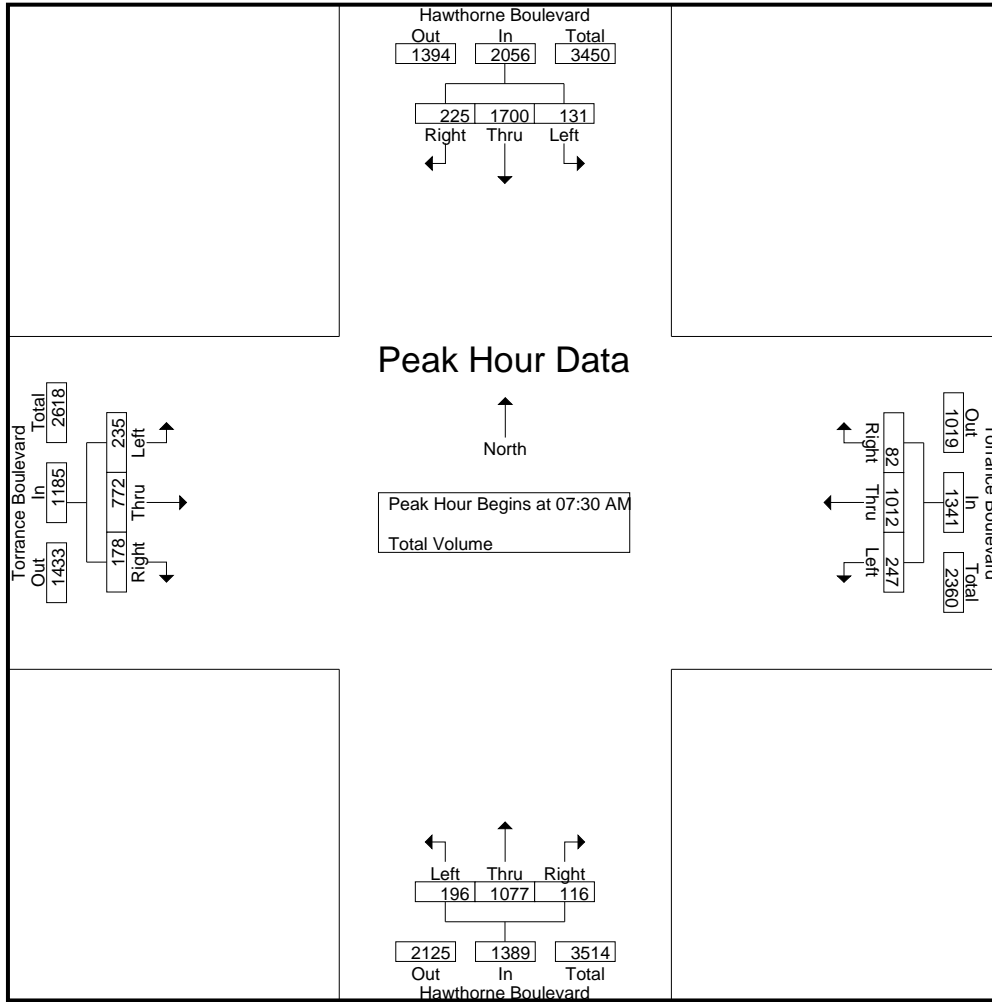
Groups Printed- Total Volume

| Start Time | Hawthorne Boulevard Southbound | | | | Torrance Boulevard Westbound | | | | Hawthorne Boulevard Northbound | | | | Torrance Boulevard Eastbound | | | | Int. Total |
|-------------|--------------------------------|------|-------|------------|------------------------------|------|-------|------------|--------------------------------|------|-------|------------|------------------------------|------|-------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| 07:00 AM | 13 | 248 | 27 | 288 | 31 | 157 | 15 | 203 | 42 | 185 | 9 | 236 | 26 | 84 | 15 | 125 | 852 |
| 07:15 AM | 14 | 316 | 47 | 377 | 35 | 258 | 8 | 301 | 36 | 225 | 18 | 279 | 37 | 124 | 20 | 181 | 1138 |
| 07:30 AM | 24 | 425 | 71 | 520 | 69 | 323 | 11 | 403 | 43 | 268 | 20 | 331 | 52 | 188 | 45 | 285 | 1539 |
| 07:45 AM | 45 | 472 | 65 | 582 | 71 | 269 | 20 | 360 | 49 | 256 | 32 | 337 | 82 | 201 | 49 | 332 | 1611 |
| Total | 96 | 1461 | 210 | 1767 | 206 | 1007 | 54 | 1267 | 170 | 934 | 79 | 1183 | 197 | 597 | 129 | 923 | 5140 |
| 08:00 AM | 36 | 405 | 60 | 501 | 49 | 216 | 30 | 295 | 45 | 270 | 30 | 345 | 67 | 233 | 52 | 352 | 1493 |
| 08:15 AM | 26 | 398 | 29 | 453 | 58 | 204 | 21 | 283 | 59 | 283 | 34 | 376 | 34 | 150 | 32 | 216 | 1328 |
| 08:30 AM | 40 | 450 | 54 | 544 | 61 | 247 | 38 | 346 | 52 | 312 | 32 | 396 | 52 | 153 | 37 | 242 | 1528 |
| 08:45 AM | 39 | 402 | 54 | 495 | 51 | 202 | 33 | 286 | 54 | 292 | 28 | 374 | 45 | 172 | 42 | 259 | 1414 |
| Total | 141 | 1655 | 197 | 1993 | 219 | 869 | 122 | 1210 | 210 | 1157 | 124 | 1491 | 198 | 708 | 163 | 1069 | 5763 |
| Grand Total | 237 | 3116 | 407 | 3760 | 425 | 1876 | 176 | 2477 | 380 | 2091 | 203 | 2674 | 395 | 1305 | 292 | 1992 | 10903 |
| Apprch % | 6.3 | 82.9 | 10.8 | | 17.2 | 75.7 | 7.1 | | 14.2 | 78.2 | 7.6 | | 19.8 | 65.5 | 14.7 | | |
| Total % | 2.2 | 28.6 | 3.7 | 34.5 | 3.9 | 17.2 | 1.6 | 22.7 | 3.5 | 19.2 | 1.9 | 24.5 | 3.6 | 12 | 2.7 | 18.3 | |

| Start Time | Hawthorne Boulevard Southbound | | | | Torrance Boulevard Westbound | | | | Hawthorne Boulevard Northbound | | | | Torrance Boulevard Eastbound | | | | Int. Total |
|--|--------------------------------|------------|-----------|------------|------------------------------|------------|-----------|------------|--------------------------------|------------|-----------|------------|------------------------------|------------|-----------|------------|-------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:30 AM | | | | | | | | | | | | | | | | | |
| 07:30 AM | 24 | 425 | 71 | 520 | 69 | 323 | 11 | 403 | 43 | 268 | 20 | 331 | 52 | 188 | 45 | 285 | 1539 |
| 07:45 AM | 45 | 472 | 65 | 582 | 71 | 269 | 20 | 360 | 49 | 256 | 32 | 337 | 82 | 201 | 49 | 332 | 1611 |
| 08:00 AM | 36 | 405 | 60 | 501 | 49 | 216 | 30 | 295 | 45 | 270 | 30 | 345 | 67 | 233 | 52 | 352 | 1493 |
| 08:15 AM | 26 | 398 | 29 | 453 | 58 | 204 | 21 | 283 | 59 | 283 | 34 | 376 | 34 | 150 | 32 | 216 | 1328 |
| Total Volume | 131 | 1700 | 225 | 2056 | 247 | 1012 | 82 | 1341 | 196 | 1077 | 116 | 1389 | 235 | 772 | 178 | 1185 | 5971 |
| % App. Total | 6.4 | 82.7 | 10.9 | | 18.4 | 75.5 | 6.1 | | 14.1 | 77.5 | 8.4 | | 19.8 | 65.1 | 15 | | |
| PHF | .728 | .900 | .792 | .883 | .870 | .783 | .683 | .832 | .831 | .951 | .853 | .924 | .716 | .828 | .856 | .842 | .927 |

City of Torrance
 N/S: Hawthorne Boulevard
 E/W: Torrance Boulevard
 Weather: Clear

File Name : 06_TOR_Haw_Torr AM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

| | 07:45 AM | | | | 07:15 AM | | | | 08:00 AM | | | | 07:30 AM | | | |
|--------------|----------|------|------|------|----------|------|------|------|----------|------|------|------|----------|------|------|------|
| +0 mins. | 45 | 472 | 65 | 582 | 35 | 258 | 8 | 301 | 45 | 270 | 30 | 345 | 52 | 188 | 45 | 285 |
| +15 mins. | 36 | 405 | 60 | 501 | 69 | 323 | 11 | 403 | 59 | 283 | 34 | 376 | 82 | 201 | 49 | 332 |
| +30 mins. | 26 | 398 | 29 | 453 | 71 | 269 | 20 | 360 | 52 | 312 | 32 | 396 | 67 | 233 | 52 | 352 |
| +45 mins. | 40 | 450 | 54 | 544 | 49 | 216 | 30 | 295 | 54 | 292 | 28 | 374 | 34 | 150 | 32 | 216 |
| Total Volume | 147 | 1725 | 208 | 2080 | 224 | 1066 | 69 | 1359 | 210 | 1157 | 124 | 1491 | 235 | 772 | 178 | 1185 |
| % App. Total | 7.1 | 82.9 | 10 | | 16.5 | 78.4 | 5.1 | | 14.1 | 77.6 | 8.3 | | 19.8 | 65.1 | 15 | |
| PHF | .817 | .914 | .800 | .893 | .789 | .825 | .575 | .843 | .890 | .927 | .912 | .941 | .716 | .828 | .856 | .842 |

City of Torrance
 N/S: Hawthorne Boulevard
 E/W: Torrance Boulevard
 Weather: Clear

File Name : 06_TOR_Haw_Torr PM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 1

Groups Printed- Total Volume

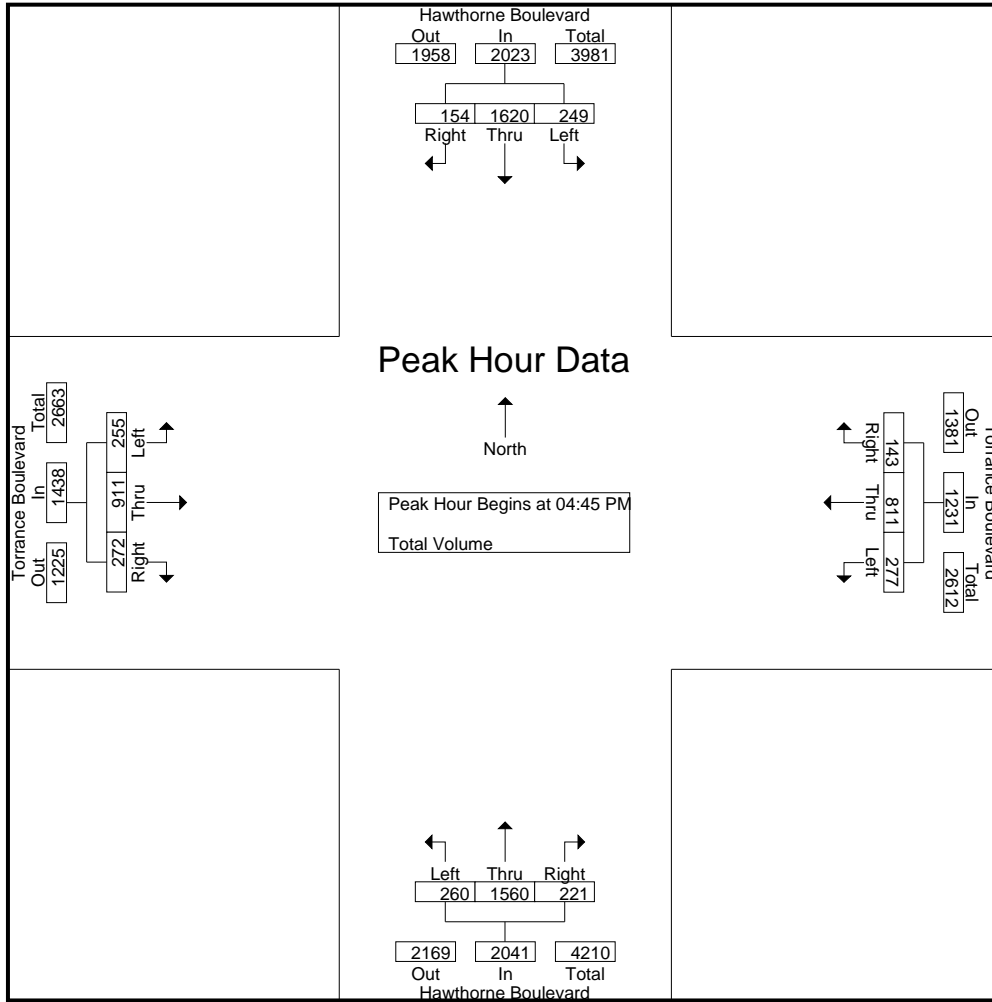
| Start Time | Hawthorne Boulevard Southbound | | | | Torrance Boulevard Westbound | | | | Hawthorne Boulevard Northbound | | | | Torrance Boulevard Eastbound | | | | Int. Total |
|-------------|--------------------------------|------|-------|------------|------------------------------|------|-------|------------|--------------------------------|------|-------|------------|------------------------------|------|-------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| 04:00 PM | 92 | 458 | 49 | 599 | 62 | 163 | 37 | 262 | 65 | 396 | 53 | 514 | 67 | 216 | 63 | 346 | 1721 |
| 04:15 PM | 81 | 475 | 38 | 594 | 60 | 202 | 30 | 292 | 59 | 333 | 50 | 442 | 60 | 213 | 71 | 344 | 1672 |
| 04:30 PM | 52 | 360 | 34 | 446 | 66 | 174 | 27 | 267 | 61 | 397 | 37 | 495 | 63 | 178 | 60 | 301 | 1509 |
| 04:45 PM | 65 | 460 | 47 | 572 | 65 | 216 | 35 | 316 | 79 | 363 | 54 | 496 | 54 | 242 | 83 | 379 | 1763 |
| Total | 290 | 1753 | 168 | 2211 | 253 | 755 | 129 | 1137 | 264 | 1489 | 194 | 1947 | 244 | 849 | 277 | 1370 | 6665 |
| 05:00 PM | 63 | 367 | 26 | 456 | 74 | 202 | 37 | 313 | 56 | 478 | 60 | 594 | 64 | 239 | 67 | 370 | 1733 |
| 05:15 PM | 70 | 385 | 44 | 499 | 68 | 177 | 37 | 282 | 63 | 385 | 54 | 502 | 77 | 217 | 63 | 357 | 1640 |
| 05:30 PM | 51 | 408 | 37 | 496 | 70 | 216 | 34 | 320 | 62 | 334 | 53 | 449 | 60 | 213 | 59 | 332 | 1597 |
| 05:45 PM | 43 | 393 | 43 | 479 | 77 | 208 | 54 | 339 | 68 | 369 | 48 | 485 | 66 | 220 | 53 | 339 | 1642 |
| Total | 227 | 1553 | 150 | 1930 | 289 | 803 | 162 | 1254 | 249 | 1566 | 215 | 2030 | 267 | 889 | 242 | 1398 | 6612 |
| Grand Total | 517 | 3306 | 318 | 4141 | 542 | 1558 | 291 | 2391 | 513 | 3055 | 409 | 3977 | 511 | 1738 | 519 | 2768 | 13277 |
| Apprch % | 12.5 | 79.8 | 7.7 | | 22.7 | 65.2 | 12.2 | | 12.9 | 76.8 | 10.3 | | 18.5 | 62.8 | 18.8 | | |
| Total % | 3.9 | 24.9 | 2.4 | 31.2 | 4.1 | 11.7 | 2.2 | 18 | 3.9 | 23 | 3.1 | 30 | 3.8 | 13.1 | 3.9 | 20.8 | |

| Start Time | Hawthorne Boulevard Southbound | | | | Torrance Boulevard Westbound | | | | Hawthorne Boulevard Northbound | | | | Torrance Boulevard Eastbound | | | | Int. Total |
|--------------|--------------------------------|------------|-----------|------------|------------------------------|------------|-----------|------------|--------------------------------|------------|-----------|------------|------------------------------|------------|-----------|------------|-------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| 04:45 PM | 65 | 460 | 47 | 572 | 65 | 216 | 35 | 316 | 79 | 363 | 54 | 496 | 54 | 242 | 83 | 379 | 1763 |
| 05:00 PM | 63 | 367 | 26 | 456 | 74 | 202 | 37 | 313 | 56 | 478 | 60 | 594 | 64 | 239 | 67 | 370 | 1733 |
| 05:15 PM | 70 | 385 | 44 | 499 | 68 | 177 | 37 | 282 | 63 | 385 | 54 | 502 | 77 | 217 | 63 | 357 | 1640 |
| 05:30 PM | 51 | 408 | 37 | 496 | 70 | 216 | 34 | 320 | 62 | 334 | 53 | 449 | 60 | 213 | 59 | 332 | 1597 |
| Total Volume | 249 | 1620 | 154 | 2023 | 277 | 811 | 143 | 1231 | 260 | 1560 | 221 | 2041 | 255 | 911 | 272 | 1438 | 6733 |
| % App. Total | 12.3 | 80.1 | 7.6 | | 22.5 | 65.9 | 11.6 | | 12.7 | 76.4 | 10.8 | | 17.7 | 63.4 | 18.9 | | |
| PHF | .889 | .880 | .819 | .884 | .936 | .939 | .966 | .962 | .823 | .816 | .921 | .859 | .828 | .941 | .819 | .949 | .955 |

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:45 PM

City of Torrance
 N/S: Hawthorne Boulevard
 E/W: Torrance Boulevard
 Weather: Clear

File Name : 06_TOR_Haw_Torr PM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

| | 04:00 PM | | | | 05:00 PM | | | | 04:30 PM | | | | 04:45 PM | | | |
|--------------|----------|------|------|------|----------|------|------|------|----------|------|------|------|----------|------|------|------|
| +0 mins. | 92 | 458 | 49 | 599 | 74 | 202 | 37 | 313 | 61 | 397 | 37 | 495 | 54 | 242 | 83 | 379 |
| +15 mins. | 81 | 475 | 38 | 594 | 68 | 177 | 37 | 282 | 79 | 363 | 54 | 496 | 64 | 239 | 67 | 370 |
| +30 mins. | 52 | 360 | 34 | 446 | 70 | 216 | 34 | 320 | 56 | 478 | 60 | 594 | 77 | 217 | 63 | 357 |
| +45 mins. | 65 | 460 | 47 | 572 | 77 | 208 | 54 | 339 | 63 | 385 | 54 | 502 | 60 | 213 | 59 | 332 |
| Total Volume | 290 | 1753 | 168 | 2211 | 289 | 803 | 162 | 1254 | 259 | 1623 | 205 | 2087 | 255 | 911 | 272 | 1438 |
| % App. Total | 13.1 | 79.3 | 7.6 | | 23 | 64 | 12.9 | | 12.4 | 77.8 | 9.8 | | 17.7 | 63.4 | 18.9 | |
| PHF | .788 | .923 | .857 | .923 | .938 | .929 | .750 | .925 | .820 | .849 | .854 | .878 | .828 | .941 | .819 | .949 |

City of Torrance
 N/S: Hawthorne Boulevard
 E/W: Village Lane/Fashion Way
 Weather: Clear

File Name : 04_TOR_Haw_VIII AM
 Site Code : 05722330
 Start Date : 4/26/2022
 Page No : 1

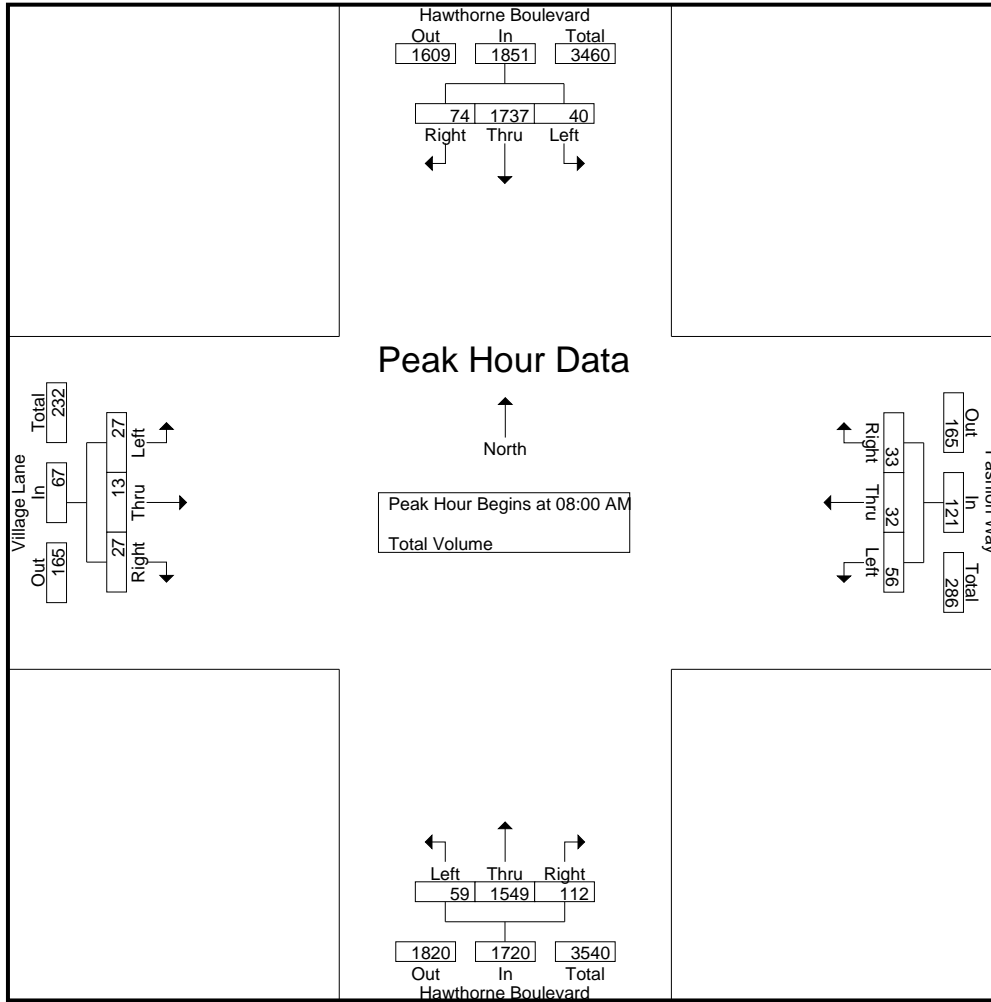
Groups Printed- Total Volume

| Start Time | Hawthorne Boulevard Southbound | | | | Fashion Way Westbound | | | | Hawthorne Boulevard Northbound | | | | Village Lane Eastbound | | | | Int. Total |
|-------------|--------------------------------|------|-------|------------|-----------------------|------|-------|------------|--------------------------------|------|-------|------------|------------------------|------|-------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| 07:00 AM | 3 | 268 | 7 | 278 | 4 | 0 | 6 | 10 | 4 | 301 | 11 | 316 | 6 | 0 | 2 | 8 | 612 |
| 07:15 AM | 10 | 301 | 3 | 314 | 9 | 3 | 4 | 16 | 5 | 279 | 20 | 304 | 2 | 2 | 2 | 6 | 640 |
| 07:30 AM | 5 | 404 | 9 | 418 | 7 | 0 | 8 | 15 | 8 | 410 | 11 | 429 | 8 | 1 | 3 | 12 | 874 |
| 07:45 AM | 8 | 435 | 6 | 449 | 12 | 3 | 6 | 21 | 11 | 381 | 19 | 411 | 3 | 1 | 7 | 11 | 892 |
| Total | 26 | 1408 | 25 | 1459 | 32 | 6 | 24 | 62 | 28 | 1371 | 61 | 1460 | 19 | 4 | 14 | 37 | 3018 |
| 08:00 AM | 8 | 401 | 10 | 419 | 13 | 11 | 7 | 31 | 7 | 377 | 19 | 403 | 5 | 3 | 10 | 18 | 871 |
| 08:15 AM | 7 | 448 | 17 | 472 | 13 | 7 | 7 | 27 | 19 | 383 | 30 | 432 | 9 | 4 | 8 | 21 | 952 |
| 08:30 AM | 9 | 419 | 22 | 450 | 20 | 7 | 10 | 37 | 16 | 349 | 21 | 386 | 9 | 4 | 3 | 16 | 889 |
| 08:45 AM | 16 | 469 | 25 | 510 | 10 | 7 | 9 | 26 | 17 | 440 | 42 | 499 | 4 | 2 | 6 | 12 | 1047 |
| Total | 40 | 1737 | 74 | 1851 | 56 | 32 | 33 | 121 | 59 | 1549 | 112 | 1720 | 27 | 13 | 27 | 67 | 3759 |
| Grand Total | 66 | 3145 | 99 | 3310 | 88 | 38 | 57 | 183 | 87 | 2920 | 173 | 3180 | 46 | 17 | 41 | 104 | 6777 |
| Apprch % | 2 | 95 | 3 | | 48.1 | 20.8 | 31.1 | | 2.7 | 91.8 | 5.4 | | 44.2 | 16.3 | 39.4 | | |
| Total % | 1 | 46.4 | 1.5 | 48.8 | 1.3 | 0.6 | 0.8 | 2.7 | 1.3 | 43.1 | 2.6 | 46.9 | 0.7 | 0.3 | 0.6 | 1.5 | |

| Start Time | Hawthorne Boulevard Southbound | | | | Fashion Way Westbound | | | | Hawthorne Boulevard Northbound | | | | Village Lane Eastbound | | | | Int. Total |
|--|--------------------------------|------------|-----------|------------|-----------------------|-----------|-----------|------------|--------------------------------|------------|-----------|------------|------------------------|----------|-----------|------------|-------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 08:00 AM | | | | | | | | | | | | | | | | | |
| 08:00 AM | 8 | 401 | 10 | 419 | 13 | 11 | 7 | 31 | 7 | 377 | 19 | 403 | 5 | 3 | 10 | 18 | 871 |
| 08:15 AM | 7 | 448 | 17 | 472 | 13 | 7 | 7 | 27 | 19 | 383 | 30 | 432 | 9 | 4 | 8 | 21 | 952 |
| 08:30 AM | 9 | 419 | 22 | 450 | 20 | 7 | 10 | 37 | 16 | 349 | 21 | 386 | 9 | 4 | 3 | 16 | 889 |
| 08:45 AM | 16 | 469 | 25 | 510 | 10 | 7 | 9 | 26 | 17 | 440 | 42 | 499 | 4 | 2 | 6 | 12 | 1047 |
| Total Volume | 40 | 1737 | 74 | 1851 | 56 | 32 | 33 | 121 | 59 | 1549 | 112 | 1720 | 27 | 13 | 27 | 67 | 3759 |
| % App. Total | 2.2 | 93.8 | 4 | | 46.3 | 26.4 | 27.3 | | 3.4 | 90.1 | 6.5 | | 40.3 | 19.4 | 40.3 | | |
| PHF | .625 | .926 | .740 | .907 | .700 | .727 | .825 | .818 | .776 | .880 | .667 | .862 | .750 | .813 | .675 | .798 | .898 |

City of Torrance
 N/S: Hawthorne Boulevard
 E/W: Village Lane/Fashion Way
 Weather: Clear

File Name : 04_TOR_Haw_VIII AM
 Site Code : 05722330
 Start Date : 4/26/2022
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

| | 08:00 AM | | | | 08:00 AM | | | | 08:00 AM | | | | 08:00 AM | | | |
|--------------|----------|------|------|------|----------|------|------|------|----------|------|------|------|----------|------|------|------|
| +0 mins. | 8 | 401 | 10 | 419 | 13 | 11 | 7 | 31 | 7 | 377 | 19 | 403 | 5 | 3 | 10 | 18 |
| +15 mins. | 7 | 448 | 17 | 472 | 13 | 7 | 7 | 27 | 19 | 383 | 30 | 432 | 9 | 4 | 8 | 21 |
| +30 mins. | 9 | 419 | 22 | 450 | 20 | 7 | 10 | 37 | 16 | 349 | 21 | 386 | 9 | 4 | 3 | 16 |
| +45 mins. | 16 | 469 | 25 | 510 | 10 | 7 | 9 | 26 | 17 | 440 | 42 | 499 | 4 | 2 | 6 | 12 |
| Total Volume | 40 | 1737 | 74 | 1851 | 56 | 32 | 33 | 121 | 59 | 1549 | 112 | 1720 | 27 | 13 | 27 | 67 |
| % App. Total | 2.2 | 93.8 | 4 | | 46.3 | 26.4 | 27.3 | | 3.4 | 90.1 | 6.5 | | 40.3 | 19.4 | 40.3 | |
| PHF | .625 | .926 | .740 | .907 | .700 | .727 | .825 | .818 | .776 | .880 | .667 | .862 | .750 | .813 | .675 | .798 |

City of Torrance
 N/S: Hawthorne Boulevard
 E/W: Village Lane/Fashion Way
 Weather: Clear

File Name : 04_TOR_Haw_VIII PM
 Site Code : 05722330
 Start Date : 4/26/2022
 Page No : 1

Groups Printed- Total Volume

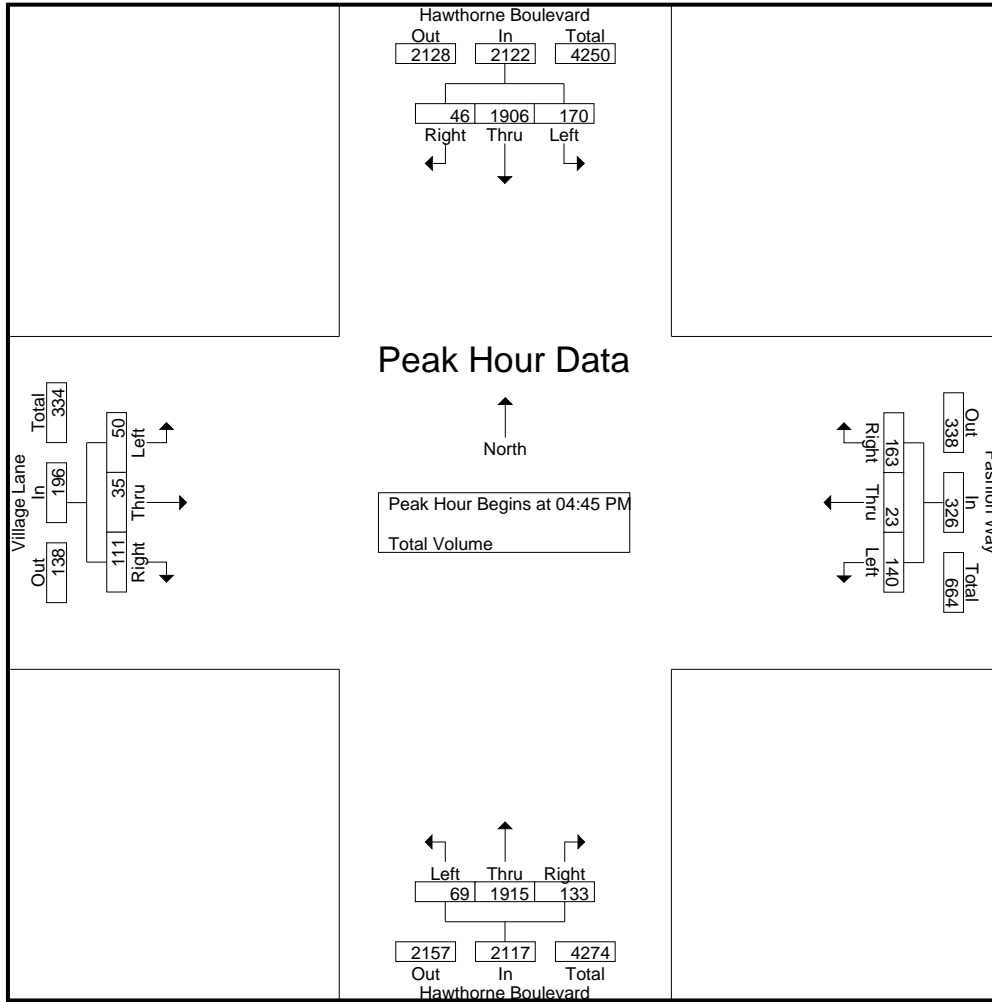
| Start Time | Hawthorne Boulevard Southbound | | | | Fashion Way Westbound | | | | Hawthorne Boulevard Northbound | | | | Village Lane Eastbound | | | | Int. Total |
|-------------|--------------------------------|------|-------|------------|-----------------------|------|-------|------------|--------------------------------|------|-------|------------|------------------------|------|-------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| 04:00 PM | 39 | 447 | 9 | 495 | 29 | 7 | 44 | 80 | 15 | 469 | 33 | 517 | 12 | 1 | 22 | 35 | 1127 |
| 04:15 PM | 43 | 447 | 16 | 506 | 29 | 4 | 43 | 76 | 15 | 480 | 29 | 524 | 9 | 2 | 24 | 35 | 1141 |
| 04:30 PM | 42 | 463 | 12 | 517 | 27 | 11 | 36 | 74 | 24 | 466 | 29 | 519 | 9 | 4 | 15 | 28 | 1138 |
| 04:45 PM | 44 | 466 | 14 | 524 | 27 | 7 | 33 | 67 | 14 | 498 | 34 | 546 | 9 | 5 | 27 | 41 | 1178 |
| Total | 168 | 1823 | 51 | 2042 | 112 | 29 | 156 | 297 | 68 | 1913 | 125 | 2106 | 39 | 12 | 88 | 139 | 4584 |
| 05:00 PM | 37 | 461 | 7 | 505 | 39 | 10 | 49 | 98 | 15 | 434 | 32 | 481 | 19 | 16 | 37 | 72 | 1156 |
| 05:15 PM | 53 | 488 | 17 | 558 | 35 | 4 | 38 | 77 | 22 | 501 | 38 | 561 | 12 | 8 | 29 | 49 | 1245 |
| 05:30 PM | 36 | 491 | 8 | 535 | 39 | 2 | 43 | 84 | 18 | 482 | 29 | 529 | 10 | 6 | 18 | 34 | 1182 |
| 05:45 PM | 53 | 445 | 12 | 510 | 39 | 4 | 41 | 84 | 19 | 434 | 27 | 480 | 10 | 2 | 20 | 32 | 1106 |
| Total | 179 | 1885 | 44 | 2108 | 152 | 20 | 171 | 343 | 74 | 1851 | 126 | 2051 | 51 | 32 | 104 | 187 | 4689 |
| Grand Total | 347 | 3708 | 95 | 4150 | 264 | 49 | 327 | 640 | 142 | 3764 | 251 | 4157 | 90 | 44 | 192 | 326 | 9273 |
| Apprch % | 8.4 | 89.3 | 2.3 | | 41.2 | 7.7 | 51.1 | | 3.4 | 90.5 | 6 | | 27.6 | 13.5 | 58.9 | | |
| Total % | 3.7 | 40 | 1 | 44.8 | 2.8 | 0.5 | 3.5 | 6.9 | 1.5 | 40.6 | 2.7 | 44.8 | 1 | 0.5 | 2.1 | 3.5 | |

| Start Time | Hawthorne Boulevard Southbound | | | | Fashion Way Westbound | | | | Hawthorne Boulevard Northbound | | | | Village Lane Eastbound | | | | Int. Total |
|--------------|--------------------------------|------------|-----------|------------|-----------------------|-----------|-----------|------------|--------------------------------|------------|-----------|------------|------------------------|-----------|-----------|------------|-------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| 04:45 PM | 44 | 466 | 14 | 524 | 27 | 7 | 33 | 67 | 14 | 498 | 34 | 546 | 9 | 5 | 27 | 41 | 1178 |
| 05:00 PM | 37 | 461 | 7 | 505 | 39 | 10 | 49 | 98 | 15 | 434 | 32 | 481 | 19 | 16 | 37 | 72 | 1156 |
| 05:15 PM | 53 | 488 | 17 | 558 | 35 | 4 | 38 | 77 | 22 | 501 | 38 | 561 | 12 | 8 | 29 | 49 | 1245 |
| 05:30 PM | 36 | 491 | 8 | 535 | 39 | 2 | 43 | 84 | 18 | 482 | 29 | 529 | 10 | 6 | 18 | 34 | 1182 |
| Total Volume | 170 | 1906 | 46 | 2122 | 140 | 23 | 163 | 326 | 69 | 1915 | 133 | 2117 | 50 | 35 | 111 | 196 | 4761 |
| % App. Total | 8 | 89.8 | 2.2 | | 42.9 | 7.1 | 50 | | 3.3 | 90.5 | 6.3 | | 25.5 | 17.9 | 56.6 | | |
| PHF | .802 | .970 | .676 | .951 | .897 | .575 | .832 | .832 | .784 | .956 | .875 | .943 | .658 | .547 | .750 | .681 | .956 |

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:45 PM

City of Torrance
 N/S: Hawthorne Boulevard
 E/W: Village Lane/Fashion Way
 Weather: Clear

File Name : 04_TOR_Haw_VIII PM
 Site Code : 05722330
 Start Date : 4/26/2022
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

| | 04:45 PM | | | | 05:00 PM | | | | 04:45 PM | | | | 04:45 PM | | | |
|--------------|-----------|------------|-----------|------------|-----------|-----------|-----------|-----------|-----------|------------|-----------|------------|-----------|-----------|-----------|-----------|
| +0 mins. | 44 | 466 | 14 | 524 | 39 | 10 | 49 | 98 | 14 | 498 | 34 | 546 | 9 | 5 | 27 | 41 |
| +15 mins. | 37 | 461 | 7 | 505 | 35 | 4 | 38 | 77 | 15 | 434 | 32 | 481 | 19 | 16 | 37 | 72 |
| +30 mins. | 53 | 488 | 17 | 558 | 39 | 2 | 43 | 84 | 22 | 501 | 38 | 561 | 12 | 8 | 29 | 49 |
| +45 mins. | 36 | 491 | 8 | 535 | 39 | 4 | 41 | 84 | 18 | 482 | 29 | 529 | 10 | 6 | 18 | 34 |
| Total Volume | 170 | 1906 | 46 | 2122 | 152 | 20 | 171 | 343 | 69 | 1915 | 133 | 2117 | 50 | 35 | 111 | 196 |
| % App. Total | 8 | 89.8 | 2.2 | | 44.3 | 5.8 | 49.9 | | 3.3 | 90.5 | 6.3 | | 25.5 | 17.9 | 56.6 | |
| PHF | .802 | .970 | .676 | .951 | .974 | .500 | .872 | .875 | .784 | .956 | .875 | .943 | .658 | .547 | .750 | .681 |

City of Torrance
 N/S: Hawthorne Boulevard
 E/W: Del Amo Circle W/Del Amo Circle N
 Weather: Clear

File Name : 07_TOR_Haw_Del Amo AM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 1

Groups Printed- Total Volume

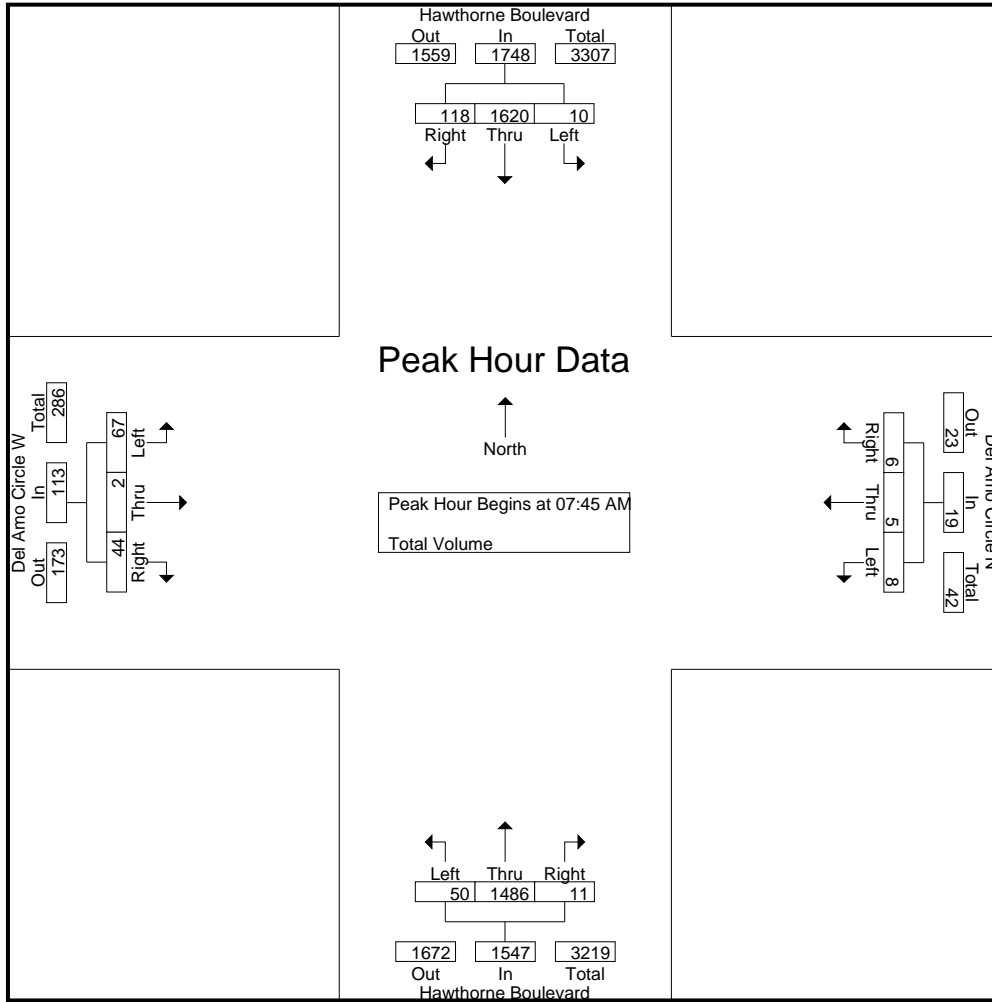
| Start Time | Hawthorne Boulevard Southbound | | | | Del Amo Circle N Westbound | | | | Hawthorne Boulevard Northbound | | | | Del Amo Circle W Eastbound | | | | Int. Total |
|-------------|--------------------------------|------|-------|------------|----------------------------|------|-------|------------|--------------------------------|------|-------|------------|----------------------------|------|-------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| 07:00 AM | 0 | 269 | 13 | 282 | 0 | 0 | 0 | 0 | 13 | 236 | 0 | 249 | 12 | 0 | 12 | 24 | 555 |
| 07:15 AM | 0 | 282 | 11 | 293 | 0 | 0 | 0 | 0 | 15 | 256 | 0 | 271 | 10 | 0 | 10 | 20 | 584 |
| 07:30 AM | 0 | 378 | 14 | 392 | 1 | 0 | 1 | 2 | 8 | 335 | 2 | 345 | 15 | 0 | 10 | 25 | 764 |
| 07:45 AM | 2 | 482 | 32 | 516 | 2 | 3 | 1 | 6 | 9 | 368 | 2 | 379 | 18 | 0 | 8 | 26 | 927 |
| Total | 2 | 1411 | 70 | 1483 | 3 | 3 | 2 | 8 | 45 | 1195 | 4 | 1244 | 55 | 0 | 40 | 95 | 2830 |
| 08:00 AM | 3 | 409 | 21 | 433 | 0 | 1 | 1 | 2 | 13 | 360 | 4 | 377 | 20 | 1 | 11 | 32 | 844 |
| 08:15 AM | 3 | 353 | 25 | 381 | 3 | 0 | 3 | 6 | 14 | 378 | 1 | 393 | 12 | 0 | 12 | 24 | 804 |
| 08:30 AM | 2 | 376 | 40 | 418 | 3 | 1 | 1 | 5 | 14 | 380 | 4 | 398 | 17 | 1 | 13 | 31 | 852 |
| 08:45 AM | 2 | 391 | 31 | 424 | 4 | 1 | 0 | 5 | 16 | 393 | 4 | 413 | 14 | 1 | 11 | 26 | 868 |
| Total | 10 | 1529 | 117 | 1656 | 10 | 3 | 5 | 18 | 57 | 1511 | 13 | 1581 | 63 | 3 | 47 | 113 | 3368 |
| Grand Total | 12 | 2940 | 187 | 3139 | 13 | 6 | 7 | 26 | 102 | 2706 | 17 | 2825 | 118 | 3 | 87 | 208 | 6198 |
| Apprch % | 0.4 | 93.7 | 6 | | 50 | 23.1 | 26.9 | | 3.6 | 95.8 | 0.6 | | 56.7 | 1.4 | 41.8 | | |
| Total % | 0.2 | 47.4 | 3 | 50.6 | 0.2 | 0.1 | 0.1 | 0.4 | 1.6 | 43.7 | 0.3 | 45.6 | 1.9 | 0 | 1.4 | 3.4 | |

| Start Time | Hawthorne Boulevard Southbound | | | | Del Amo Circle N Westbound | | | | Hawthorne Boulevard Northbound | | | | Del Amo Circle W Eastbound | | | | Int. Total |
|--------------|--------------------------------|------------|-----------|------------|----------------------------|----------|----------|------------|--------------------------------|------------|----------|------------|----------------------------|----------|-----------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| 07:45 AM | 2 | 482 | 32 | 516 | 2 | 3 | 1 | 6 | 9 | 368 | 2 | 379 | 18 | 0 | 8 | 26 | 927 |
| 08:00 AM | 3 | 409 | 21 | 433 | 0 | 1 | 1 | 2 | 13 | 360 | 4 | 377 | 20 | 1 | 11 | 32 | 844 |
| 08:15 AM | 3 | 353 | 25 | 381 | 3 | 0 | 3 | 6 | 14 | 378 | 1 | 393 | 12 | 0 | 12 | 24 | 804 |
| 08:30 AM | 2 | 376 | 40 | 418 | 3 | 1 | 1 | 5 | 14 | 380 | 4 | 398 | 17 | 1 | 13 | 31 | 852 |
| Total Volume | 10 | 1620 | 118 | 1748 | 8 | 5 | 6 | 19 | 50 | 1486 | 11 | 1547 | 67 | 2 | 44 | 113 | 3427 |
| % App. Total | 0.6 | 92.7 | 6.8 | | 42.1 | 26.3 | 31.6 | | 3.2 | 96.1 | 0.7 | | 59.3 | 1.8 | 38.9 | | |
| PHF | .833 | .840 | .738 | .847 | .667 | .417 | .500 | .792 | .893 | .978 | .688 | .972 | .838 | .500 | .846 | .883 | .924 |

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:45 AM

City of Torrance
 N/S: Hawthorne Boulevard
 E/W: Del Amo Circle W/Del Amo Circle N
 Weather: Clear

File Name : 07_TOR_Haw_Del Amo AM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

| | 07:45 AM | | | | 07:45 AM | | | | 08:00 AM | | | | 07:45 AM | | | |
|--------------|----------|------------|-----------|------------|----------|----------|----------|----------|-----------|------------|----------|------------|-----------|----------|-----------|-----------|
| +0 mins. | 2 | 482 | 32 | 516 | 2 | 3 | 1 | 6 | 13 | 360 | 4 | 377 | 18 | 0 | 8 | 26 |
| +15 mins. | 3 | 409 | 21 | 433 | 0 | 1 | 1 | 2 | 14 | 378 | 1 | 393 | 20 | 1 | 11 | 32 |
| +30 mins. | 3 | 353 | 25 | 381 | 3 | 0 | 3 | 6 | 14 | 380 | 4 | 398 | 12 | 0 | 12 | 24 |
| +45 mins. | 2 | 376 | 40 | 418 | 3 | 1 | 1 | 5 | 16 | 393 | 4 | 413 | 17 | 1 | 13 | 31 |
| Total Volume | 10 | 1620 | 118 | 1748 | 8 | 5 | 6 | 19 | 57 | 1511 | 13 | 1581 | 67 | 2 | 44 | 113 |
| % App. Total | 0.6 | 92.7 | 6.8 | | 42.1 | 26.3 | 31.6 | | 3.6 | 95.6 | 0.8 | | 59.3 | 1.8 | 38.9 | |
| PHF | .833 | .840 | .738 | .847 | .667 | .417 | .500 | .792 | .891 | .961 | .813 | .957 | .838 | .500 | .846 | .883 |

City of Torrance
 N/S: Hawthorne Boulevard
 E/W: Del Amo Circle W/Del Amo Circle N
 Weather: Clear

File Name : 07_TOR_Haw_Del Amo PM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 1

Groups Printed- Total Volume

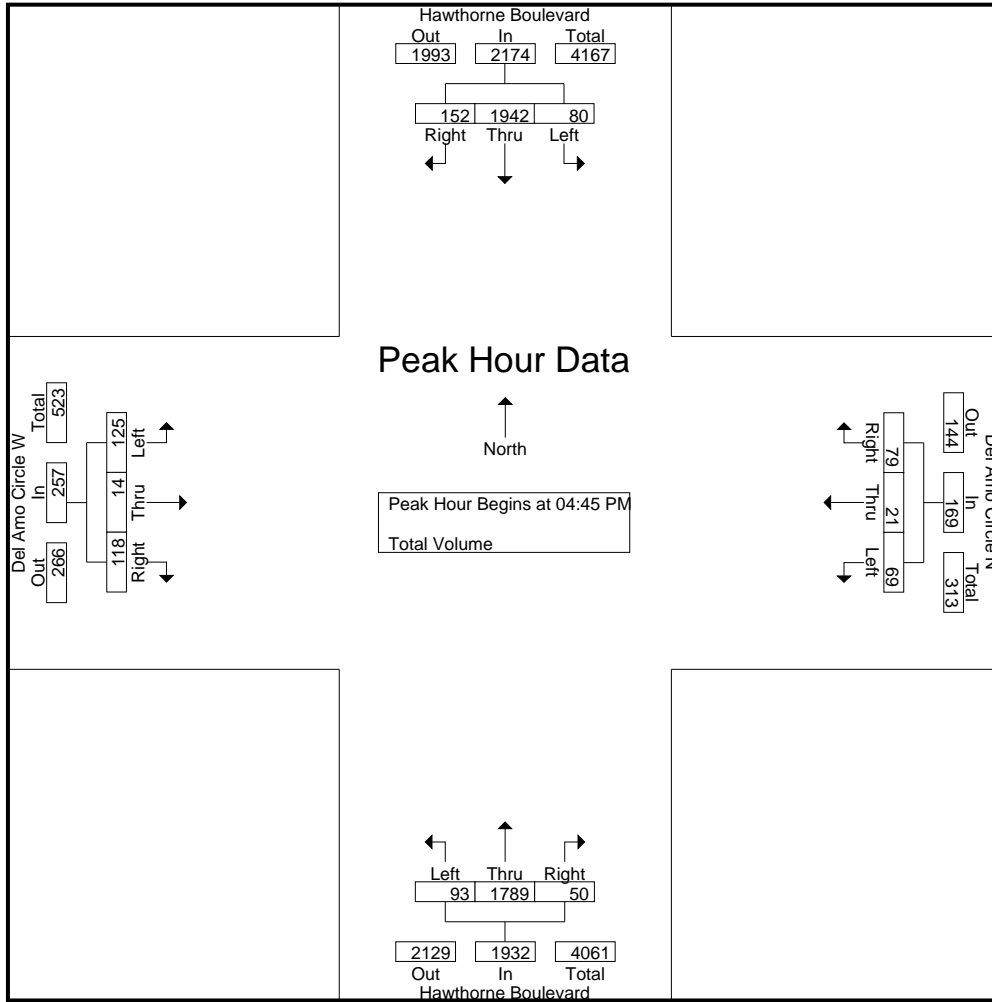
| Start Time | Hawthorne Boulevard Southbound | | | | Del Amo Circle N Westbound | | | | Hawthorne Boulevard Northbound | | | | Del Amo Circle W Eastbound | | | | Int. Total |
|-------------|--------------------------------|------|-------|------------|----------------------------|------|-------|------------|--------------------------------|------|-------|------------|----------------------------|------|-------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| 04:00 PM | 18 | 433 | 19 | 470 | 14 | 4 | 25 | 43 | 21 | 480 | 4 | 505 | 28 | 1 | 15 | 44 | 1062 |
| 04:15 PM | 20 | 492 | 31 | 543 | 21 | 4 | 16 | 41 | 22 | 394 | 10 | 426 | 22 | 5 | 11 | 38 | 1048 |
| 04:30 PM | 14 | 353 | 31 | 398 | 22 | 6 | 15 | 43 | 17 | 405 | 16 | 438 | 16 | 2 | 14 | 32 | 911 |
| 04:45 PM | 18 | 501 | 42 | 561 | 21 | 3 | 25 | 49 | 16 | 442 | 8 | 466 | 29 | 3 | 26 | 58 | 1134 |
| Total | 70 | 1779 | 123 | 1972 | 78 | 17 | 81 | 176 | 76 | 1721 | 38 | 1835 | 95 | 11 | 66 | 172 | 4155 |
| 05:00 PM | 20 | 489 | 41 | 550 | 19 | 8 | 18 | 45 | 26 | 516 | 15 | 557 | 33 | 4 | 25 | 62 | 1214 |
| 05:15 PM | 22 | 488 | 39 | 549 | 14 | 3 | 15 | 32 | 29 | 412 | 15 | 456 | 37 | 4 | 40 | 81 | 1118 |
| 05:30 PM | 20 | 464 | 30 | 514 | 15 | 7 | 21 | 43 | 22 | 419 | 12 | 453 | 26 | 3 | 27 | 56 | 1066 |
| 05:45 PM | 28 | 436 | 39 | 503 | 29 | 4 | 17 | 50 | 25 | 360 | 7 | 392 | 38 | 3 | 23 | 64 | 1009 |
| Total | 90 | 1877 | 149 | 2116 | 77 | 22 | 71 | 170 | 102 | 1707 | 49 | 1858 | 134 | 14 | 115 | 263 | 4407 |
| Grand Total | 160 | 3656 | 272 | 4088 | 155 | 39 | 152 | 346 | 178 | 3428 | 87 | 3693 | 229 | 25 | 181 | 435 | 8562 |
| Apprch % | 3.9 | 89.4 | 6.7 | | 44.8 | 11.3 | 43.9 | | 4.8 | 92.8 | 2.4 | | 52.6 | 5.7 | 41.6 | | |
| Total % | 1.9 | 42.7 | 3.2 | 47.7 | 1.8 | 0.5 | 1.8 | 4 | 2.1 | 40 | 1 | 43.1 | 2.7 | 0.3 | 2.1 | 5.1 | |

| Start Time | Hawthorne Boulevard Southbound | | | | Del Amo Circle N Westbound | | | | Hawthorne Boulevard Northbound | | | | Del Amo Circle W Eastbound | | | | Int. Total |
|--------------|--------------------------------|------------|-----------|------------|----------------------------|----------|-----------|------------|--------------------------------|------------|-----------|------------|----------------------------|----------|-----------|------------|-------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| 04:45 PM | 18 | 501 | 42 | 561 | 21 | 3 | 25 | 49 | 16 | 442 | 8 | 466 | 29 | 3 | 26 | 58 | 1134 |
| 05:00 PM | 20 | 489 | 41 | 550 | 19 | 8 | 18 | 45 | 26 | 516 | 15 | 557 | 33 | 4 | 25 | 62 | 1214 |
| 05:15 PM | 22 | 488 | 39 | 549 | 14 | 3 | 15 | 32 | 29 | 412 | 15 | 456 | 37 | 4 | 40 | 81 | 1118 |
| 05:30 PM | 20 | 464 | 30 | 514 | 15 | 7 | 21 | 43 | 22 | 419 | 12 | 453 | 26 | 3 | 27 | 56 | 1066 |
| Total Volume | 80 | 1942 | 152 | 2174 | 69 | 21 | 79 | 169 | 93 | 1789 | 50 | 1932 | 125 | 14 | 118 | 257 | 4532 |
| % App. Total | 3.7 | 89.3 | 7 | | 40.8 | 12.4 | 46.7 | | 4.8 | 92.6 | 2.6 | | 48.6 | 5.4 | 45.9 | | |
| PHF | .909 | .969 | .905 | .969 | .821 | .656 | .790 | .862 | .802 | .867 | .833 | .867 | .845 | .875 | .738 | .793 | .933 |

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:45 PM

City of Torrance
 N/S: Hawthorne Boulevard
 E/W: Del Amo Circle W/Del Amo Circle N
 Weather: Clear

File Name : 07_TOR_Haw_Del Amo PM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

| | 04:45 PM | | | | 04:15 PM | | | | 04:45 PM | | | | 05:00 PM | | | |
|--------------|-----------|------------|-----------|------------|-----------|----------|-----------|-----------|-----------|------------|-----------|------------|-----------|------|-----------|-----------|
| +0 mins. | 18 | 501 | 42 | 561 | 21 | 4 | 16 | 41 | 16 | 442 | 8 | 466 | 33 | 4 | 25 | 62 |
| +15 mins. | 20 | 489 | 41 | 550 | 22 | 6 | 15 | 43 | 26 | 516 | 15 | 557 | 37 | 4 | 40 | 81 |
| +30 mins. | 22 | 488 | 39 | 549 | 21 | 3 | 25 | 49 | 29 | 412 | 15 | 456 | 26 | 3 | 27 | 56 |
| +45 mins. | 20 | 464 | 30 | 514 | 19 | 8 | 18 | 45 | 22 | 419 | 12 | 453 | 38 | 3 | 23 | 64 |
| Total Volume | 80 | 1942 | 152 | 2174 | 83 | 21 | 74 | 178 | 93 | 1789 | 50 | 1932 | 134 | 14 | 115 | 263 |
| % App. Total | 3.7 | 89.3 | 7 | | 46.6 | 11.8 | 41.6 | | 4.8 | 92.6 | 2.6 | | 51 | 5.3 | 43.7 | |
| PHF | .909 | .969 | .905 | .969 | .943 | .656 | .740 | .908 | .802 | .867 | .833 | .867 | .882 | .875 | .719 | .812 |

City of Torrance
 N/S: Hawthorne Boulevard
 E/W: Carson Street
 Weather: Clear

File Name : 08_TOR_Haw_Car AM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 1

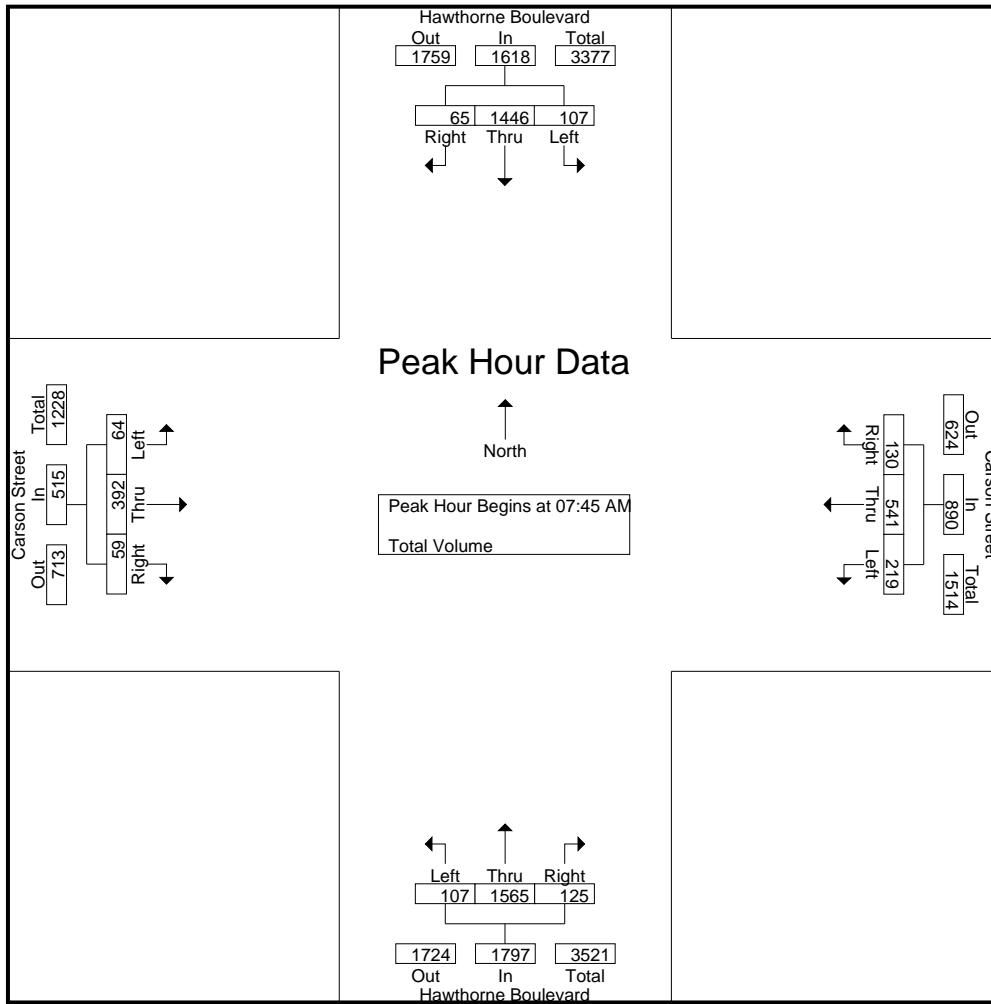
Groups Printed- Total Volume

| Start Time | Hawthorne Boulevard Southbound | | | | Carson Street Westbound | | | | Hawthorne Boulevard Northbound | | | | Carson Street Eastbound | | | | Int. Total |
|-------------|--------------------------------|------|-------|------------|-------------------------|------|-------|------------|--------------------------------|------|-------|------------|-------------------------|------|-------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| 07:00 AM | 16 | 242 | 11 | 269 | 23 | 55 | 29 | 107 | 9 | 198 | 16 | 223 | 9 | 53 | 11 | 73 | 672 |
| 07:15 AM | 20 | 248 | 15 | 283 | 22 | 103 | 28 | 153 | 12 | 265 | 15 | 292 | 5 | 56 | 6 | 67 | 795 |
| 07:30 AM | 21 | 314 | 12 | 347 | 33 | 168 | 23 | 224 | 21 | 369 | 32 | 422 | 9 | 84 | 2 | 95 | 1088 |
| 07:45 AM | 30 | 427 | 24 | 481 | 51 | 139 | 32 | 222 | 28 | 378 | 29 | 435 | 15 | 93 | 19 | 127 | 1265 |
| Total | 87 | 1231 | 62 | 1380 | 129 | 465 | 112 | 706 | 70 | 1210 | 92 | 1372 | 38 | 286 | 38 | 362 | 3820 |
| 08:00 AM | 37 | 351 | 23 | 411 | 52 | 127 | 27 | 206 | 29 | 390 | 28 | 447 | 20 | 148 | 18 | 186 | 1250 |
| 08:15 AM | 16 | 328 | 9 | 353 | 58 | 142 | 35 | 235 | 27 | 408 | 36 | 471 | 12 | 75 | 10 | 97 | 1156 |
| 08:30 AM | 24 | 340 | 9 | 373 | 58 | 133 | 36 | 227 | 23 | 389 | 32 | 444 | 17 | 76 | 12 | 105 | 1149 |
| 08:45 AM | 27 | 346 | 23 | 396 | 51 | 125 | 44 | 220 | 29 | 415 | 39 | 483 | 20 | 109 | 22 | 151 | 1250 |
| Total | 104 | 1365 | 64 | 1533 | 219 | 527 | 142 | 888 | 108 | 1602 | 135 | 1845 | 69 | 408 | 62 | 539 | 4805 |
| Grand Total | 191 | 2596 | 126 | 2913 | 348 | 992 | 254 | 1594 | 178 | 2812 | 227 | 3217 | 107 | 694 | 100 | 901 | 8625 |
| Apprch % | 6.6 | 89.1 | 4.3 | | 21.8 | 62.2 | 15.9 | | 5.5 | 87.4 | 7.1 | | 11.9 | 77 | 11.1 | | |
| Total % | 2.2 | 30.1 | 1.5 | 33.8 | 4 | 11.5 | 2.9 | 18.5 | 2.1 | 32.6 | 2.6 | 37.3 | 1.2 | 8 | 1.2 | 10.4 | |

| Start Time | Hawthorne Boulevard Southbound | | | | Carson Street Westbound | | | | Hawthorne Boulevard Northbound | | | | Carson Street Eastbound | | | | Int. Total |
|--|--------------------------------|------------|-----------|------------|-------------------------|------------|-----------|------------|--------------------------------|------------|-----------|------------|-------------------------|------------|-----------|------------|-------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:45 AM | | | | | | | | | | | | | | | | | |
| 07:45 AM | 30 | 427 | 24 | 481 | 51 | 139 | 32 | 222 | 28 | 378 | 29 | 435 | 15 | 93 | 19 | 127 | 1265 |
| 08:00 AM | 37 | 351 | 23 | 411 | 52 | 127 | 27 | 206 | 29 | 390 | 28 | 447 | 20 | 148 | 18 | 186 | 1250 |
| 08:15 AM | 16 | 328 | 9 | 353 | 58 | 142 | 35 | 235 | 27 | 408 | 36 | 471 | 12 | 75 | 10 | 97 | 1156 |
| 08:30 AM | 24 | 340 | 9 | 373 | 58 | 133 | 36 | 227 | 23 | 389 | 32 | 444 | 17 | 76 | 12 | 105 | 1149 |
| Total Volume | 107 | 1446 | 65 | 1618 | 219 | 541 | 130 | 890 | 107 | 1565 | 125 | 1797 | 64 | 392 | 59 | 515 | 4820 |
| % App. Total | 6.6 | 89.4 | 4 | | 24.6 | 60.8 | 14.6 | | 6 | 87.1 | 7 | | 12.4 | 76.1 | 11.5 | | |
| PHF | .723 | .847 | .677 | .841 | .944 | .952 | .903 | .947 | .922 | .959 | .868 | .954 | .800 | .662 | .776 | .692 | .953 |

City of Torrance
 N/S: Hawthorne Boulevard
 E/W: Carson Street
 Weather: Clear

File Name : 08_TOR_Haw_Car AM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

| | 07:45 AM | | | | 07:45 AM | | | | 08:00 AM | | | | 08:00 AM | | | |
|--------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|
| +0 mins. | 30 | 427 | 24 | 481 | 51 | 139 | 32 | 222 | 29 | 390 | 28 | 447 | 20 | 148 | 18 | 186 |
| +15 mins. | 37 | 351 | 23 | 411 | 52 | 127 | 27 | 206 | 27 | 408 | 36 | 471 | 12 | 75 | 10 | 97 |
| +30 mins. | 16 | 328 | 9 | 353 | 58 | 142 | 35 | 235 | 23 | 389 | 32 | 444 | 17 | 76 | 12 | 105 |
| +45 mins. | 24 | 340 | 9 | 373 | 58 | 133 | 36 | 227 | 29 | 415 | 39 | 483 | 20 | 109 | 22 | 151 |
| Total Volume | 107 | 1446 | 65 | 1618 | 219 | 541 | 130 | 890 | 108 | 1602 | 135 | 1845 | 69 | 408 | 62 | 539 |
| % App. Total | 6.6 | 89.4 | 4 | | 24.6 | 60.8 | 14.6 | | 5.9 | 86.8 | 7.3 | | 12.8 | 75.7 | 11.5 | |
| PHF | .723 | .847 | .677 | .841 | .944 | .952 | .903 | .947 | .931 | .965 | .865 | .955 | .863 | .689 | .705 | .724 |

City of Torrance
 N/S: Hawthorne Boulevard
 E/W: Carson Street
 Weather: Clear

File Name : 08_TOR_Haw_Car PM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 1

Groups Printed- Total Volume

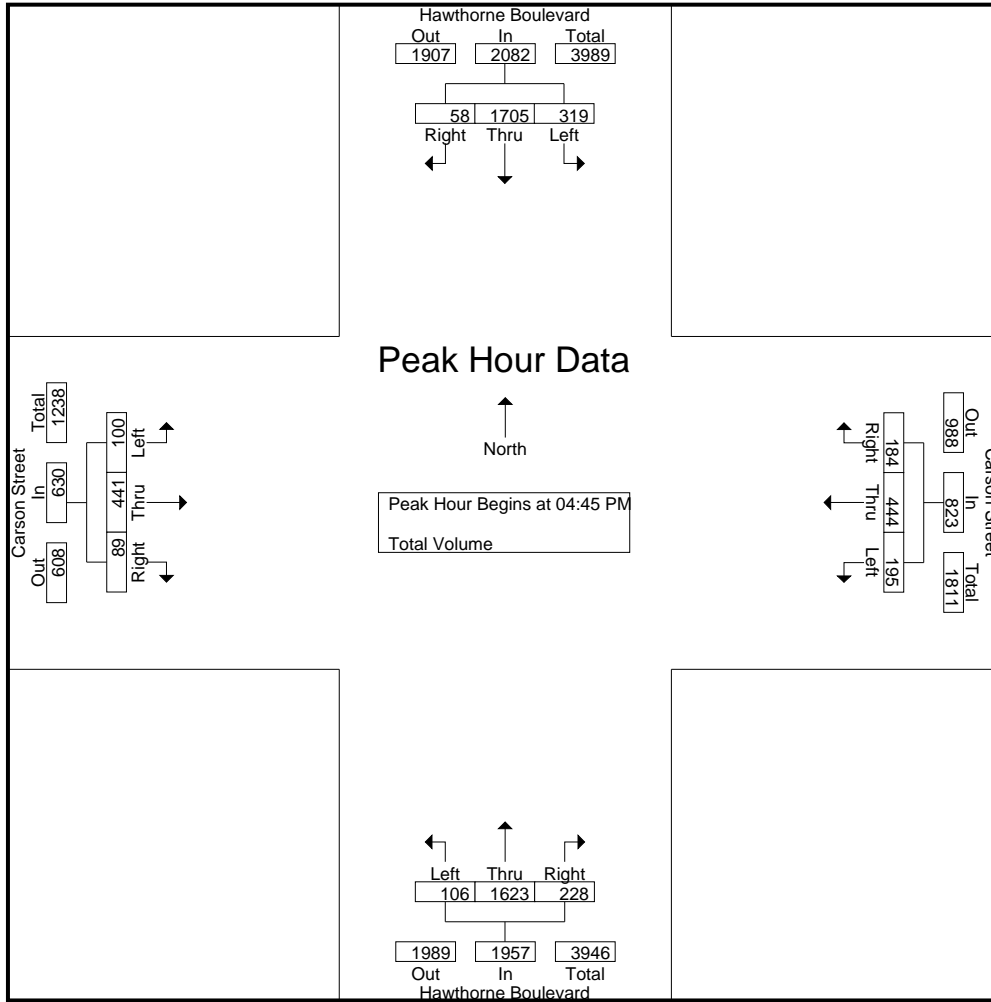
| Start Time | Hawthorne Boulevard Southbound | | | | Carson Street Westbound | | | | Hawthorne Boulevard Northbound | | | | Carson Street Eastbound | | | | Int. Total |
|-------------|--------------------------------|------|-------|------------|-------------------------|------|-------|------------|--------------------------------|------|-------|------------|-------------------------|------|-------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| 04:00 PM | 61 | 383 | 11 | 455 | 65 | 97 | 50 | 212 | 33 | 414 | 53 | 500 | 28 | 117 | 24 | 169 | 1336 |
| 04:15 PM | 77 | 441 | 20 | 538 | 50 | 89 | 50 | 189 | 24 | 371 | 52 | 447 | 30 | 121 | 22 | 173 | 1347 |
| 04:30 PM | 68 | 286 | 16 | 370 | 64 | 137 | 51 | 252 | 21 | 379 | 54 | 454 | 29 | 106 | 17 | 152 | 1228 |
| 04:45 PM | 83 | 413 | 23 | 519 | 51 | 133 | 57 | 241 | 26 | 390 | 45 | 461 | 30 | 103 | 26 | 159 | 1380 |
| Total | 289 | 1523 | 70 | 1882 | 230 | 456 | 208 | 894 | 104 | 1554 | 204 | 1862 | 117 | 447 | 89 | 653 | 5291 |
| 05:00 PM | 76 | 407 | 14 | 497 | 45 | 85 | 50 | 180 | 33 | 418 | 66 | 517 | 32 | 119 | 19 | 170 | 1364 |
| 05:15 PM | 94 | 445 | 10 | 549 | 52 | 115 | 41 | 208 | 27 | 413 | 52 | 492 | 22 | 121 | 23 | 166 | 1415 |
| 05:30 PM | 66 | 440 | 11 | 517 | 47 | 111 | 36 | 194 | 20 | 402 | 65 | 487 | 16 | 98 | 21 | 135 | 1333 |
| 05:45 PM | 83 | 374 | 8 | 465 | 57 | 98 | 45 | 200 | 14 | 324 | 54 | 392 | 22 | 81 | 13 | 116 | 1173 |
| Total | 319 | 1666 | 43 | 2028 | 201 | 409 | 172 | 782 | 94 | 1557 | 237 | 1888 | 92 | 419 | 76 | 587 | 5285 |
| Grand Total | 608 | 3189 | 113 | 3910 | 431 | 865 | 380 | 1676 | 198 | 3111 | 441 | 3750 | 209 | 866 | 165 | 1240 | 10576 |
| Apprch % | 15.5 | 81.6 | 2.9 | | 25.7 | 51.6 | 22.7 | | 5.3 | 83 | 11.8 | | 16.9 | 69.8 | 13.3 | | |
| Total % | 5.7 | 30.2 | 1.1 | 37 | 4.1 | 8.2 | 3.6 | 15.8 | 1.9 | 29.4 | 4.2 | 35.5 | 2 | 8.2 | 1.6 | 11.7 | |

| Start Time | Hawthorne Boulevard Southbound | | | | Carson Street Westbound | | | | Hawthorne Boulevard Northbound | | | | Carson Street Eastbound | | | | Int. Total |
|--------------|--------------------------------|------------|-----------|------------|-------------------------|------------|-----------|------------|--------------------------------|------------|-----------|------------|-------------------------|------------|-----------|------------|-------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| 04:45 PM | 83 | 413 | 23 | 519 | 51 | 133 | 57 | 241 | 26 | 390 | 45 | 461 | 30 | 103 | 26 | 159 | 1380 |
| 05:00 PM | 76 | 407 | 14 | 497 | 45 | 85 | 50 | 180 | 33 | 418 | 66 | 517 | 32 | 119 | 19 | 170 | 1364 |
| 05:15 PM | 94 | 445 | 10 | 549 | 52 | 115 | 41 | 208 | 27 | 413 | 52 | 492 | 22 | 121 | 23 | 166 | 1415 |
| 05:30 PM | 66 | 440 | 11 | 517 | 47 | 111 | 36 | 194 | 20 | 402 | 65 | 487 | 16 | 98 | 21 | 135 | 1333 |
| Total Volume | 319 | 1705 | 58 | 2082 | 195 | 444 | 184 | 823 | 106 | 1623 | 228 | 1957 | 100 | 441 | 89 | 630 | 5492 |
| % App. Total | 15.3 | 81.9 | 2.8 | | 23.7 | 53.9 | 22.4 | | 5.4 | 82.9 | 11.7 | | 15.9 | 70 | 14.1 | | |
| PHF | .848 | .958 | .630 | .948 | .938 | .835 | .807 | .854 | .803 | .971 | .864 | .946 | .781 | .911 | .856 | .926 | .970 |

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:45 PM

City of Torrance
 N/S: Hawthorne Boulevard
 E/W: Carson Street
 Weather: Clear

File Name : 08_TOR_Haw_Car PM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

| | 04:45 PM | | | | 04:00 PM | | | | 04:45 PM | | | | 04:15 PM | | | |
|--------------|----------|------|------|------|----------|------|------|------|----------|------|------|------|----------|------|------|------|
| +0 mins. | 83 | 413 | 23 | 519 | 65 | 97 | 50 | 212 | 26 | 390 | 45 | 461 | 30 | 121 | 22 | 173 |
| +15 mins. | 76 | 407 | 14 | 497 | 50 | 89 | 50 | 189 | 33 | 418 | 66 | 517 | 29 | 106 | 17 | 152 |
| +30 mins. | 94 | 445 | 10 | 549 | 64 | 137 | 51 | 252 | 27 | 413 | 52 | 492 | 30 | 103 | 26 | 159 |
| +45 mins. | 66 | 440 | 11 | 517 | 51 | 133 | 57 | 241 | 20 | 402 | 65 | 487 | 32 | 119 | 19 | 170 |
| Total Volume | 319 | 1705 | 58 | 2082 | 230 | 456 | 208 | 894 | 106 | 1623 | 228 | 1957 | 121 | 449 | 84 | 654 |
| % App. Total | 15.3 | 81.9 | 2.8 | | 25.7 | 51 | 23.3 | | 5.4 | 82.9 | 11.7 | | 18.5 | 68.7 | 12.8 | |
| PHF | .848 | .958 | .630 | .948 | .885 | .832 | .912 | .887 | .803 | .971 | .864 | .946 | .945 | .928 | .808 | .945 |

City of Torrance
 N/S: Hawthorne Boulevard
 E/W: Sepulveda Boulevard
 Weather: Clear

File Name : 09_TOR_Haw_Sep AM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 1

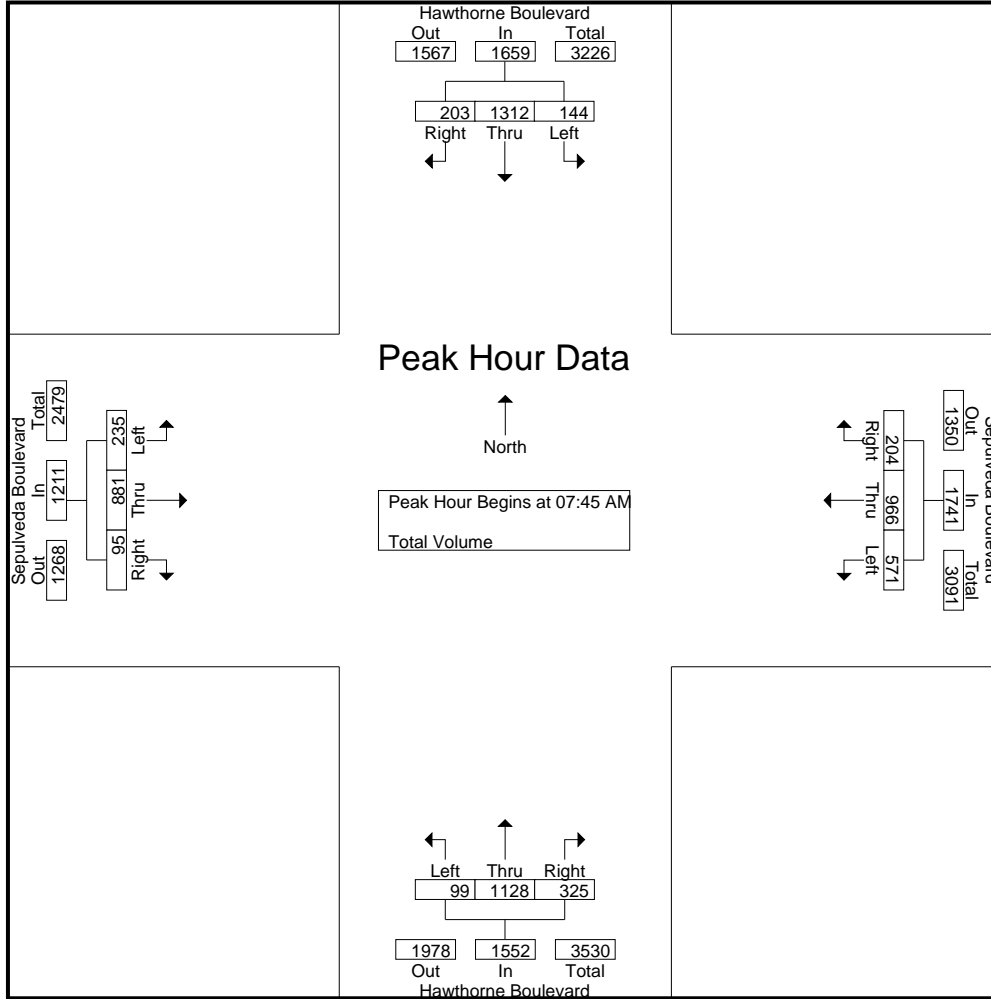
Groups Printed- Total Volume

| Start Time | Hawthorne Boulevard Southbound | | | | Sepulveda Boulevard Westbound | | | | Hawthorne Boulevard Northbound | | | | Sepulveda Boulevard Eastbound | | | | Int. Total |
|-------------|--------------------------------|------|-------|------------|-------------------------------|------|-------|------------|--------------------------------|------|-------|------------|-------------------------------|------|-------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| 07:00 AM | 19 | 214 | 22 | 255 | 50 | 114 | 39 | 203 | 9 | 165 | 46 | 220 | 22 | 103 | 15 | 140 | 818 |
| 07:15 AM | 16 | 267 | 29 | 312 | 79 | 187 | 30 | 296 | 8 | 230 | 50 | 288 | 29 | 125 | 12 | 166 | 1062 |
| 07:30 AM | 20 | 279 | 36 | 335 | 130 | 248 | 46 | 424 | 21 | 291 | 68 | 380 | 56 | 153 | 5 | 214 | 1353 |
| 07:45 AM | 30 | 374 | 54 | 458 | 171 | 260 | 58 | 489 | 22 | 284 | 99 | 405 | 60 | 220 | 22 | 302 | 1654 |
| Total | 85 | 1134 | 141 | 1360 | 430 | 809 | 173 | 1412 | 60 | 970 | 263 | 1293 | 167 | 601 | 54 | 822 | 4887 |
| 08:00 AM | 44 | 298 | 44 | 386 | 121 | 224 | 51 | 396 | 26 | 274 | 82 | 382 | 41 | 252 | 28 | 321 | 1485 |
| 08:15 AM | 28 | 296 | 63 | 387 | 135 | 255 | 47 | 437 | 22 | 279 | 73 | 374 | 63 | 183 | 22 | 268 | 1466 |
| 08:30 AM | 42 | 344 | 42 | 428 | 144 | 227 | 48 | 419 | 29 | 291 | 71 | 391 | 71 | 226 | 23 | 320 | 1558 |
| 08:45 AM | 44 | 289 | 40 | 373 | 154 | 171 | 56 | 381 | 37 | 330 | 83 | 450 | 67 | 219 | 19 | 305 | 1509 |
| Total | 158 | 1227 | 189 | 1574 | 554 | 877 | 202 | 1633 | 114 | 1174 | 309 | 1597 | 242 | 880 | 92 | 1214 | 6018 |
| Grand Total | 243 | 2361 | 330 | 2934 | 984 | 1686 | 375 | 3045 | 174 | 2144 | 572 | 2890 | 409 | 1481 | 146 | 2036 | 10905 |
| Apprch % | 8.3 | 80.5 | 11.2 | | 32.3 | 55.4 | 12.3 | | 6 | 74.2 | 19.8 | | 20.1 | 72.7 | 7.2 | | |
| Total % | 2.2 | 21.7 | 3 | 26.9 | 9 | 15.5 | 3.4 | 27.9 | 1.6 | 19.7 | 5.2 | 26.5 | 3.8 | 13.6 | 1.3 | 18.7 | |

| Start Time | Hawthorne Boulevard Southbound | | | | Sepulveda Boulevard Westbound | | | | Hawthorne Boulevard Northbound | | | | Sepulveda Boulevard Eastbound | | | | Int. Total |
|--|--------------------------------|------------|-----------|------------|-------------------------------|------------|-----------|------------|--------------------------------|------------|-----------|------------|-------------------------------|------------|-----------|------------|-------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:45 AM | | | | | | | | | | | | | | | | | |
| 07:45 AM | 30 | 374 | 54 | 458 | 171 | 260 | 58 | 489 | 22 | 284 | 99 | 405 | 60 | 220 | 22 | 302 | 1654 |
| 08:00 AM | 44 | 298 | 44 | 386 | 121 | 224 | 51 | 396 | 26 | 274 | 82 | 382 | 41 | 252 | 28 | 321 | 1485 |
| 08:15 AM | 28 | 296 | 63 | 387 | 135 | 255 | 47 | 437 | 22 | 279 | 73 | 374 | 63 | 183 | 22 | 268 | 1466 |
| 08:30 AM | 42 | 344 | 42 | 428 | 144 | 227 | 48 | 419 | 29 | 291 | 71 | 391 | 71 | 226 | 23 | 320 | 1558 |
| Total Volume | 144 | 1312 | 203 | 1659 | 571 | 966 | 204 | 1741 | 99 | 1128 | 325 | 1552 | 235 | 881 | 95 | 1211 | 6163 |
| % App. Total | 8.7 | 79.1 | 12.2 | | 32.8 | 55.5 | 11.7 | | 6.4 | 72.7 | 20.9 | | 19.4 | 72.7 | 7.8 | | |
| PHF | .818 | .877 | .806 | .906 | .835 | .929 | .879 | .890 | .853 | .969 | .821 | .958 | .827 | .874 | .848 | .943 | .932 |

City of Torrance
 N/S: Hawthorne Boulevard
 E/W: Sepulveda Boulevard
 Weather: Clear

File Name : 09_TOR_Haw_Sep AM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

| | 07:45 AM | | | | 07:30 AM | | | | 08:00 AM | | | | 08:00 AM | | | |
|--------------|-----------|------------|-----------|------------|------------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|
| +0 mins. | 30 | 374 | 54 | 458 | 130 | 248 | 46 | 424 | 26 | 274 | 82 | 382 | 41 | 252 | 28 | 321 |
| +15 mins. | 44 | 298 | 44 | 386 | 171 | 260 | 58 | 489 | 22 | 279 | 73 | 374 | 63 | 183 | 22 | 268 |
| +30 mins. | 28 | 296 | 63 | 387 | 121 | 224 | 51 | 396 | 29 | 291 | 71 | 391 | 71 | 226 | 23 | 320 |
| +45 mins. | 42 | 344 | 42 | 428 | 135 | 255 | 47 | 437 | 37 | 330 | 83 | 450 | 67 | 219 | 19 | 305 |
| Total Volume | 144 | 1312 | 203 | 1659 | 557 | 987 | 202 | 1746 | 114 | 1174 | 309 | 1597 | 242 | 880 | 92 | 1214 |
| % App. Total | 8.7 | 79.1 | 12.2 | | 31.9 | 56.5 | 11.6 | | 7.1 | 73.5 | 19.3 | | 19.9 | 72.5 | 7.6 | |
| PHF | .818 | .877 | .806 | .906 | .814 | .949 | .871 | .893 | .770 | .889 | .931 | .887 | .852 | .873 | .821 | .945 |

City of Torrance
 N/S: Hawthorne Boulevard
 E/W: Sepulveda Boulevard
 Weather: Clear

File Name : 09_TOR_Haw_Sep PM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 1

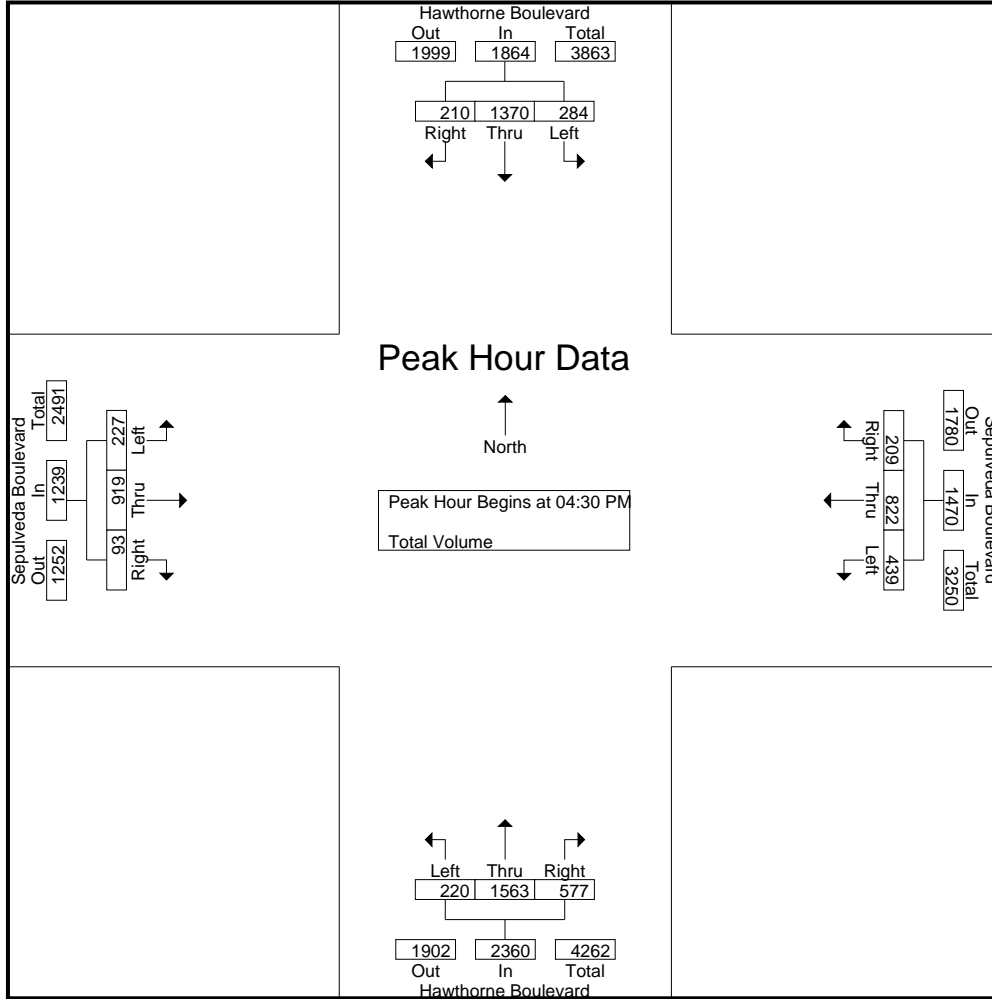
Groups Printed- Total Volume

| Start Time | Hawthorne Boulevard Southbound | | | | Sepulveda Boulevard Westbound | | | | Hawthorne Boulevard Northbound | | | | Sepulveda Boulevard Eastbound | | | | Int. Total |
|-------------|--------------------------------|------|-------|------------|-------------------------------|------|-------|------------|--------------------------------|------|-------|------------|-------------------------------|------|-------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| 04:00 PM | 59 | 316 | 55 | 430 | 106 | 200 | 54 | 360 | 56 | 437 | 168 | 661 | 66 | 198 | 29 | 293 | 1744 |
| 04:15 PM | 62 | 347 | 52 | 461 | 116 | 200 | 47 | 363 | 38 | 317 | 140 | 495 | 63 | 255 | 26 | 344 | 1663 |
| 04:30 PM | 76 | 336 | 43 | 455 | 97 | 227 | 53 | 377 | 39 | 368 | 141 | 548 | 48 | 237 | 19 | 304 | 1684 |
| 04:45 PM | 73 | 322 | 52 | 447 | 124 | 206 | 49 | 379 | 59 | 351 | 147 | 557 | 55 | 230 | 24 | 309 | 1692 |
| Total | 270 | 1321 | 202 | 1793 | 443 | 833 | 203 | 1479 | 192 | 1473 | 596 | 2261 | 232 | 920 | 98 | 1250 | 6783 |
| 05:00 PM | 61 | 377 | 66 | 504 | 102 | 180 | 46 | 328 | 59 | 434 | 138 | 631 | 58 | 219 | 25 | 302 | 1765 |
| 05:15 PM | 74 | 335 | 49 | 458 | 116 | 209 | 61 | 386 | 63 | 410 | 151 | 624 | 66 | 233 | 25 | 324 | 1792 |
| 05:30 PM | 67 | 343 | 52 | 462 | 158 | 164 | 52 | 374 | 52 | 323 | 122 | 497 | 73 | 202 | 22 | 297 | 1630 |
| 05:45 PM | 47 | 325 | 71 | 443 | 124 | 204 | 45 | 373 | 52 | 284 | 114 | 450 | 47 | 242 | 32 | 321 | 1587 |
| Total | 249 | 1380 | 238 | 1867 | 500 | 757 | 204 | 1461 | 226 | 1451 | 525 | 2202 | 244 | 896 | 104 | 1244 | 6774 |
| Grand Total | 519 | 2701 | 440 | 3660 | 943 | 1590 | 407 | 2940 | 418 | 2924 | 1121 | 4463 | 476 | 1816 | 202 | 2494 | 13557 |
| Apprch % | 14.2 | 73.8 | 12 | | 32.1 | 54.1 | 13.8 | | 9.4 | 65.5 | 25.1 | | 19.1 | 72.8 | 8.1 | | |
| Total % | 3.8 | 19.9 | 3.2 | 27 | 7 | 11.7 | 3 | 21.7 | 3.1 | 21.6 | 8.3 | 32.9 | 3.5 | 13.4 | 1.5 | 18.4 | |

| Start Time | Hawthorne Boulevard Southbound | | | | Sepulveda Boulevard Westbound | | | | Hawthorne Boulevard Northbound | | | | Sepulveda Boulevard Eastbound | | | | Int. Total |
|--|--------------------------------|------------|-----------|------------|-------------------------------|------------|-----------|------------|--------------------------------|------------|------------|------------|-------------------------------|------------|-----------|------------|-------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 04:30 PM | | | | | | | | | | | | | | | | | |
| 04:30 PM | 76 | 336 | 43 | 455 | 97 | 227 | 53 | 377 | 39 | 368 | 141 | 548 | 48 | 237 | 19 | 304 | 1684 |
| 04:45 PM | 73 | 322 | 52 | 447 | 124 | 206 | 49 | 379 | 59 | 351 | 147 | 557 | 55 | 230 | 24 | 309 | 1692 |
| 05:00 PM | 61 | 377 | 66 | 504 | 102 | 180 | 46 | 328 | 59 | 434 | 138 | 631 | 58 | 219 | 25 | 302 | 1765 |
| 05:15 PM | 74 | 335 | 49 | 458 | 116 | 209 | 61 | 386 | 63 | 410 | 151 | 624 | 66 | 233 | 25 | 324 | 1792 |
| Total Volume | 284 | 1370 | 210 | 1864 | 439 | 822 | 209 | 1470 | 220 | 1563 | 577 | 2360 | 227 | 919 | 93 | 1239 | 6933 |
| % App. Total | 15.2 | 73.5 | 11.3 | | 29.9 | 55.9 | 14.2 | | 9.3 | 66.2 | 24.4 | | 18.3 | 74.2 | 7.5 | | |
| PHF | .934 | .908 | .795 | .925 | .885 | .905 | .857 | .952 | .873 | .900 | .955 | .935 | .860 | .969 | .930 | .956 | .967 |

City of Torrance
 N/S: Hawthorne Boulevard
 E/W: Sepulveda Boulevard
 Weather: Clear

File Name : 09_TOR_Haw_Sep PM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

| | 04:45 PM | | | | 04:00 PM | | | | 04:30 PM | | | | 04:15 PM | | | |
|--------------|-----------|------------|-----------|------------|------------|------------|-----------|------------|-----------|------------|------------|------------|-----------|------------|-----------|------------|
| +0 mins. | 73 | 322 | 52 | 447 | 106 | 200 | 54 | 360 | 39 | 368 | 141 | 548 | 63 | 255 | 26 | 344 |
| +15 mins. | 61 | 377 | 66 | 504 | 116 | 200 | 47 | 363 | 59 | 351 | 147 | 557 | 48 | 237 | 19 | 304 |
| +30 mins. | 74 | 335 | 49 | 458 | 97 | 227 | 53 | 377 | 59 | 434 | 138 | 631 | 55 | 230 | 24 | 309 |
| +45 mins. | 67 | 343 | 52 | 462 | 124 | 206 | 49 | 379 | 63 | 410 | 151 | 624 | 58 | 219 | 25 | 302 |
| Total Volume | 275 | 1377 | 219 | 1871 | 443 | 833 | 203 | 1479 | 220 | 1563 | 577 | 2360 | 224 | 941 | 94 | 1259 |
| % App. Total | 14.7 | 73.6 | 11.7 | | 30 | 56.3 | 13.7 | | 9.3 | 66.2 | 24.4 | | 17.8 | 74.7 | 7.5 | |
| PHF | .929 | .913 | .830 | .928 | .893 | .917 | .940 | .976 | .873 | .900 | .955 | .935 | .889 | .923 | .904 | .915 |

City of Torrance
 N/S: Madrona Avenue
 E/W: Torrance Boulevard
 Weather: Clear

File Name : 10_TOR_Madr_Torr AM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 1

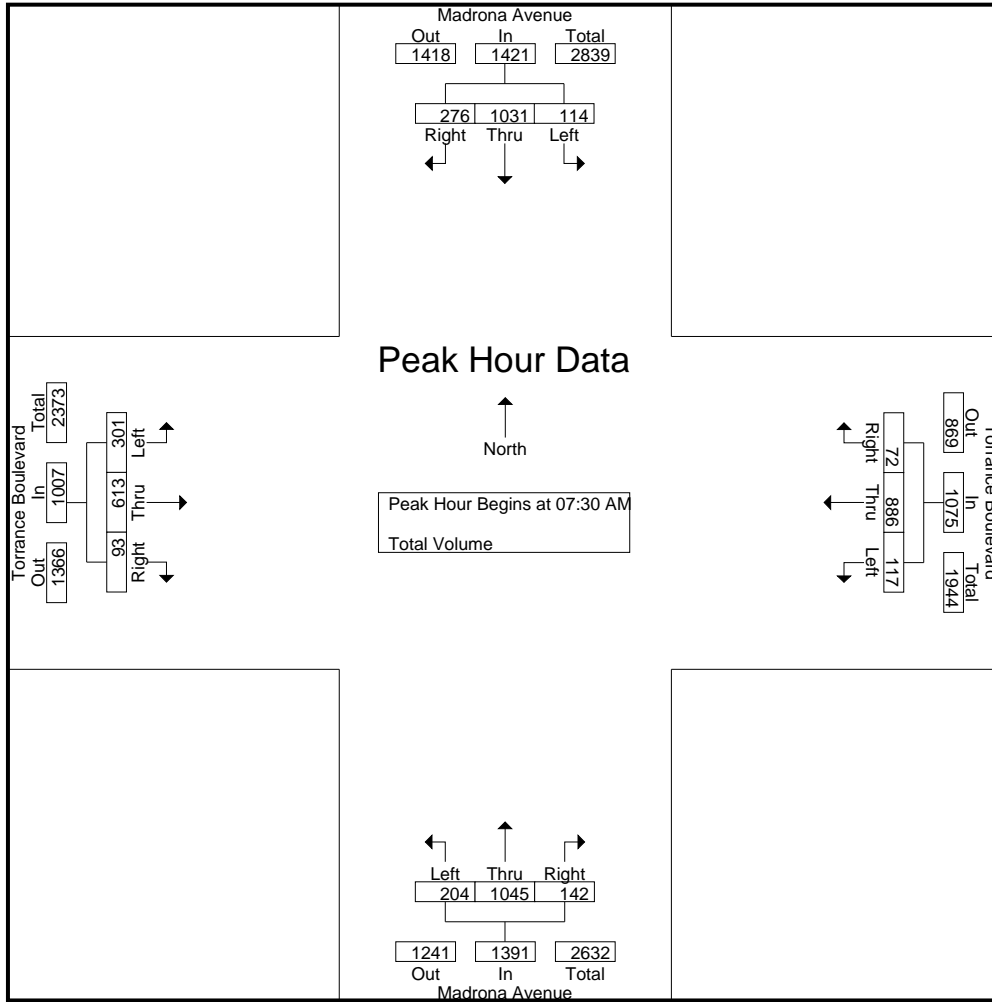
Groups Printed- Total Volume

| Start Time | Madrona Avenue Southbound | | | | Torrance Boulevard Westbound | | | | Madrona Avenue Northbound | | | | Torrance Boulevard Eastbound | | | | Int. Total |
|-------------|---------------------------|------|-------|------------|------------------------------|------|-------|------------|---------------------------|------|-------|------------|------------------------------|------|-------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| 07:00 AM | 17 | 98 | 22 | 137 | 25 | 153 | 16 | 194 | 15 | 126 | 5 | 146 | 36 | 73 | 10 | 119 | 596 |
| 07:15 AM | 18 | 147 | 41 | 206 | 21 | 180 | 14 | 215 | 35 | 211 | 13 | 259 | 48 | 61 | 9 | 118 | 798 |
| 07:30 AM | 21 | 207 | 85 | 313 | 15 | 242 | 14 | 271 | 57 | 255 | 21 | 333 | 63 | 174 | 16 | 253 | 1170 |
| 07:45 AM | 35 | 301 | 62 | 398 | 31 | 228 | 21 | 280 | 57 | 285 | 49 | 391 | 71 | 167 | 35 | 273 | 1342 |
| Total | 91 | 753 | 210 | 1054 | 92 | 803 | 65 | 960 | 164 | 877 | 88 | 1129 | 218 | 475 | 70 | 763 | 3906 |
| 08:00 AM | 34 | 277 | 47 | 358 | 38 | 201 | 20 | 259 | 52 | 241 | 54 | 347 | 93 | 163 | 17 | 273 | 1237 |
| 08:15 AM | 24 | 246 | 82 | 352 | 33 | 215 | 17 | 265 | 38 | 264 | 18 | 320 | 74 | 109 | 25 | 208 | 1145 |
| 08:30 AM | 32 | 259 | 71 | 362 | 30 | 209 | 14 | 253 | 20 | 251 | 18 | 289 | 65 | 140 | 20 | 225 | 1129 |
| 08:45 AM | 41 | 254 | 85 | 380 | 28 | 229 | 27 | 284 | 50 | 318 | 27 | 395 | 57 | 141 | 15 | 213 | 1272 |
| Total | 131 | 1036 | 285 | 1452 | 129 | 854 | 78 | 1061 | 160 | 1074 | 117 | 1351 | 289 | 553 | 77 | 919 | 4783 |
| Grand Total | 222 | 1789 | 495 | 2506 | 221 | 1657 | 143 | 2021 | 324 | 1951 | 205 | 2480 | 507 | 1028 | 147 | 1682 | 8689 |
| Apprch % | 8.9 | 71.4 | 19.8 | | 10.9 | 82 | 7.1 | | 13.1 | 78.7 | 8.3 | | 30.1 | 61.1 | 8.7 | | |
| Total % | 2.6 | 20.6 | 5.7 | 28.8 | 2.5 | 19.1 | 1.6 | 23.3 | 3.7 | 22.5 | 2.4 | 28.5 | 5.8 | 11.8 | 1.7 | 19.4 | |

| Start Time | Madrona Avenue Southbound | | | | Torrance Boulevard Westbound | | | | Madrona Avenue Northbound | | | | Torrance Boulevard Eastbound | | | | Int. Total |
|--|---------------------------|------------|-----------|------------|------------------------------|------------|-----------|------------|---------------------------|------------|-----------|------------|------------------------------|------------|-----------|------------|-------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:30 AM | | | | | | | | | | | | | | | | | |
| 07:30 AM | 21 | 207 | 85 | 313 | 15 | 242 | 14 | 271 | 57 | 255 | 21 | 333 | 63 | 174 | 16 | 253 | 1170 |
| 07:45 AM | 35 | 301 | 62 | 398 | 31 | 228 | 21 | 280 | 57 | 285 | 49 | 391 | 71 | 167 | 35 | 273 | 1342 |
| 08:00 AM | 34 | 277 | 47 | 358 | 38 | 201 | 20 | 259 | 52 | 241 | 54 | 347 | 93 | 163 | 17 | 273 | 1237 |
| 08:15 AM | 24 | 246 | 82 | 352 | 33 | 215 | 17 | 265 | 38 | 264 | 18 | 320 | 74 | 109 | 25 | 208 | 1145 |
| Total Volume | 114 | 1031 | 276 | 1421 | 117 | 886 | 72 | 1075 | 204 | 1045 | 142 | 1391 | 301 | 613 | 93 | 1007 | 4894 |
| % App. Total | 8 | 72.6 | 19.4 | | 10.9 | 82.4 | 6.7 | | 14.7 | 75.1 | 10.2 | | 29.9 | 60.9 | 9.2 | | |
| PHF | .814 | .856 | .812 | .893 | .770 | .915 | .857 | .960 | .895 | .917 | .657 | .889 | .809 | .881 | .664 | .922 | .912 |

City of Torrance
 N/S: Madrona Avenue
 E/W: Torrance Boulevard
 Weather: Clear

File Name : 10_TOR_Madr_Torr AM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

| | 07:45 AM | | | | 07:30 AM | | | | 07:30 AM | | | | 07:30 AM | | | |
|--------------|----------|------|------|------|----------|------|------|------|----------|------|------|------|----------|------|------|------|
| +0 mins. | 35 | 301 | 62 | 398 | 15 | 242 | 14 | 271 | 57 | 255 | 21 | 333 | 63 | 174 | 16 | 253 |
| +15 mins. | 34 | 277 | 47 | 358 | 31 | 228 | 21 | 280 | 57 | 285 | 49 | 391 | 71 | 167 | 35 | 273 |
| +30 mins. | 24 | 246 | 82 | 352 | 38 | 201 | 20 | 259 | 52 | 241 | 54 | 347 | 93 | 163 | 17 | 273 |
| +45 mins. | 32 | 259 | 71 | 362 | 33 | 215 | 17 | 265 | 38 | 264 | 18 | 320 | 74 | 109 | 25 | 208 |
| Total Volume | 125 | 1083 | 262 | 1470 | 117 | 886 | 72 | 1075 | 204 | 1045 | 142 | 1391 | 301 | 613 | 93 | 1007 |
| % App. Total | 8.5 | 73.7 | 17.8 | | 10.9 | 82.4 | 6.7 | | 14.7 | 75.1 | 10.2 | | 29.9 | 60.9 | 9.2 | |
| PHF | .893 | .900 | .799 | .923 | .770 | .915 | .857 | .960 | .895 | .917 | .657 | .889 | .809 | .881 | .664 | .922 |

City of Torrance
 N/S: Madrona Avenue
 E/W: Torrance Boulevard
 Weather: Clear

File Name : 10_TOR_Madr_Torr PM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 1

Groups Printed- Total Volume

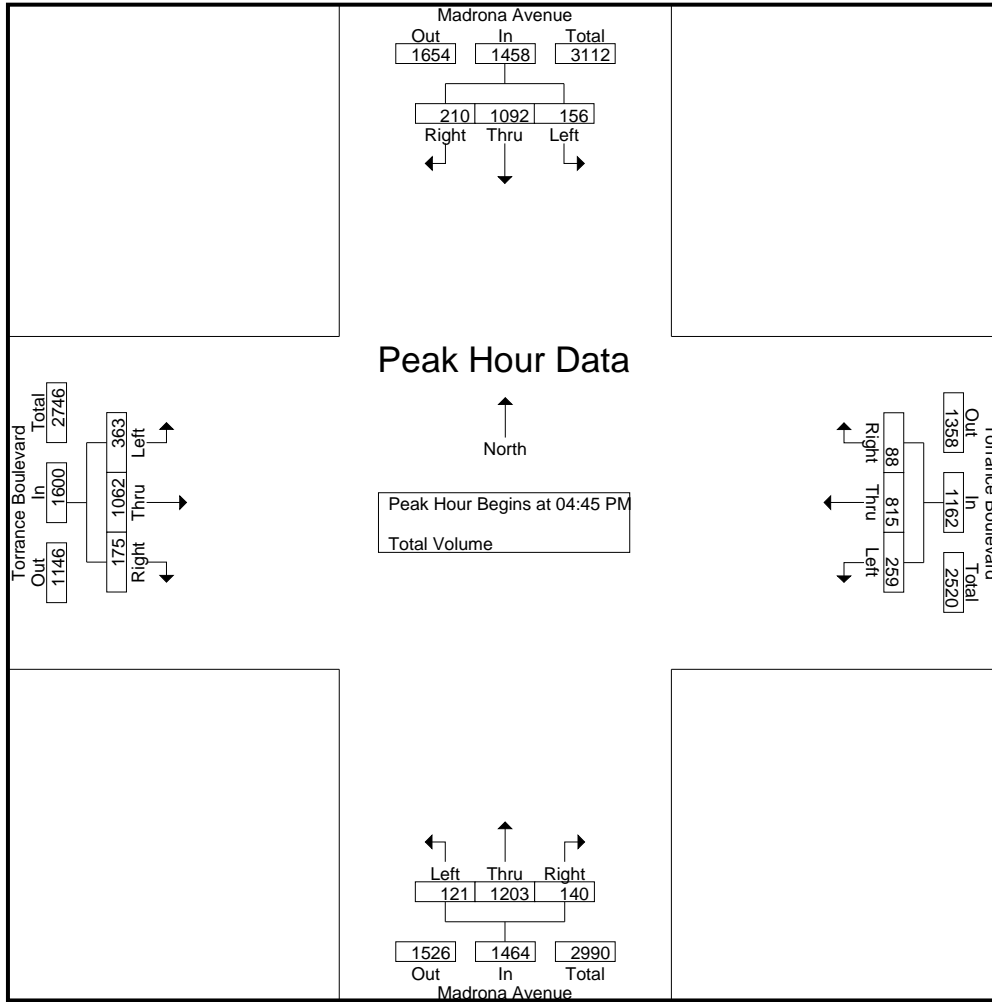
| Start Time | Madrona Avenue Southbound | | | | Torrance Boulevard Westbound | | | | Madrona Avenue Northbound | | | | Torrance Boulevard Eastbound | | | | Int. Total |
|-------------|---------------------------|------|-------|------------|------------------------------|------|-------|------------|---------------------------|------|-------|------------|------------------------------|------|-------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| 04:00 PM | 32 | 247 | 54 | 333 | 40 | 209 | 34 | 283 | 21 | 283 | 47 | 351 | 94 | 233 | 35 | 362 | 1329 |
| 04:15 PM | 28 | 285 | 52 | 365 | 52 | 156 | 31 | 239 | 42 | 303 | 32 | 377 | 87 | 254 | 27 | 368 | 1349 |
| 04:30 PM | 23 | 262 | 59 | 344 | 51 | 210 | 11 | 272 | 32 | 296 | 41 | 369 | 75 | 220 | 30 | 325 | 1310 |
| 04:45 PM | 39 | 308 | 60 | 407 | 52 | 165 | 19 | 236 | 36 | 313 | 32 | 381 | 84 | 277 | 49 | 410 | 1434 |
| Total | 122 | 1102 | 225 | 1449 | 195 | 740 | 95 | 1030 | 131 | 1195 | 152 | 1478 | 340 | 984 | 141 | 1465 | 5422 |
| 05:00 PM | 30 | 245 | 53 | 328 | 69 | 220 | 24 | 313 | 26 | 290 | 43 | 359 | 108 | 290 | 42 | 440 | 1440 |
| 05:15 PM | 42 | 267 | 50 | 359 | 69 | 192 | 17 | 278 | 37 | 357 | 39 | 433 | 79 | 222 | 44 | 345 | 1415 |
| 05:30 PM | 45 | 272 | 47 | 364 | 69 | 238 | 28 | 335 | 22 | 243 | 26 | 291 | 92 | 273 | 40 | 405 | 1395 |
| 05:45 PM | 47 | 291 | 57 | 395 | 40 | 183 | 22 | 245 | 41 | 284 | 28 | 353 | 73 | 202 | 44 | 319 | 1312 |
| Total | 164 | 1075 | 207 | 1446 | 247 | 833 | 91 | 1171 | 126 | 1174 | 136 | 1436 | 352 | 987 | 170 | 1509 | 5562 |
| Grand Total | 286 | 2177 | 432 | 2895 | 442 | 1573 | 186 | 2201 | 257 | 2369 | 288 | 2914 | 692 | 1971 | 311 | 2974 | 10984 |
| Apprch % | 9.9 | 75.2 | 14.9 | | 20.1 | 71.5 | 8.5 | | 8.8 | 81.3 | 9.9 | | 23.3 | 66.3 | 10.5 | | |
| Total % | 2.6 | 19.8 | 3.9 | 26.4 | 4 | 14.3 | 1.7 | 20 | 2.3 | 21.6 | 2.6 | 26.5 | 6.3 | 17.9 | 2.8 | 27.1 | |

| Start Time | Madrona Avenue Southbound | | | | Torrance Boulevard Westbound | | | | Madrona Avenue Northbound | | | | Torrance Boulevard Eastbound | | | | Int. Total |
|--------------|---------------------------|------------|-----------|------------|------------------------------|------------|-----------|------------|---------------------------|------------|-----------|------------|------------------------------|------------|-----------|------------|-------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| 04:45 PM | 39 | 308 | 60 | 407 | 52 | 165 | 19 | 236 | 36 | 313 | 32 | 381 | 84 | 277 | 49 | 410 | 1434 |
| 05:00 PM | 30 | 245 | 53 | 328 | 69 | 220 | 24 | 313 | 26 | 290 | 43 | 359 | 108 | 290 | 42 | 440 | 1440 |
| 05:15 PM | 42 | 267 | 50 | 359 | 69 | 192 | 17 | 278 | 37 | 357 | 39 | 433 | 79 | 222 | 44 | 345 | 1415 |
| 05:30 PM | 45 | 272 | 47 | 364 | 69 | 238 | 28 | 335 | 22 | 243 | 26 | 291 | 92 | 273 | 40 | 405 | 1395 |
| Total Volume | 156 | 1092 | 210 | 1458 | 259 | 815 | 88 | 1162 | 121 | 1203 | 140 | 1464 | 363 | 1062 | 175 | 1600 | 5684 |
| % App. Total | 10.7 | 74.9 | 14.4 | | 22.3 | 70.1 | 7.6 | | 8.3 | 82.2 | 9.6 | | 22.7 | 66.4 | 10.9 | | |
| PHF | .867 | .886 | .875 | .896 | .938 | .856 | .786 | .867 | .818 | .842 | .814 | .845 | .840 | .916 | .893 | .909 | .987 |

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:45 PM

City of Torrance
 N/S: Madrona Avenue
 E/W: Torrance Boulevard
 Weather: Clear

File Name : 10_TOR_Madr_Torr PM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

| | 04:45 PM | | | | 05:00 PM | | | | 04:30 PM | | | | 04:45 PM | | | |
|--------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|------------|------------|-----------|------------|
| +0 mins. | 39 | 308 | 60 | 407 | 69 | 220 | 24 | 313 | 32 | 296 | 41 | 369 | 84 | 277 | 49 | 410 |
| +15 mins. | 30 | 245 | 53 | 328 | 69 | 192 | 17 | 278 | 36 | 313 | 32 | 381 | 108 | 290 | 42 | 440 |
| +30 mins. | 42 | 267 | 50 | 359 | 69 | 238 | 28 | 335 | 26 | 290 | 43 | 359 | 79 | 222 | 44 | 345 |
| +45 mins. | 45 | 272 | 47 | 364 | 40 | 183 | 22 | 245 | 37 | 357 | 39 | 433 | 92 | 273 | 40 | 405 |
| Total Volume | 156 | 1092 | 210 | 1458 | 247 | 833 | 91 | 1171 | 131 | 1256 | 155 | 1542 | 363 | 1062 | 175 | 1600 |
| % App. Total | 10.7 | 74.9 | 14.4 | | 21.1 | 71.1 | 7.8 | | 8.5 | 81.5 | 10.1 | | 22.7 | 66.4 | 10.9 | |
| PHF | .867 | .886 | .875 | .896 | .895 | .875 | .813 | .874 | .885 | .880 | .901 | .890 | .840 | .916 | .893 | .909 |

City of Torrance
 N/S: Madrona Avenue
 E/W: Carson Street
 Weather: Clear

File Name : 11_TOR_Madr_Carson AM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 1

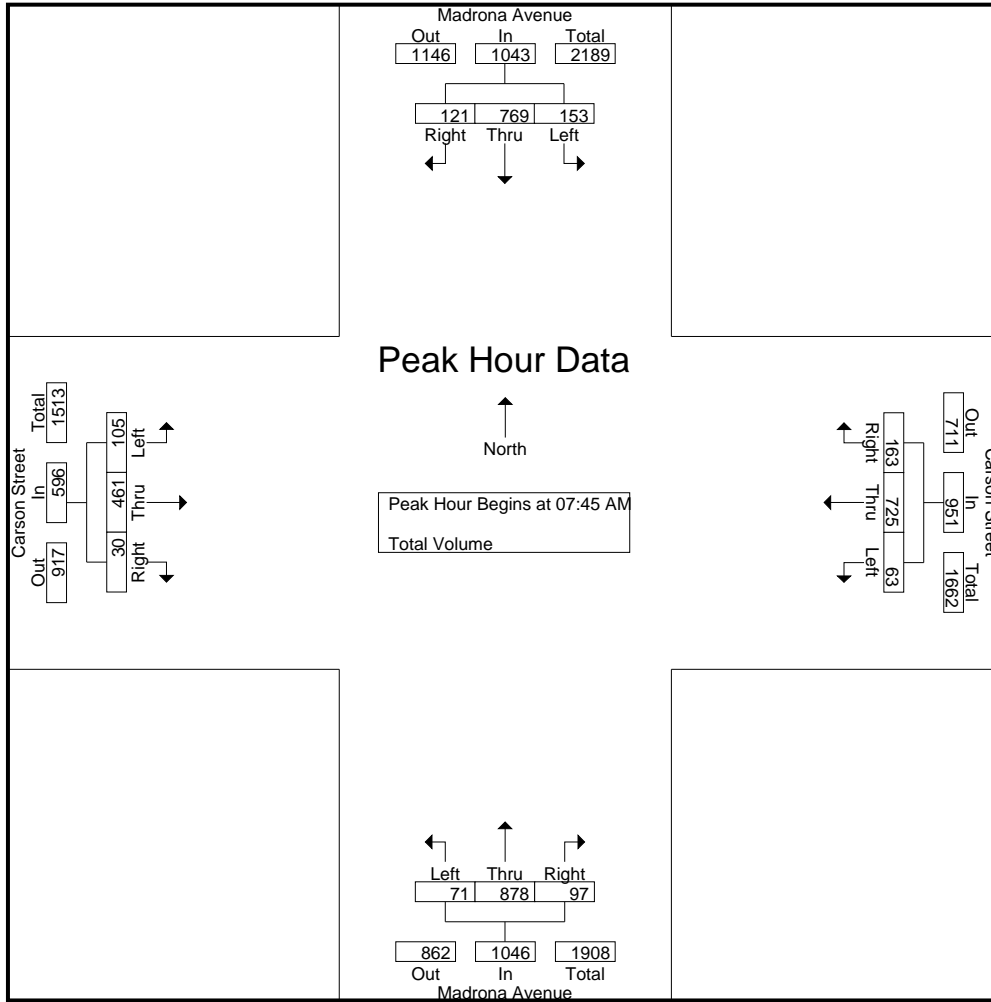
Groups Printed- Total Volume

| Start Time | Madrona Avenue Southbound | | | | Carson Street Westbound | | | | Madrona Avenue Northbound | | | | Carson Street Eastbound | | | | Int. Total |
|-------------|---------------------------|------|-------|------------|-------------------------|------|-------|------------|---------------------------|------|-------|------------|-------------------------|------|-------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| 07:00 AM | 12 | 68 | 10 | 90 | 3 | 124 | 24 | 151 | 2 | 116 | 4 | 122 | 9 | 64 | 8 | 81 | 444 |
| 07:15 AM | 25 | 104 | 22 | 151 | 9 | 124 | 26 | 159 | 11 | 173 | 11 | 195 | 23 | 62 | 0 | 85 | 590 |
| 07:30 AM | 31 | 157 | 21 | 209 | 5 | 196 | 45 | 246 | 13 | 231 | 7 | 251 | 26 | 105 | 5 | 136 | 842 |
| 07:45 AM | 43 | 211 | 37 | 291 | 15 | 186 | 56 | 257 | 19 | 270 | 29 | 318 | 33 | 110 | 7 | 150 | 1016 |
| Total | 111 | 540 | 90 | 741 | 32 | 630 | 151 | 813 | 45 | 790 | 51 | 886 | 91 | 341 | 20 | 452 | 2892 |
| 08:00 AM | 40 | 190 | 23 | 253 | 15 | 180 | 44 | 239 | 12 | 220 | 19 | 251 | 28 | 163 | 8 | 199 | 942 |
| 08:15 AM | 36 | 183 | 31 | 250 | 20 | 165 | 27 | 212 | 19 | 179 | 22 | 220 | 20 | 88 | 5 | 113 | 795 |
| 08:30 AM | 34 | 185 | 30 | 249 | 13 | 194 | 36 | 243 | 21 | 209 | 27 | 257 | 24 | 100 | 10 | 134 | 883 |
| 08:45 AM | 29 | 181 | 22 | 232 | 17 | 181 | 41 | 239 | 29 | 202 | 24 | 255 | 26 | 127 | 10 | 163 | 889 |
| Total | 139 | 739 | 106 | 984 | 65 | 720 | 148 | 933 | 81 | 810 | 92 | 983 | 98 | 478 | 33 | 609 | 3509 |
| Grand Total | 250 | 1279 | 196 | 1725 | 97 | 1350 | 299 | 1746 | 126 | 1600 | 143 | 1869 | 189 | 819 | 53 | 1061 | 6401 |
| Apprch % | 14.5 | 74.1 | 11.4 | | 5.6 | 77.3 | 17.1 | | 6.7 | 85.6 | 7.7 | | 17.8 | 77.2 | 5 | | |
| Total % | 3.9 | 20 | 3.1 | 26.9 | 1.5 | 21.1 | 4.7 | 27.3 | 2 | 25 | 2.2 | 29.2 | 3 | 12.8 | 0.8 | 16.6 | |

| Start Time | Madrona Avenue Southbound | | | | Carson Street Westbound | | | | Madrona Avenue Northbound | | | | Carson Street Eastbound | | | | Int. Total |
|--|---------------------------|------------|-----------|------------|-------------------------|------------|-----------|------------|---------------------------|------------|-----------|------------|-------------------------|------------|-----------|------------|-------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 07:45 AM | | | | | | | | | | | | | | | | | |
| 07:45 AM | 43 | 211 | 37 | 291 | 15 | 186 | 56 | 257 | 19 | 270 | 29 | 318 | 33 | 110 | 7 | 150 | 1016 |
| 08:00 AM | 40 | 190 | 23 | 253 | 15 | 180 | 44 | 239 | 12 | 220 | 19 | 251 | 28 | 163 | 8 | 199 | 942 |
| 08:15 AM | 36 | 183 | 31 | 250 | 20 | 165 | 27 | 212 | 19 | 179 | 22 | 220 | 20 | 88 | 5 | 113 | 795 |
| 08:30 AM | 34 | 185 | 30 | 249 | 13 | 194 | 36 | 243 | 21 | 209 | 27 | 257 | 24 | 100 | 10 | 134 | 883 |
| Total Volume | 153 | 769 | 121 | 1043 | 63 | 725 | 163 | 951 | 71 | 878 | 97 | 1046 | 105 | 461 | 30 | 596 | 3636 |
| % App. Total | 14.7 | 73.7 | 11.6 | | 6.6 | 76.2 | 17.1 | | 6.8 | 83.9 | 9.3 | | 17.6 | 77.3 | 5 | | |
| PHF | .890 | .911 | .818 | .896 | .788 | .934 | .728 | .925 | .845 | .813 | .836 | .822 | .795 | .707 | .750 | .749 | .895 |

City of Torrance
 N/S: Madrona Avenue
 E/W: Carson Street
 Weather: Clear

File Name : 11_TOR_Madr_Carson AM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

| | 07:45 AM | | | | 07:30 AM | | | | 07:45 AM | | | | 08:00 AM | | | |
|--------------|----------|------|------|------|----------|------|------|------|----------|------|------|------|----------|------|------|------|
| +0 mins. | 43 | 211 | 37 | 291 | 5 | 196 | 45 | 246 | 19 | 270 | 29 | 318 | 28 | 163 | 8 | 199 |
| +15 mins. | 40 | 190 | 23 | 253 | 15 | 186 | 56 | 257 | 12 | 220 | 19 | 251 | 20 | 88 | 5 | 113 |
| +30 mins. | 36 | 183 | 31 | 250 | 15 | 180 | 44 | 239 | 19 | 179 | 22 | 220 | 24 | 100 | 10 | 134 |
| +45 mins. | 34 | 185 | 30 | 249 | 20 | 165 | 27 | 212 | 21 | 209 | 27 | 257 | 26 | 127 | 10 | 163 |
| Total Volume | 153 | 769 | 121 | 1043 | 55 | 727 | 172 | 954 | 71 | 878 | 97 | 1046 | 98 | 478 | 33 | 609 |
| % App. Total | 14.7 | 73.7 | 11.6 | | 5.8 | 76.2 | 18 | | 6.8 | 83.9 | 9.3 | | 16.1 | 78.5 | 5.4 | |
| PHF | .890 | .911 | .818 | .896 | .688 | .927 | .768 | .928 | .845 | .813 | .836 | .822 | .875 | .733 | .825 | .765 |

City of Torrance
 N/S: Madrona Avenue
 E/W: Carson Street
 Weather: Clear

File Name : 11_TOR_Madr_Carson PM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 1

Groups Printed- Total Volume

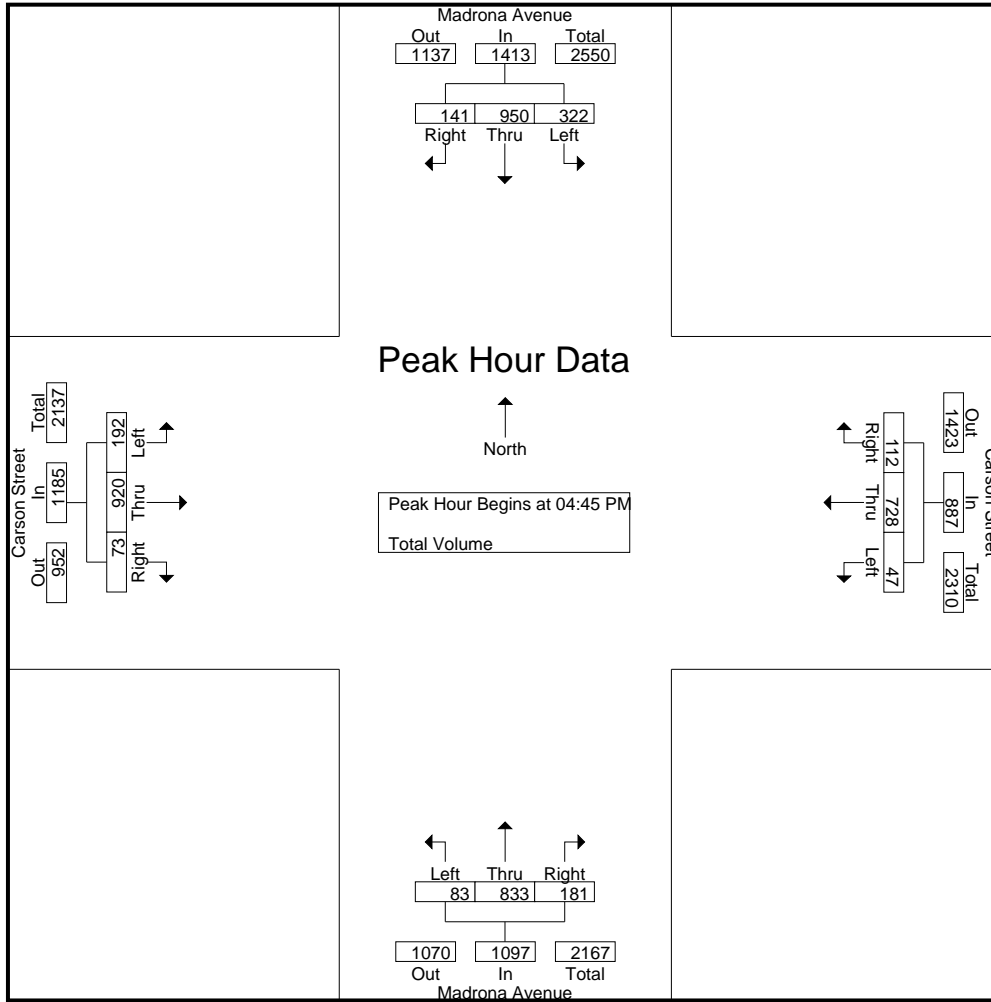
| Start Time | Madrona Avenue Southbound | | | | Carson Street Westbound | | | | Madrona Avenue Northbound | | | | Carson Street Eastbound | | | | Int. Total |
|-------------|---------------------------|------|-------|------------|-------------------------|------|-------|------------|---------------------------|------|-------|------------|-------------------------|------|-------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| 04:00 PM | 73 | 168 | 28 | 269 | 16 | 193 | 22 | 231 | 23 | 152 | 39 | 214 | 58 | 242 | 10 | 310 | 1024 |
| 04:15 PM | 64 | 230 | 41 | 335 | 9 | 161 | 34 | 204 | 20 | 201 | 26 | 247 | 38 | 266 | 25 | 329 | 1115 |
| 04:30 PM | 83 | 192 | 34 | 309 | 15 | 141 | 63 | 219 | 20 | 194 | 39 | 253 | 53 | 210 | 24 | 287 | 1068 |
| 04:45 PM | 90 | 246 | 33 | 369 | 10 | 170 | 28 | 208 | 18 | 237 | 45 | 300 | 37 | 221 | 12 | 270 | 1147 |
| Total | 310 | 836 | 136 | 1282 | 50 | 665 | 147 | 862 | 81 | 784 | 149 | 1014 | 186 | 939 | 71 | 1196 | 4354 |
| 05:00 PM | 78 | 244 | 42 | 364 | 13 | 164 | 22 | 199 | 21 | 181 | 54 | 256 | 57 | 229 | 15 | 301 | 1120 |
| 05:15 PM | 87 | 229 | 32 | 348 | 16 | 195 | 34 | 245 | 18 | 229 | 48 | 295 | 43 | 261 | 24 | 328 | 1216 |
| 05:30 PM | 67 | 231 | 34 | 332 | 8 | 199 | 28 | 235 | 26 | 186 | 34 | 246 | 55 | 209 | 22 | 286 | 1099 |
| 05:45 PM | 64 | 239 | 41 | 344 | 16 | 145 | 25 | 186 | 22 | 207 | 34 | 263 | 28 | 189 | 21 | 238 | 1031 |
| Total | 296 | 943 | 149 | 1388 | 53 | 703 | 109 | 865 | 87 | 803 | 170 | 1060 | 183 | 888 | 82 | 1153 | 4466 |
| Grand Total | 606 | 1779 | 285 | 2670 | 103 | 1368 | 256 | 1727 | 168 | 1587 | 319 | 2074 | 369 | 1827 | 153 | 2349 | 8820 |
| Apprch % | 22.7 | 66.6 | 10.7 | | 6 | 79.2 | 14.8 | | 8.1 | 76.5 | 15.4 | | 15.7 | 77.8 | 6.5 | | |
| Total % | 6.9 | 20.2 | 3.2 | 30.3 | 1.2 | 15.5 | 2.9 | 19.6 | 1.9 | 18 | 3.6 | 23.5 | 4.2 | 20.7 | 1.7 | 26.6 | |

| Start Time | Madrona Avenue Southbound | | | | Carson Street Westbound | | | | Madrona Avenue Northbound | | | | Carson Street Eastbound | | | | Int. Total |
|--------------|---------------------------|------------|-----------|------------|-------------------------|------------|-----------|------------|---------------------------|------------|-----------|------------|-------------------------|------------|-----------|------------|-------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | |
| 04:45 PM | 90 | 246 | 33 | 369 | 10 | 170 | 28 | 208 | 18 | 237 | 45 | 300 | 37 | 221 | 12 | 270 | 1147 |
| 05:00 PM | 78 | 244 | 42 | 364 | 13 | 164 | 22 | 199 | 21 | 181 | 54 | 256 | 57 | 229 | 15 | 301 | 1120 |
| 05:15 PM | 87 | 229 | 32 | 348 | 16 | 195 | 34 | 245 | 18 | 229 | 48 | 295 | 43 | 261 | 24 | 328 | 1216 |
| 05:30 PM | 67 | 231 | 34 | 332 | 8 | 199 | 28 | 235 | 26 | 186 | 34 | 246 | 55 | 209 | 22 | 286 | 1099 |
| Total Volume | 322 | 950 | 141 | 1413 | 47 | 728 | 112 | 887 | 83 | 833 | 181 | 1097 | 192 | 920 | 73 | 1185 | 4582 |
| % App. Total | 22.8 | 67.2 | 10 | | 5.3 | 82.1 | 12.6 | | 7.6 | 75.9 | 16.5 | | 16.2 | 77.6 | 6.2 | | |
| PHF | .894 | .965 | .839 | .957 | .734 | .915 | .824 | .905 | .798 | .879 | .838 | .914 | .842 | .881 | .760 | .903 | .942 |

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:45 PM

City of Torrance
 N/S: Madrona Avenue
 E/W: Carson Street
 Weather: Clear

File Name : 11_TOR_Madr_Carson PM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

| | 04:45 PM | | | | 04:45 PM | | | | 04:30 PM | | | | 04:00 PM | | | |
|--------------|----------|------|------|------|----------|------|------|------|----------|------|------|------|----------|------|------|------|
| +0 mins. | 90 | 246 | 33 | 369 | 10 | 170 | 28 | 208 | 20 | 194 | 39 | 253 | 58 | 242 | 10 | 310 |
| +15 mins. | 78 | 244 | 42 | 364 | 13 | 164 | 22 | 199 | 18 | 237 | 45 | 300 | 38 | 266 | 25 | 329 |
| +30 mins. | 87 | 229 | 32 | 348 | 16 | 195 | 34 | 245 | 21 | 181 | 54 | 256 | 53 | 210 | 24 | 287 |
| +45 mins. | 67 | 231 | 34 | 332 | 8 | 199 | 28 | 235 | 18 | 229 | 48 | 295 | 37 | 221 | 12 | 270 |
| Total Volume | 322 | 950 | 141 | 1413 | 47 | 728 | 112 | 887 | 77 | 841 | 186 | 1104 | 186 | 939 | 71 | 1196 |
| % App. Total | 22.8 | 67.2 | 10 | | 5.3 | 82.1 | 12.6 | | 7 | 76.2 | 16.8 | | 15.6 | 78.5 | 5.9 | |
| PHF | .894 | .965 | .839 | .957 | .734 | .915 | .824 | .905 | .917 | .887 | .861 | .920 | .802 | .883 | .710 | .909 |

City of Torrance
 N/S: Del Amo Circle W
 E/W: West Driveway
 Weather: Clear

File Name : 12_TOR_Del Amo_W DW AM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 1

Groups Printed- Total Volume

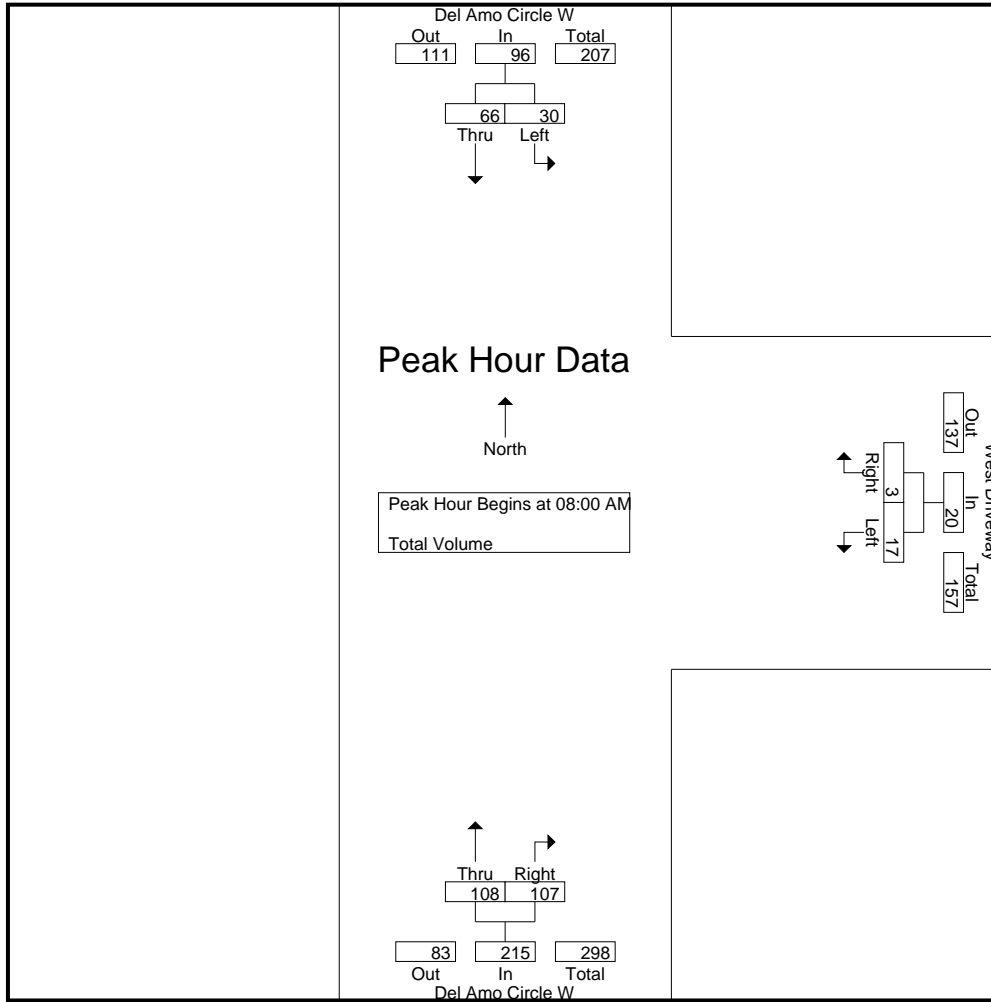
| Start Time | Del Amo Circle W Southbound | | | West Driveway Westbound | | | Del Amo Circle W Northbound | | | Int. Total |
|-------------|-----------------------------|------|------------|-------------------------|-------|------------|-----------------------------|-------|------------|------------|
| | Left | Thru | App. Total | Left | Right | App. Total | Thru | Right | App. Total | |
| 07:00 AM | 3 | 5 | 8 | 10 | 0 | 10 | 15 | 8 | 23 | 41 |
| 07:15 AM | 5 | 5 | 10 | 8 | 2 | 10 | 9 | 12 | 21 | 41 |
| 07:30 AM | 3 | 11 | 14 | 4 | 0 | 4 | 20 | 17 | 37 | 55 |
| 07:45 AM | 5 | 22 | 27 | 3 | 0 | 3 | 21 | 14 | 35 | 65 |
| Total | 16 | 43 | 59 | 25 | 2 | 27 | 65 | 51 | 116 | 202 |
| 08:00 AM | 8 | 11 | 19 | 5 | 1 | 6 | 24 | 22 | 46 | 71 |
| 08:15 AM | 9 | 14 | 23 | 2 | 1 | 3 | 27 | 22 | 49 | 75 |
| 08:30 AM | 4 | 23 | 27 | 6 | 0 | 6 | 28 | 25 | 53 | 86 |
| 08:45 AM | 9 | 18 | 27 | 4 | 1 | 5 | 29 | 38 | 67 | 99 |
| Total | 30 | 66 | 96 | 17 | 3 | 20 | 108 | 107 | 215 | 331 |
| Grand Total | 46 | 109 | 155 | 42 | 5 | 47 | 173 | 158 | 331 | 533 |
| Apprch % | 29.7 | 70.3 | | 89.4 | 10.6 | | 52.3 | 47.7 | | |
| Total % | 8.6 | 20.5 | 29.1 | 7.9 | 0.9 | 8.8 | 32.5 | 29.6 | 62.1 | |

| Start Time | Del Amo Circle W Southbound | | | West Driveway Westbound | | | Del Amo Circle W Northbound | | | Int. Total |
|--------------|-----------------------------|------|------------|-------------------------|-------|------------|-----------------------------|-------|------------|------------|
| | Left | Thru | App. Total | Left | Right | App. Total | Thru | Right | App. Total | |
| 08:00 AM | 8 | 11 | 19 | 5 | 1 | 6 | 24 | 22 | 46 | 71 |
| 08:15 AM | 9 | 14 | 23 | 2 | 1 | 3 | 27 | 22 | 49 | 75 |
| 08:30 AM | 4 | 23 | 27 | 6 | 0 | 6 | 28 | 25 | 53 | 86 |
| 08:45 AM | 9 | 18 | 27 | 4 | 1 | 5 | 29 | 38 | 67 | 99 |
| Total Volume | 30 | 66 | 96 | 17 | 3 | 20 | 108 | 107 | 215 | 331 |
| % App. Total | 31.2 | 68.8 | | 85 | 15 | | 50.2 | 49.8 | | |
| PHF | .833 | .717 | .889 | .708 | .750 | .833 | .931 | .704 | .802 | .836 |

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 08:00 AM

City of Torrance
 N/S: Del Amo Circle W
 E/W: West Driveway
 Weather: Clear

File Name : 12_TOR_Del Amo_W DW AM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

| | 07:45 AM | | | 07:00 AM | | | 08:00 AM | | |
|--------------|----------|-----------|-----------|-----------|----------|-----------|-----------|-----------|-----------|
| +0 mins. | 5 | 22 | 27 | 10 | 0 | 10 | 24 | 22 | 46 |
| +15 mins. | 8 | 11 | 19 | 8 | 2 | 10 | 27 | 22 | 49 |
| +30 mins. | 9 | 14 | 23 | 4 | 0 | 4 | 28 | 25 | 53 |
| +45 mins. | 4 | 23 | 27 | 3 | 0 | 3 | 29 | 38 | 67 |
| Total Volume | 26 | 70 | 96 | 25 | 2 | 27 | 108 | 107 | 215 |
| % App. Total | 27.1 | 72.9 | | 92.6 | 7.4 | | 50.2 | 49.8 | |
| PHF | .722 | .761 | .889 | .625 | .250 | .675 | .931 | .704 | .802 |

City of Torrance
 N/S: Del Amo Circle W
 E/W: West Driveway
 Weather: Clear

File Name : 12_TOR_Del Amo_W DW PM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 1

Groups Printed- Total Volume

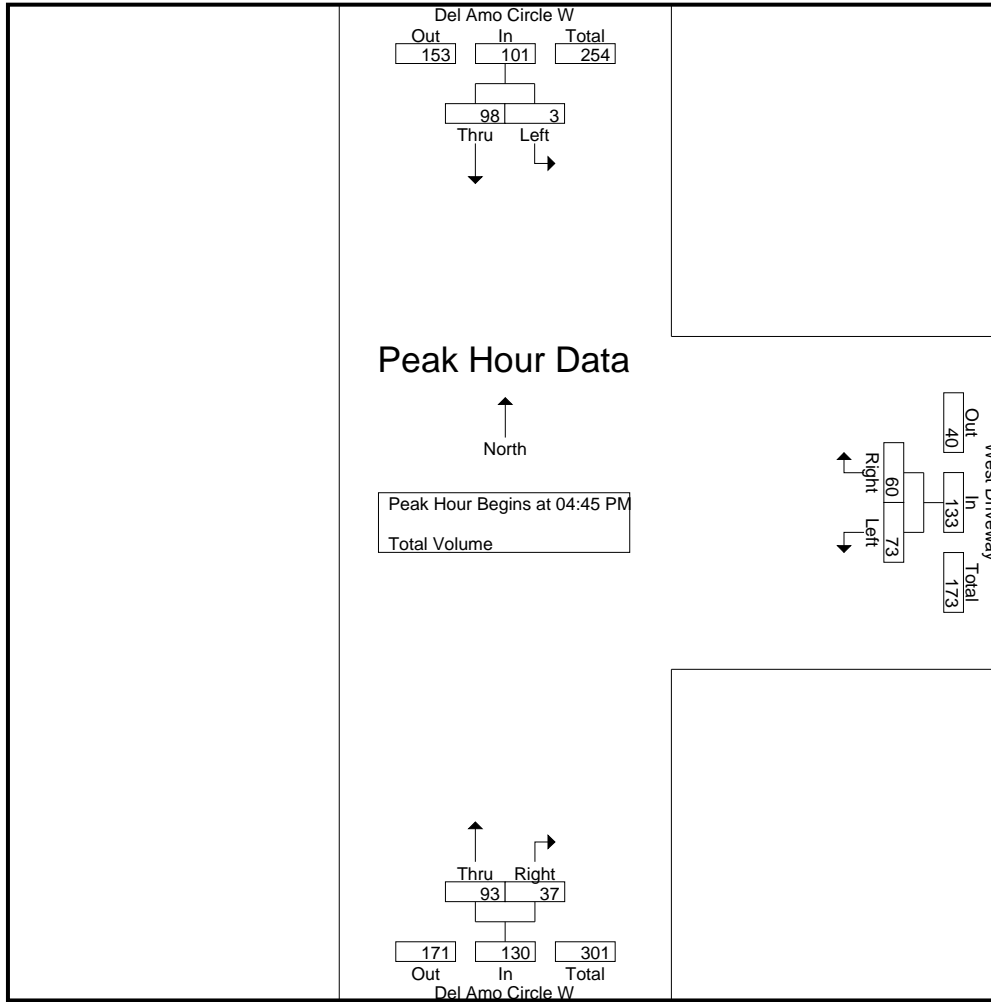
| Start Time | Del Amo Circle W Southbound | | | West Driveway Westbound | | | Del Amo Circle W Northbound | | | Int. Total |
|-------------|-----------------------------|------|------------|-------------------------|-------|------------|-----------------------------|-------|------------|------------|
| | Left | Thru | App. Total | Left | Right | App. Total | Thru | Right | App. Total | |
| 04:00 PM | 1 | 28 | 29 | 13 | 5 | 18 | 19 | 8 | 27 | 74 |
| 04:15 PM | 0 | 24 | 24 | 18 | 1 | 19 | 20 | 8 | 28 | 71 |
| 04:30 PM | 0 | 29 | 29 | 14 | 4 | 18 | 25 | 8 | 33 | 80 |
| 04:45 PM | 1 | 26 | 27 | 15 | 10 | 25 | 27 | 13 | 40 | 92 |
| Total | 2 | 107 | 109 | 60 | 20 | 80 | 91 | 37 | 128 | 317 |
| 05:00 PM | 0 | 24 | 24 | 20 | 20 | 40 | 26 | 7 | 33 | 97 |
| 05:15 PM | 1 | 18 | 19 | 25 | 18 | 43 | 25 | 6 | 31 | 93 |
| 05:30 PM | 1 | 30 | 31 | 13 | 12 | 25 | 15 | 11 | 26 | 82 |
| 05:45 PM | 0 | 18 | 18 | 7 | 6 | 13 | 25 | 9 | 34 | 65 |
| Total | 2 | 90 | 92 | 65 | 56 | 121 | 91 | 33 | 124 | 337 |
| Grand Total | 4 | 197 | 201 | 125 | 76 | 201 | 182 | 70 | 252 | 654 |
| Apprch % | 2 | 98 | | 62.2 | 37.8 | | 72.2 | 27.8 | | |
| Total % | 0.6 | 30.1 | 30.7 | 19.1 | 11.6 | 30.7 | 27.8 | 10.7 | 38.5 | |

| Start Time | Del Amo Circle W Southbound | | | West Driveway Westbound | | | Del Amo Circle W Northbound | | | Int. Total |
|--------------|-----------------------------|------|------------|-------------------------|-------|------------|-----------------------------|-------|------------|------------|
| | Left | Thru | App. Total | Left | Right | App. Total | Thru | Right | App. Total | |
| 04:45 PM | 1 | 26 | 27 | 15 | 10 | 25 | 27 | 13 | 40 | 92 |
| 05:00 PM | 0 | 24 | 24 | 20 | 20 | 40 | 26 | 7 | 33 | 97 |
| 05:15 PM | 1 | 18 | 19 | 25 | 18 | 43 | 25 | 6 | 31 | 93 |
| 05:30 PM | 1 | 30 | 31 | 13 | 12 | 25 | 15 | 11 | 26 | 82 |
| Total Volume | 3 | 98 | 101 | 73 | 60 | 133 | 93 | 37 | 130 | 364 |
| % App. Total | 3 | 97 | | 54.9 | 45.1 | | 71.5 | 28.5 | | |
| PHF | .750 | .817 | .815 | .730 | .750 | .773 | .861 | .712 | .813 | .938 |

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:45 PM

City of Torrance
 N/S: Del Amo Circle W
 E/W: West Driveway
 Weather: Clear

File Name : 12_TOR_Del Amo_W DW PM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

| | 04:00 PM | | | 04:45 PM | | | 04:30 PM | | |
|--------------|----------|------|------|----------|------|------|----------|------|------|
| +0 mins. | 1 | 28 | 29 | 15 | 10 | 25 | 25 | 8 | 33 |
| +15 mins. | 0 | 24 | 24 | 20 | 20 | 40 | 27 | 13 | 40 |
| +30 mins. | 0 | 29 | 29 | 25 | 18 | 43 | 26 | 7 | 33 |
| +45 mins. | 1 | 26 | 27 | 13 | 12 | 25 | 25 | 6 | 31 |
| Total Volume | 2 | 107 | 109 | 73 | 60 | 133 | 103 | 34 | 137 |
| % App. Total | 1.8 | 98.2 | | 54.9 | 45.1 | | 75.2 | 24.8 | |
| PHF | .500 | .922 | .940 | .730 | .750 | .773 | .954 | .654 | .856 |

City of Torrance
 N/S: South Driveway
 E/W: Carson Street
 Weather: Clear

File Name : 13_TOR_DW_Carson AM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 1

Groups Printed- Total Volume

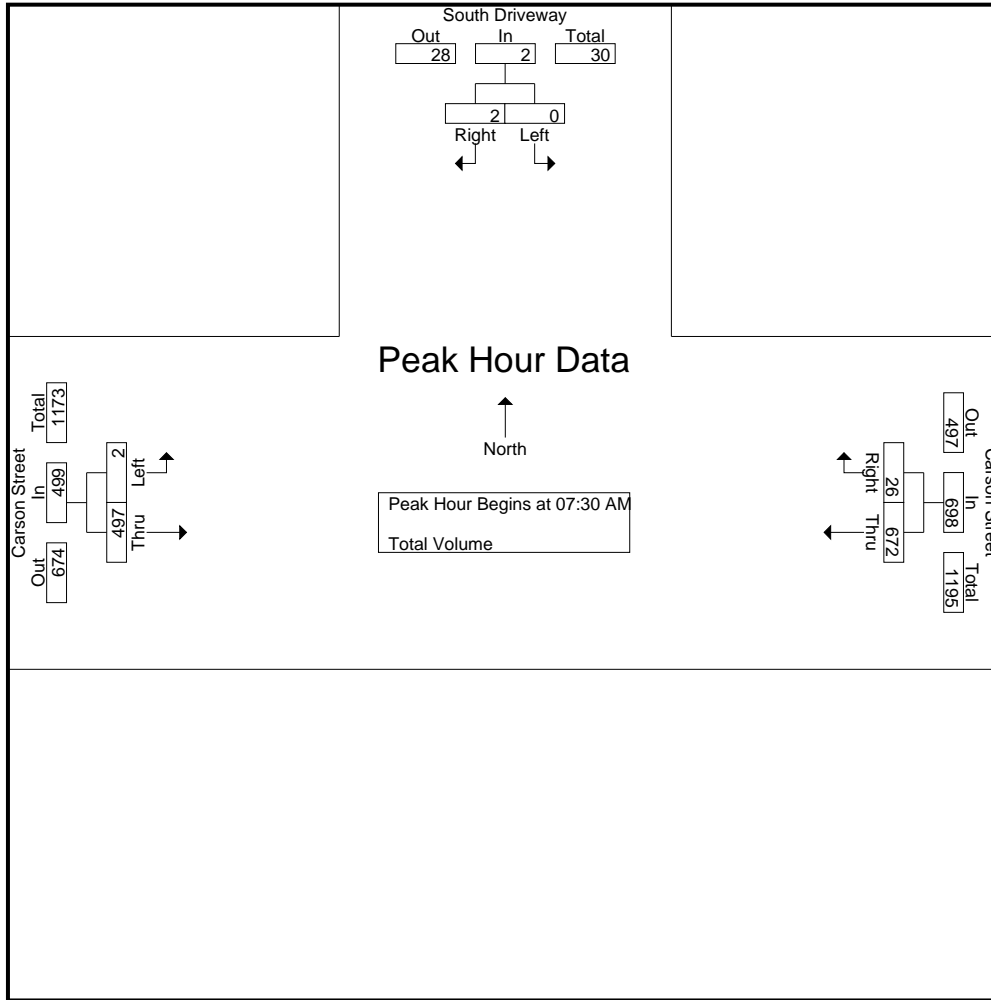
| Start Time | South Driveway Southbound | | | Carson Street Westbound | | | Carson Street Eastbound | | | Int. Total |
|-------------|---------------------------|-------|------------|-------------------------|-------|------------|-------------------------|------|------------|------------|
| | Left | Right | App. Total | Thru | Right | App. Total | Left | Thru | App. Total | |
| 07:00 AM | 0 | 0 | 0 | 66 | 9 | 75 | 0 | 71 | 71 | 146 |
| 07:15 AM | 0 | 0 | 0 | 115 | 4 | 119 | 1 | 70 | 71 | 190 |
| 07:30 AM | 0 | 1 | 1 | 202 | 4 | 206 | 0 | 90 | 90 | 297 |
| 07:45 AM | 0 | 0 | 0 | 172 | 5 | 177 | 0 | 140 | 140 | 317 |
| Total | 0 | 1 | 1 | 555 | 22 | 577 | 1 | 371 | 372 | 950 |
| 08:00 AM | 0 | 1 | 1 | 159 | 8 | 167 | 2 | 175 | 177 | 345 |
| 08:15 AM | 0 | 0 | 0 | 139 | 9 | 148 | 0 | 92 | 92 | 240 |
| 08:30 AM | 0 | 2 | 2 | 142 | 15 | 157 | 3 | 100 | 103 | 262 |
| 08:45 AM | 2 | 5 | 7 | 118 | 24 | 142 | 2 | 142 | 144 | 293 |
| Total | 2 | 8 | 10 | 558 | 56 | 614 | 7 | 509 | 516 | 1140 |
| Grand Total | 2 | 9 | 11 | 1113 | 78 | 1191 | 8 | 880 | 888 | 2090 |
| Apprch % | 18.2 | 81.8 | | 93.5 | 6.5 | | 0.9 | 99.1 | | |
| Total % | 0.1 | 0.4 | 0.5 | 53.3 | 3.7 | 57 | 0.4 | 42.1 | 42.5 | |

| Start Time | South Driveway Southbound | | | Carson Street Westbound | | | Carson Street Eastbound | | | Int. Total |
|--------------|---------------------------|-------|------------|-------------------------|-------|------------|-------------------------|------|------------|------------|
| | Left | Right | App. Total | Thru | Right | App. Total | Left | Thru | App. Total | |
| 07:30 AM | 0 | 1 | 1 | 202 | 4 | 206 | 0 | 90 | 90 | 297 |
| 07:45 AM | 0 | 0 | 0 | 172 | 5 | 177 | 0 | 140 | 140 | 317 |
| 08:00 AM | 0 | 1 | 1 | 159 | 8 | 167 | 2 | 175 | 177 | 345 |
| 08:15 AM | 0 | 0 | 0 | 139 | 9 | 148 | 0 | 92 | 92 | 240 |
| Total Volume | 0 | 2 | 2 | 672 | 26 | 698 | 2 | 497 | 499 | 1199 |
| % App. Total | 0 | 100 | | 96.3 | 3.7 | | 0.4 | 99.6 | | |
| PHF | .000 | .500 | .500 | .832 | .722 | .847 | .250 | .710 | .705 | .869 |

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:30 AM

City of Torrance
 N/S: South Driveway
 E/W: Carson Street
 Weather: Clear

File Name : 13_TOR_DW_Carson AM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

| | 08:00 AM | | | 07:30 AM | | | 08:00 AM | | |
|--------------|----------|----------|----------|------------|----------|------------|----------|------------|------------|
| +0 mins. | 0 | 1 | 1 | 202 | 4 | 206 | 2 | 175 | 177 |
| +15 mins. | 0 | 0 | 0 | 172 | 5 | 177 | 0 | 92 | 92 |
| +30 mins. | 0 | 2 | 2 | 159 | 8 | 167 | 3 | 100 | 103 |
| +45 mins. | 2 | 5 | 7 | 139 | 9 | 148 | 2 | 142 | 144 |
| Total Volume | 2 | 8 | 10 | 672 | 26 | 698 | 7 | 509 | 516 |
| % App. Total | 20 | 80 | | 96.3 | 3.7 | | 1.4 | 98.6 | |
| PHF | .250 | .400 | .357 | .832 | .722 | .847 | .583 | .727 | .729 |

City of Torrance
 N/S: South Driveway
 E/W: Carson Street
 Weather: Clear

File Name : 13_TOR_DW_Carson PM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 1

Groups Printed- Total Volume

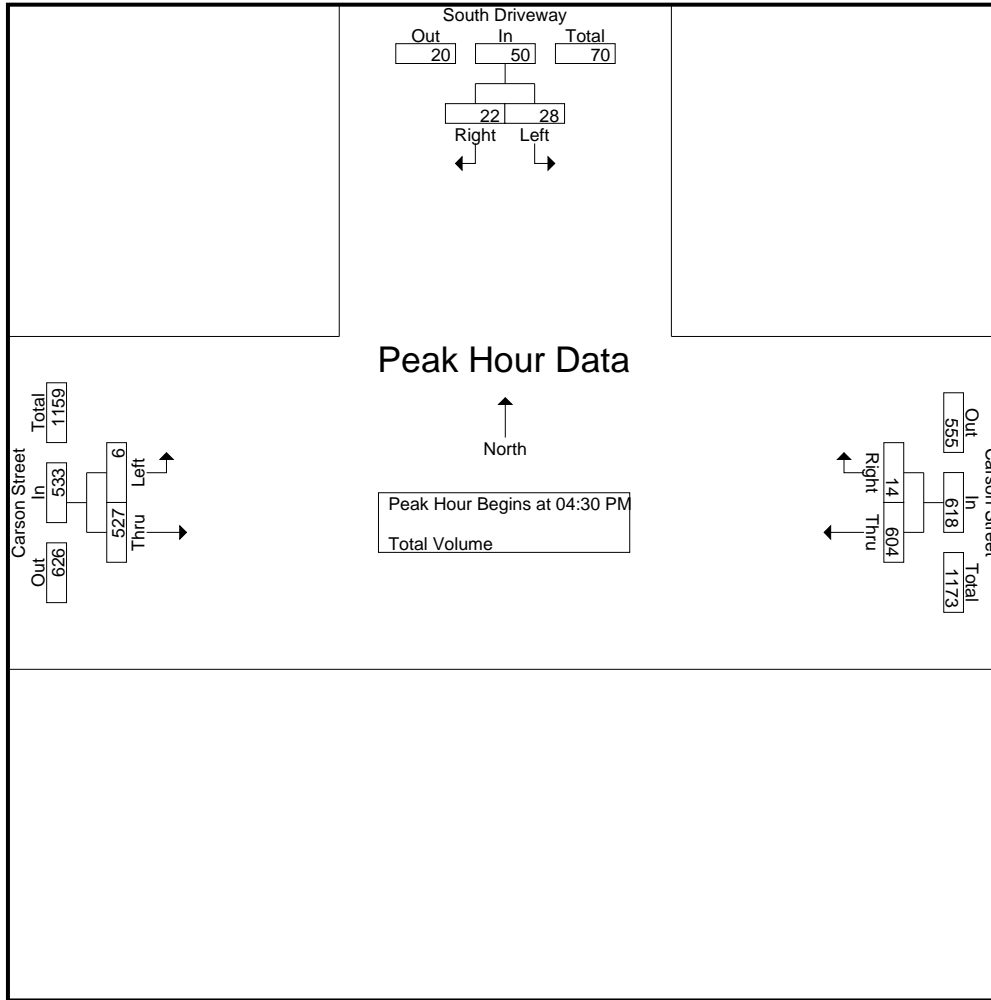
| Start Time | South Driveway Southbound | | | Carson Street Westbound | | | Carson Street Eastbound | | | Int. Total |
|-------------|---------------------------|-------|------------|-------------------------|-------|------------|-------------------------|------|------------|------------|
| | Left | Right | App. Total | Thru | Right | App. Total | Left | Thru | App. Total | |
| 04:00 PM | 7 | 5 | 12 | 124 | 6 | 130 | 0 | 161 | 161 | 303 |
| 04:15 PM | 3 | 3 | 6 | 116 | 10 | 126 | 2 | 158 | 160 | 292 |
| 04:30 PM | 13 | 4 | 17 | 157 | 3 | 160 | 1 | 107 | 108 | 285 |
| 04:45 PM | 3 | 7 | 10 | 169 | 5 | 174 | 2 | 129 | 131 | 315 |
| Total | 26 | 19 | 45 | 566 | 24 | 590 | 5 | 555 | 560 | 1195 |
| 05:00 PM | 5 | 7 | 12 | 133 | 2 | 135 | 3 | 143 | 146 | 293 |
| 05:15 PM | 7 | 4 | 11 | 145 | 4 | 149 | 0 | 148 | 148 | 308 |
| 05:30 PM | 6 | 0 | 6 | 131 | 4 | 135 | 0 | 111 | 111 | 252 |
| 05:45 PM | 1 | 6 | 7 | 110 | 3 | 113 | 2 | 109 | 111 | 231 |
| Total | 19 | 17 | 36 | 519 | 13 | 532 | 5 | 511 | 516 | 1084 |
| Grand Total | 45 | 36 | 81 | 1085 | 37 | 1122 | 10 | 1066 | 1076 | 2279 |
| Apprch % | 55.6 | 44.4 | | 96.7 | 3.3 | | 0.9 | 99.1 | | |
| Total % | 2 | 1.6 | 3.6 | 47.6 | 1.6 | 49.2 | 0.4 | 46.8 | 47.2 | |

| Start Time | South Driveway Southbound | | | Carson Street Westbound | | | Carson Street Eastbound | | | Int. Total |
|--------------|---------------------------|----------|------------|-------------------------|----------|------------|-------------------------|------------|------------|------------|
| | Left | Right | App. Total | Thru | Right | App. Total | Left | Thru | App. Total | |
| 04:30 PM | 13 | 4 | 17 | 157 | 3 | 160 | 1 | 107 | 108 | 285 |
| 04:45 PM | 3 | 7 | 10 | 169 | 5 | 174 | 2 | 129 | 131 | 315 |
| 05:00 PM | 5 | 7 | 12 | 133 | 2 | 135 | 3 | 143 | 146 | 293 |
| 05:15 PM | 7 | 4 | 11 | 145 | 4 | 149 | 0 | 148 | 148 | 308 |
| Total Volume | 28 | 22 | 50 | 604 | 14 | 618 | 6 | 527 | 533 | 1201 |
| % App. Total | 56 | 44 | | 97.7 | 2.3 | | 1.1 | 98.9 | | |
| PHF | .538 | .786 | .735 | .893 | .700 | .888 | .500 | .890 | .900 | .953 |

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:30 PM

City of Torrance
 N/S: South Driveway
 E/W: Carson Street
 Weather: Clear

File Name : 13_TOR_DW_Carson PM
 Site Code : 05722263
 Start Date : 3/30/2022
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

| | 04:30 PM | | | 04:30 PM | | | 04:00 PM | | |
|--------------|-----------|----------|-----------|------------|----------|------------|----------|------------|------------|
| +0 mins. | 13 | 4 | 17 | 157 | 3 | 160 | 0 | 161 | 161 |
| +15 mins. | 3 | 7 | 10 | 169 | 5 | 174 | 2 | 158 | 160 |
| +30 mins. | 5 | 7 | 12 | 133 | 2 | 135 | 1 | 107 | 108 |
| +45 mins. | 7 | 4 | 11 | 145 | 4 | 149 | 2 | 129 | 131 |
| Total Volume | 28 | 22 | 50 | 604 | 14 | 618 | 5 | 555 | 560 |
| % App. Total | 56 | 44 | | 97.7 | 2.3 | | 0.9 | 99.1 | |
| PHF | .538 | .786 | .735 | .893 | .700 | .888 | .625 | .862 | .870 |

APPENDIX C

LEVEL OF SERVICE CALCULATION WORKSHEETS

APPENDIX C-1

EXISTING TRAFFIC CONDITIONS

Intersection Level Of Service Report
Intersection 1: Anza Avenue at Torrance Boulevard

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.791 |

Intersection Setup

| Name | Anza Avenue | | | Anza Avenue | | | Torrance Boulevard | | | Torrance Boulevard | | |
|------------------------------|-------------|--------|--------|-------------|--------|--------|--------------------|--------|--------|--------------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | T T T | | | T T T | | | T T T | | | T T T | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Anza Avenue | | | Anza Avenue | | | Torrance Boulevard | | | Torrance Boulevard | | |
|---|-------------|--------|--------|-------------|--------|--------|--------------------|--------|--------|--------------------|--------|--------|
| Base Volume Input [veh/h] | 296 | 771 | 99 | 125 | 706 | 152 | 145 | 747 | 222 | 88 | 734 | 97 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 296 | 771 | 99 | 125 | 706 | 152 | 145 | 747 | 222 | 88 | 734 | 97 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 74 | 193 | 25 | 31 | 177 | 38 | 36 | 187 | 56 | 22 | 184 | 24 |
| Total Analysis Volume [veh/h] | 296 | 771 | 99 | 125 | 706 | 152 | 145 | 747 | 222 | 88 | 734 | 97 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|-------------------------|----------|---------|---------|----------|---------|---------|----------|---------|---------|----------|---------|---------|
| Signal Group | 3 | 8 | 0 | 7 | 4 | 0 | 5 | 2 | 0 | 1 | 6 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.10 | 0.27 | 0.27 | 0.04 | 0.27 | 0.27 | 0.09 | 0.23 | 0.14 | 0.06 | 0.23 | 0.06 |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.791 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 2: Anza Avenue at Carson Street

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.708 |

Intersection Setup

| Name | Anza Avenue | | | Anza Avenue | | | Carson Street | | | Carson Street | | |
|------------------------------|-------------|--------|--------|-------------|--------|--------|---------------|--------|--------|---------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | T T T | | | T T T | | | T T T | | | T T T | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Anza Avenue | | | Anza Avenue | | | Carson Street | | | Carson Street | | |
|---|-------------|--------|--------|-------------|--------|--------|---------------|--------|--------|---------------|--------|--------|
| Base Volume Input [veh/h] | 22 | 829 | 248 | 126 | 719 | 33 | 25 | 169 | 36 | 186 | 198 | 214 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 22 | 829 | 248 | 126 | 719 | 33 | 25 | 169 | 36 | 186 | 198 | 214 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 6 | 207 | 62 | 32 | 180 | 8 | 6 | 42 | 9 | 47 | 50 | 54 |
| Total Analysis Volume [veh/h] | 22 | 829 | 248 | 126 | 719 | 33 | 25 | 169 | 36 | 186 | 198 | 214 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|-------------------------|----------|---------|---------|----------|---------|---------|----------|---------|---------|----------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.01 | 0.34 | 0.34 | 0.08 | 0.24 | 0.24 | 0.02 | 0.13 | 0.13 | 0.06 | 0.12 | 0.13 |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.708 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 3: Anza Avenue at Sepulveda Boulevard

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.717 |

Intersection Setup

| Name | Anza Avenue | | | Anza Avenue | | | Sepulveda Boulevard | | | Sepulveda Boulevard | | |
|------------------------------|-------------|--------|--------|-------------|--------|--------|---------------------|--------|--------|---------------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | [Diagram] | | | [Diagram] | | | [Diagram] | | | [Diagram] | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Anza Avenue | | | Anza Avenue | | | Sepulveda Boulevard | | | Sepulveda Boulevard | | |
|---|-------------|--------|--------|-------------|--------|--------|---------------------|--------|--------|---------------------|--------|--------|
| Base Volume Input [veh/h] | 127 | 690 | 228 | 152 | 732 | 64 | 161 | 601 | 229 | 291 | 708 | 230 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 127 | 690 | 228 | 152 | 732 | 64 | 161 | 601 | 229 | 291 | 708 | 230 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 32 | 173 | 57 | 38 | 183 | 16 | 40 | 150 | 57 | 73 | 177 | 58 |
| Total Analysis Volume [veh/h] | 127 | 690 | 228 | 152 | 732 | 64 | 161 | 601 | 229 | 291 | 708 | 230 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|-------------------------|----------|---------|---------|----------|---------|---------|----------|---------|---------|----------|---------|---------|
| Signal Group | 3 | 8 | 0 | 7 | 4 | 0 | 5 | 2 | 0 | 1 | 6 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.08 | 0.22 | 0.14 | 0.10 | 0.25 | 0.25 | 0.06 | 0.19 | 0.14 | 0.10 | 0.22 | 0.14 |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.717 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 4: Ocean Avenue at Torrance Boulevard

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 50.3 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | F |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.073 |

Intersection Setup

| Name | Ocean Avenue | | Torrance Boulevard | | Torrance Boulevard | |
|------------------------------|--------------|--------|--------------------|--------|--------------------|--------|
| Approach | Northbound | | Eastbound | | Westbound | |
| Lane Configuration | | | | | | |
| Turning Movement | Left | Right | Thru | Right | Left | Thru |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 1 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 25.00 | | 40.00 | | 40.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | No | | No | | No | |

Volumes

| Name | Ocean Avenue | | Torrance Boulevard | | Torrance Boulevard | |
|---|--------------|--------|--------------------|--------|--------------------|--------|
| Base Volume Input [veh/h] | 7 | 176 | 950 | 45 | 125 | 1107 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 7 | 176 | 950 | 45 | 125 | 1107 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 2 | 44 | 238 | 11 | 31 | 277 |
| Total Analysis Volume [veh/h] | 7 | 176 | 950 | 45 | 125 | 1107 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| | | | |
|------------------------------------|------|------|------|
| Priority Scheme | Stop | Free | Free |
| Flared Lane | No | | |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | No | | |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|-------|-------|------|------|-------|------|
| V/C, Movement V/C Ratio | 0.07 | 0.40 | 0.01 | 0.00 | 0.32 | 0.01 |
| d_M, Delay for Movement [s/veh] | 50.29 | 21.03 | 0.00 | 0.00 | 18.35 | 0.00 |
| Movement LOS | F | C | A | A | C | A |
| 95th-Percentile Queue Length [veh/ln] | 2.43 | 2.43 | 0.00 | 0.00 | 1.34 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 60.69 | 60.69 | 0.00 | 0.00 | 33.56 | 0.00 |
| d_A, Approach Delay [s/veh] | 22.15 | | 0.00 | | 1.86 | |
| Approach LOS | C | | A | | A | |
| d_I, Intersection Delay [s/veh] | 2.63 | | | | | |
| Intersection LOS | F | | | | | |

Intersection Level Of Service Report
Intersection 5: Ocean Avenue at Carson Street

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 39.8 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | E |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.040 |

Intersection Setup

| Name | Ocean Avenue | | | Ocean Avenue | | | Carson Street | | | Carsoon Street | | |
|------------------------------|--------------|--------|--------|--------------|--------|--------|---------------|--------|--------|----------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | ↶ | | | ⊕ | | | ↷ | | | ↷ | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 25.00 | | | 25.00 | | | 35.00 | | | 35.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | No | | | No | | | No | | | No | | |

Volumes

| Name | Ocean Avenue | | | Ocean Avenue | | | Carson Street | | | Carsoon Street | | |
|---|--------------|--------|--------|--------------|--------|--------|---------------|--------|--------|----------------|--------|--------|
| Base Volume Input [veh/h] | 0 | 0 | 31 | 28 | 5 | 51 | 118 | 554 | 4 | 0 | 576 | 36 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 0 | 0 | 31 | 28 | 5 | 51 | 118 | 554 | 4 | 0 | 576 | 36 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 0 | 0 | 8 | 7 | 1 | 13 | 30 | 139 | 1 | 0 | 144 | 9 |
| Total Analysis Volume [veh/h] | 0 | 0 | 31 | 28 | 5 | 51 | 118 | 554 | 4 | 0 | 576 | 36 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | | | | |
|------------------------------------|------|------|------|------|
| Priority Scheme | Stop | Stop | Free | Free |
| Flared Lane | | No | | |
| Storage Area [veh] | 0 | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | No | No | | |
| Number of Storage Spaces in Median | 0 | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|---------------------------------------|-------|------|-------|-------|-------|-------|-------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.00 | 0.00 | 0.04 | 0.20 | 0.04 | 0.07 | 0.12 | 0.01 | 0.00 | 0.00 | 0.01 | 0.00 |
| d_M, Delay for Movement [s/veh] | 0.00 | 0.00 | 10.24 | 36.07 | 39.85 | 16.08 | 9.26 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Movement LOS | | | B | E | E | C | A | A | A | | A | A |
| 95th-Percentile Queue Length [veh/ln] | 0.00 | 0.00 | 0.14 | 1.28 | 1.28 | 1.28 | 0.42 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 0.00 | 0.00 | 3.38 | 31.97 | 31.97 | 31.97 | 10.43 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| d_A, Approach Delay [s/veh] | 10.24 | | | 24.16 | | | 1.62 | | | 0.00 | | |
| Approach LOS | B | | | C | | | A | | | A | | |
| d_I, Intersection Delay [s/veh] | 2.45 | | | | | | | | | | | |
| Intersection LOS | E | | | | | | | | | | | |

Intersection Level Of Service Report

Intersection 6: Plaza Lane/Village Lane at Torrance Boulevard

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.403 |

Intersection Setup

| Name | Village Lane | | | Plaza Lane | | | Torrance Boulevard | | | Torrance Boulevard | | |
|------------------------------|--------------|--------|--------|------------|--------|--------|--------------------|--------|--------|--------------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | ⇐⇐⇐ | | | ⇐⇐⇐ | | | ⇐⇐⇐⇐⇐ | | | ⇐⇐⇐⇐⇐ | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | No | | | Yes | | |

Volumes

| Name | Village Lane | | | Plaza Lane | | | Torrance Boulevard | | | Torrance Boulevard | | |
|---|--------------|--------|--------|------------|--------|--------|--------------------|--------|--------|--------------------|--------|--------|
| Base Volume Input [veh/h] | 88 | 7 | 75 | 33 | 3 | 12 | 24 | 834 | 124 | 102 | 1003 | 96 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 88 | 7 | 75 | 33 | 3 | 12 | 24 | 834 | 124 | 102 | 1003 | 96 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 22 | 2 | 19 | 8 | 1 | 3 | 6 | 209 | 31 | 26 | 251 | 24 |
| Total Analysis Volume [veh/h] | 88 | 7 | 75 | 33 | 3 | 12 | 24 | 834 | 124 | 102 | 1003 | 96 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Split | Split | Split | Split | Split | Split | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|-------------------------|-------|-------|-------|-------|-------|-------|----------|---------|---------|----------|---------|---------|
| Signal Group | 0 | 8 | 0 | 0 | 4 | 0 | 5 | 2 | 0 | 1 | 6 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | - | - | - | - | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.03 | 0.03 | 0.05 | 0.01 | 0.01 | 0.01 | 0.02 | 0.17 | 0.08 | 0.04 | 0.23 | 0.23 |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.403 | | | | | | | | | | | |

**Intersection Level Of Service Report
Intersection 7: Village Court at Village Lane**

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | All-way stop | Delay (sec / veh): | 7.6 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.062 |

Intersection Setup

| Name | Village Court | | Village Lane | | Village Lane | |
|------------------------------|---------------|--------|--------------|--------|--------------|--------|
| Approach | Northbound | | Eastbound | | Westbound | |
| Lane Configuration | ↵↵ | | ↑ | | ↵↑ | |
| Turning Movement | Left | Right | Thru | Right | Left | Thru |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 1 | 0 | 0 | 1 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | Yes | | Yes | | No | |

Volumes

| Name | Village Court | | Village Lane | | Village Lane | |
|---|---------------|--------|--------------|--------|--------------|--------|
| Base Volume Input [veh/h] | 36 | 45 | 12 | 42 | 30 | 15 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 36 | 45 | 12 | 42 | 30 | 15 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 9 | 11 | 3 | 11 | 8 | 4 |
| Total Analysis Volume [veh/h] | 36 | 45 | 12 | 42 | 30 | 15 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

Lanes

| | | | | | |
|---------------------------------|------|------|------|------|------|
| Capacity per Entry Lane [veh/h] | 684 | 887 | 876 | 684 | 756 |
| Degree of Utilization, x | 0.05 | 0.05 | 0.06 | 0.04 | 0.02 |

Movement, Approach, & Intersection Results

| | | | | | |
|------------------------------------|------|------|------|------|------|
| 95th-Percentile Queue Length [veh] | 0.17 | 0.16 | 0.20 | 0.14 | 0.06 |
| 95th-Percentile Queue Length [ft] | 4.16 | 4.00 | 4.92 | 3.43 | 1.52 |
| Approach Delay [s/veh] | 7.54 | | 7.38 | 7.99 | |
| Approach LOS | A | | A | A | |
| Intersection Delay [s/veh] | 7.61 | | | | |
| Intersection LOS | A | | | | |

Intersection Level Of Service Report
Intersection 8: Village Court at Del Amo Circle

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 10.1 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | B |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.043 |

Intersection Setup

| Name | Village Court | | Del Amo Circle | | Del Amo Circle | |
|------------------------------|---------------|--------|----------------|--------|----------------|--------|
| Approach | Southbound | | Eastbound | | Westbound | |
| Lane Configuration | ⇐⇐ | | ⇐ | | ⇐ | |
| Turning Movement | Left | Right | Left | Thru | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 1 | 1 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | Yes | | No | | No | |

Volumes

| Name | Village Court | | Del Amo Circle | | Del Amo Circle | |
|---|---------------|--------|----------------|--------|----------------|--------|
| Base Volume Input [veh/h] | 32 | 30 | 77 | 42 | 71 | 15 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 32 | 30 | 77 | 42 | 71 | 15 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 8 | 8 | 19 | 11 | 18 | 4 |
| Total Analysis Volume [veh/h] | 32 | 30 | 77 | 42 | 71 | 15 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| Priority Scheme | Stop | Free | Free |
|------------------------------------|------|------|------|
| Flared Lane | | | |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | Yes | | |
| Number of Storage Spaces in Median | 2 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|-------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.04 | 0.03 | 0.05 | 0.00 | 0.00 | 0.00 |
| d_M, Delay for Movement [s/veh] | 10.08 | 8.64 | 7.52 | 0.00 | 0.00 | 0.00 |
| Movement LOS | B | A | A | A | A | A |
| 95th-Percentile Queue Length [veh/ln] | 0.14 | 0.09 | 0.16 | 0.00 | 0.00 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 3.38 | 2.28 | 4.03 | 0.00 | 0.00 | 0.00 |
| d_A, Approach Delay [s/veh] | 9.39 | | 4.86 | | 0.00 | |
| Approach LOS | A | | A | | A | |
| d_I, Intersection Delay [s/veh] | 4.35 | | | | | |
| Intersection LOS | B | | | | | |

Intersection Level Of Service Report
Intersection 9: Del Amo Circle W at Carson Street

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.363 |

Intersection Setup

| Name | Del Amo Circle W | | | Del Amo Circle W | | | Carson Street | | | Carson Street | | |
|------------------------------|------------------|--------|--------|------------------|--------|--------|---------------|--------|--------|---------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Del Amo Circle W | | | Del Amo Circle W | | | Carson Street | | | Carson Street | | |
|---|------------------|--------|--------|------------------|--------|--------|---------------|--------|--------|---------------|--------|--------|
| Base Volume Input [veh/h] | 2 | 1 | 0 | 13 | 6 | 60 | 83 | 493 | 18 | 16 | 550 | 84 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 2 | 1 | 0 | 13 | 6 | 60 | 83 | 493 | 18 | 16 | 550 | 84 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 1 | 0 | 0 | 3 | 2 | 15 | 21 | 123 | 5 | 4 | 138 | 21 |
| Total Analysis Volume [veh/h] | 2 | 1 | 0 | 13 | 6 | 60 | 83 | 493 | 18 | 16 | 550 | 84 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss |
|-------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Signal Group | 0 | 8 | 0 | 0 | 4 | 0 | 0 | 2 | 0 | 0 | 6 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | - | - | - | - | - | - | - | - | - | - | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.04 | 0.05 | 0.16 | 0.16 | 0.01 | 0.17 | 0.05 |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.363 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 10: Hawthorne Boulevard at Torrance Boulevard

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.726 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Torrance Boulevard | | | Torrance Boulevard | | |
|------------------------------|---------------------|--------|--------|---------------------|--------|--------|--------------------|--------|--------|--------------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | [Diagram] | | | [Diagram] | | | [Diagram] | | | [Diagram] | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Torrance Boulevard | | | Torrance Boulevard | | |
|---|---------------------|--------|--------|---------------------|--------|--------|--------------------|--------|--------|--------------------|--------|--------|
| Base Volume Input [veh/h] | 196 | 1077 | 116 | 131 | 1700 | 225 | 235 | 772 | 178 | 247 | 1012 | 82 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 196 | 1077 | 116 | 131 | 1700 | 225 | 235 | 772 | 178 | 247 | 1012 | 82 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 49 | 269 | 29 | 33 | 425 | 56 | 59 | 193 | 45 | 62 | 253 | 21 |
| Total Analysis Volume [veh/h] | 196 | 1077 | 116 | 131 | 1700 | 225 | 235 | 772 | 178 | 247 | 1012 | 82 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|-------------------------|----------|---------|---------|----------|---------|---------|----------|---------|---------|----------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.07 | 0.17 | 0.07 | 0.05 | 0.27 | 0.14 | 0.08 | 0.16 | 0.11 | 0.09 | 0.21 | 0.05 |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.726 | | | | | | | | | | | |

Intersection Level Of Service Report

Intersection 11: Hawthorne Boulevard at Village Lane/Fashion Way

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.447 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Village Lane | | | Fashion Way | | |
|------------------------------|---------------------|--------|--------|---------------------|--------|--------|--------------|--------|--------|-------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | No | | | No | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Village Lane | | | Fashion Way | | |
|---|---------------------|--------|--------|---------------------|--------|--------|--------------|--------|--------|-------------|--------|--------|
| Base Volume Input [veh/h] | 59 | 1549 | 112 | 40 | 1737 | 74 | 40 | 0 | 27 | 56 | 32 | 33 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 59 | 1549 | 112 | 40 | 1737 | 74 | 40 | 0 | 27 | 56 | 32 | 33 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 15 | 387 | 28 | 10 | 434 | 19 | 10 | 0 | 7 | 14 | 8 | 8 |
| Total Analysis Volume [veh/h] | 59 | 1549 | 112 | 40 | 1737 | 74 | 40 | 0 | 27 | 56 | 32 | 33 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Split | Permiss | Overlap | Split | Split | Overlap |
|-------------------------|----------|---------|---------|----------|---------|---------|-------|---------|---------|-------|-------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 0 | 8 | 0 | 4 | 4 |
| Auxiliary Signal Groups | | | | | | | | | 1,8 | | | 4,5 |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | - | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.02 | 0.24 | 0.07 | 0.01 | 0.27 | 0.05 | 0.03 | 0.00 | 0.00 | 0.02 | 0.03 | 0.01 |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.447 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 12: Hawthorne Boulevard at Del Amo Circle

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.430 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Del Amo Circle | | | Del Amo Circle | | |
|------------------------------|---------------------|--------|--------|---------------------|--------|--------|----------------|--------|--------|----------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Del Amo Circle | | | Del Amo Circle | | |
|---|---------------------|--------|--------|---------------------|--------|--------|----------------|--------|--------|----------------|--------|--------|
| Base Volume Input [veh/h] | 50 | 1486 | 11 | 10 | 1620 | 118 | 67 | 2 | 44 | 8 | 5 | 6 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 50 | 1486 | 11 | 10 | 1620 | 118 | 67 | 2 | 44 | 8 | 5 | 6 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 13 | 372 | 3 | 3 | 405 | 30 | 17 | 1 | 11 | 2 | 1 | 2 |
| Total Analysis Volume [veh/h] | 50 | 1486 | 11 | 10 | 1620 | 118 | 67 | 2 | 44 | 8 | 5 | 6 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss |
|-------------------------|----------|---------|---------|----------|---------|---------|---------|---------|---------|---------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 0 | 8 | 0 | 0 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | - | - | - | - | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.03 | 0.23 | 0.23 | 0.00 | 0.25 | 0.07 | 0.04 | 0.01 | 0.01 | 0.01 | 0.00 | 0.00 |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.430 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 13: Hawthorne Boulevard at Carson Street

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | B |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.620 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Carson Street | | | Carson Street | | |
|------------------------------|---------------------|--------|--------|---------------------|--------|--------|---------------|--------|--------|---------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | [Diagram] | | | [Diagram] | | | [Diagram] | | | [Diagram] | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Carson Street | | | Carson Street | | |
|---|---------------------|--------|--------|---------------------|--------|--------|---------------|--------|--------|---------------|--------|--------|
| Base Volume Input [veh/h] | 107 | 1565 | 125 | 107 | 1446 | 65 | 64 | 392 | 59 | 219 | 541 | 130 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 107 | 1565 | 125 | 107 | 1446 | 65 | 64 | 392 | 59 | 219 | 541 | 130 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 27 | 391 | 31 | 27 | 362 | 16 | 16 | 98 | 15 | 55 | 135 | 33 |
| Total Analysis Volume [veh/h] | 107 | 1565 | 125 | 107 | 1446 | 65 | 64 | 392 | 59 | 219 | 541 | 130 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|-------------------------|----------|---------|---------|----------|---------|---------|----------|---------|---------|----------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.07 | 0.24 | 0.08 | 0.04 | 0.24 | 0.24 | 0.04 | 0.14 | 0.14 | 0.08 | 0.11 | 0.08 |
| Intersection LOS | B | | | | | | | | | | | |
| Intersection V/C | 0.620 | | | | | | | | | | | |

Intersection Level Of Service Report

Intersection 14: Hawthorne Boulevard at Sepulveda Boulevard

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.741 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Sepulveda Boulevard | | | Sepulveda Boulevard | | |
|------------------------------|---------------------|--------|--------|---------------------|--------|--------|---------------------|--------|--------|---------------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | [Diagram] | | | [Diagram] | | | [Diagram] | | | [Diagram] | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Sepulveda Boulevard | | | Sepulveda Boulevard | | |
|---|---------------------|--------|--------|---------------------|--------|--------|---------------------|--------|--------|---------------------|--------|--------|
| Base Volume Input [veh/h] | 99 | 1128 | 325 | 144 | 1312 | 203 | 235 | 881 | 95 | 571 | 966 | 204 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 99 | 1128 | 325 | 144 | 1312 | 203 | 235 | 881 | 95 | 571 | 966 | 204 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 25 | 282 | 81 | 36 | 328 | 51 | 59 | 220 | 24 | 143 | 242 | 51 |
| Total Analysis Volume [veh/h] | 99 | 1128 | 325 | 144 | 1312 | 203 | 235 | 881 | 95 | 571 | 966 | 204 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Unsigna | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|-------------------------|----------|---------|---------|----------|---------|---------|----------|---------|---------|----------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.03 | 0.18 | 0.00 | 0.05 | 0.21 | 0.13 | 0.08 | 0.20 | 0.20 | 0.20 | 0.20 | 0.13 |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.741 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 15: Madrona Avenue at Torrance Boulevard

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | B |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.691 |

Intersection Setup

| Name | Madrona Avenue | | | Madrona Avenue | | | Torrance Boulevard | | | Torrance Boulevard | | |
|------------------------------|----------------|--------|--------|----------------|--------|--------|--------------------|--------|--------|--------------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | T T T | | | T T T | | | T T T | | | T T T | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Madrona Avenue | | | Madrona Avenue | | | Torrance Boulevard | | | Torrance Boulevard | | |
|---|----------------|--------|--------|----------------|--------|--------|--------------------|--------|--------|--------------------|--------|--------|
| Base Volume Input [veh/h] | 204 | 1045 | 142 | 114 | 1031 | 276 | 301 | 613 | 93 | 117 | 886 | 72 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 204 | 1045 | 142 | 114 | 1031 | 276 | 301 | 613 | 93 | 117 | 886 | 72 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 51 | 261 | 36 | 29 | 258 | 69 | 75 | 153 | 23 | 29 | 222 | 18 |
| Total Analysis Volume [veh/h] | 204 | 1045 | 142 | 114 | 1031 | 276 | 301 | 613 | 93 | 117 | 886 | 72 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|-------------------------|----------|---------|---------|----------|---------|---------|----------|---------|---------|----------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.07 | 0.25 | 0.25 | 0.04 | 0.21 | 0.17 | 0.10 | 0.19 | 0.06 | 0.04 | 0.20 | 0.20 |
| Intersection LOS | B | | | | | | | | | | | |
| Intersection V/C | 0.691 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 16: Madrona Avenue at Carson Street

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.558 |

Intersection Setup

| Name | Madrona Avenue | | | Madrona Avenue | | | Carson Street | | | Carson Street | | |
|------------------------------|----------------|--------|--------|----------------|--------|--------|---------------|--------|--------|---------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | [Diagram] | | | [Diagram] | | | [Diagram] | | | [Diagram] | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Madrona Avenue | | | Madrona Avenue | | | Carson Street | | | Carson Street | | |
|---|----------------|--------|--------|----------------|--------|--------|---------------|--------|--------|---------------|--------|--------|
| Base Volume Input [veh/h] | 71 | 878 | 97 | 153 | 769 | 121 | 105 | 461 | 30 | 63 | 725 | 163 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 71 | 878 | 97 | 153 | 769 | 121 | 105 | 461 | 30 | 63 | 725 | 163 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 18 | 220 | 24 | 38 | 192 | 30 | 26 | 115 | 8 | 16 | 181 | 41 |
| Total Analysis Volume [veh/h] | 71 | 878 | 97 | 153 | 769 | 121 | 105 | 461 | 30 | 63 | 725 | 163 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|-------------------------|----------|---------|---------|----------|---------|---------|----------|---------|---------|----------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.02 | 0.18 | 0.06 | 0.05 | 0.16 | 0.08 | 0.04 | 0.10 | 0.02 | 0.04 | 0.19 | 0.19 |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.558 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 17: Del Amo Circle W at Project Driveway 1

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | All-way stop | Delay (sec / veh): | 7.9 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.143 |

Intersection Setup

| Name | Del Amo Circle W | | Del Amo Circle W | | Project Driveway 1 | |
|------------------------------|------------------|--------|------------------|--------|--------------------|--------|
| Approach | Northbound | | Southbound | | Westbound | |
| Lane Configuration | | | | | | |
| Turning Movement | Thru | Right | Left | Thru | Left | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 1 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | No | | No | | Yes | |

Volumes

| Name | Del Amo Circle W | | Del Amo Circle W | | Project Driveway 1 | |
|---|------------------|--------|------------------|--------|--------------------|--------|
| Base Volume Input [veh/h] | 108 | 107 | 30 | 66 | 17 | 3 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 108 | 107 | 30 | 66 | 17 | 3 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 27 | 27 | 8 | 17 | 4 | 1 |
| Total Analysis Volume [veh/h] | 108 | 107 | 30 | 66 | 17 | 3 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

Lanes

| | | | | | | |
|---------------------------------|------|------|------|------|------|------|
| Capacity per Entry Lane [veh/h] | 753 | 881 | 687 | 760 | 760 | 686 |
| Degree of Utilization, x | 0.14 | 0.12 | 0.04 | 0.04 | 0.04 | 0.03 |




Movement, Approach, & Intersection Results

| | | | | | | |
|------------------------------------|-------|-------|------|------|------|------|
| 95th-Percentile Queue Length [veh] | 0.50 | 0.42 | 0.14 | 0.14 | 0.14 | 0.09 |
| 95th-Percentile Queue Length [ft] | 12.42 | 10.38 | 3.42 | 3.40 | 3.40 | 2.25 |
| Approach Delay [s/veh] | 7.81 | | 7.82 | | | 8.41 |
| Approach LOS | A | | A | | | A |
| Intersection Delay [s/veh] | 7.85 | | | | | |
| Intersection LOS | A | | | | | |

Intersection Level Of Service Report
Intersection 18: Project Driveway 2 at Carson Street

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 11.6 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | B |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.004 |

Intersection Setup

| Name | Project Driveway 2 | | Carson Street | | Carson Street | |
|------------------------------|---|--------|--|--------|---|--------|
| Approach | Southbound | | Eastbound | | Westbound | |
| Lane Configuration |  | |  | |  | |
| Turning Movement | Left | Right | Left | Thru | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 1 | 1 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 35.00 | | 35.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | Yes | | No | | No | |

Volumes

| Name | Project Driveway 2 | | Carson Street | | Carson Street | |
|---|--------------------|--------|---------------|--------|---------------|--------|
| Base Volume Input [veh/h] | 0 | 2 | 2 | 497 | 672 | 26 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 0 | 2 | 2 | 497 | 672 | 26 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 0 | 1 | 1 | 124 | 168 | 7 |
| Total Analysis Volume [veh/h] | 0 | 2 | 2 | 497 | 672 | 26 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| Priority Scheme | Stop | Free | Free |
|------------------------------------|------|------|------|
| Flared Lane | | | |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | No | | |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|-------|-------|-------|------|------|------|
| V/C, Movement V/C Ratio | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 |
| d_M, Delay for Movement [s/veh] | 15.23 | 11.54 | 11.62 | 0.00 | 0.00 | 0.00 |
| Movement LOS | C | B | B | A | A | A |
| 95th-Percentile Queue Length [veh/ln] | 0.00 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 0.00 | 0.27 | 0.28 | 0.00 | 0.00 | 0.00 |
| d_A, Approach Delay [s/veh] | 11.54 | | 0.05 | | 0.00 | |
| Approach LOS | B | | A | | A | |
| d_I, Intersection Delay [s/veh] | 0.04 | | | | | |
| Intersection LOS | B | | | | | |

Intersection Level Of Service Report
Intersection 1: Anza Avenue at Torrance Boulevard

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | D |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.818 |

Intersection Setup

| Name | Anza Avenue | | | Anza Avenue | | | Torrance Boulevard | | | Torrance Boulevard | | |
|------------------------------|-------------|--------|--------|-------------|--------|--------|--------------------|--------|--------|--------------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | T T T | | | T T T | | | T T T | | | T T T | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Anza Avenue | | | Anza Avenue | | | Torrance Boulevard | | | Torrance Boulevard | | |
|---|-------------|--------|--------|-------------|--------|--------|--------------------|--------|--------|--------------------|--------|--------|
| Base Volume Input [veh/h] | 245 | 781 | 94 | 142 | 776 | 136 | 148 | 825 | 171 | 144 | 701 | 191 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 245 | 781 | 94 | 142 | 776 | 136 | 148 | 825 | 171 | 144 | 701 | 191 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 61 | 195 | 24 | 36 | 194 | 34 | 37 | 206 | 43 | 36 | 175 | 48 |
| Total Analysis Volume [veh/h] | 245 | 781 | 94 | 142 | 776 | 136 | 148 | 825 | 171 | 144 | 701 | 191 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|-------------------------|----------|---------|---------|----------|---------|---------|----------|---------|---------|----------|---------|---------|
| Signal Group | 3 | 8 | 0 | 7 | 4 | 0 | 5 | 2 | 0 | 1 | 6 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.09 | 0.27 | 0.27 | 0.05 | 0.29 | 0.29 | 0.09 | 0.26 | 0.11 | 0.09 | 0.22 | 0.12 |
| Intersection LOS | D | | | | | | | | | | | |
| Intersection V/C | 0.818 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 2: Anza Avenue at Carson Street

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.704 |

Intersection Setup

| Name | Anza Avenue | | | Anza Avenue | | | Carson Street | | | Carson Street | | |
|------------------------------|-------------|--------|--------|-------------|--------|--------|---------------|--------|--------|---------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | T T T | | | T T T | | | T T T | | | T T T | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Anza Avenue | | | Anza Avenue | | | Carson Street | | | Carson Street | | |
|---|-------------|--------|--------|-------------|--------|--------|---------------|--------|--------|---------------|--------|--------|
| Base Volume Input [veh/h] | 38 | 935 | 154 | 119 | 857 | 40 | 27 | 158 | 36 | 197 | 243 | 165 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 38 | 935 | 154 | 119 | 857 | 40 | 27 | 158 | 36 | 197 | 243 | 165 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 10 | 234 | 39 | 30 | 214 | 10 | 7 | 40 | 9 | 49 | 61 | 41 |
| Total Analysis Volume [veh/h] | 38 | 935 | 154 | 119 | 857 | 40 | 27 | 158 | 36 | 197 | 243 | 165 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|-------------------------|----------|---------|---------|----------|---------|---------|----------|---------|---------|----------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.02 | 0.34 | 0.34 | 0.07 | 0.28 | 0.28 | 0.02 | 0.12 | 0.12 | 0.07 | 0.15 | 0.10 |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.704 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 3: Anza Avenue at Sepulveda Boulevard

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.785 |

Intersection Setup

| Name | Anza Avenue | | | Anza Avenue | | | Sepulveda Boulevard | | | Sepulveda Boulevard | | |
|------------------------------|-------------|--------|--------|-------------|--------|--------|---------------------|--------|--------|---------------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | [Diagram] | | | [Diagram] | | | [Diagram] | | | [Diagram] | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Anza Avenue | | | Anza Avenue | | | Sepulveda Boulevard | | | Sepulveda Boulevard | | |
|---|-------------|--------|--------|-------------|--------|--------|---------------------|--------|--------|---------------------|--------|--------|
| Base Volume Input [veh/h] | 167 | 722 | 162 | 180 | 837 | 86 | 201 | 725 | 266 | 166 | 712 | 217 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 167 | 722 | 162 | 180 | 837 | 86 | 201 | 725 | 266 | 166 | 712 | 217 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 42 | 181 | 41 | 45 | 209 | 22 | 50 | 181 | 67 | 42 | 178 | 54 |
| Total Analysis Volume [veh/h] | 167 | 722 | 162 | 180 | 837 | 86 | 201 | 725 | 266 | 166 | 712 | 217 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|-------------------------|----------|---------|---------|----------|---------|---------|----------|---------|---------|----------|---------|---------|
| Signal Group | 3 | 8 | 0 | 7 | 4 | 0 | 5 | 2 | 0 | 1 | 6 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.10 | 0.23 | 0.10 | 0.11 | 0.29 | 0.29 | 0.07 | 0.23 | 0.17 | 0.06 | 0.22 | 0.14 |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.785 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 4: Ocean Avenue at Torrance Boulevard

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 51.6 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | F |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.116 |

Intersection Setup

| Name | Ocean Avenue | | Torrance Boulevard | | Torrance Boulevard | |
|------------------------------|--------------|--------|--------------------|--------|--------------------|--------|
| Approach | Northbound | | Eastbound | | Westbound | |
| Lane Configuration | | | | | | |
| Turning Movement | Left | Right | Thru | Right | Left | Thru |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 1 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 25.00 | | 40.00 | | 40.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | No | | No | | No | |

Volumes

| Name | Ocean Avenue | | Torrance Boulevard | | Torrance Boulevard | |
|---|--------------|--------|--------------------|--------|--------------------|--------|
| Base Volume Input [veh/h] | 10 | 39 | 1243 | 43 | 67 | 1129 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 10 | 39 | 1243 | 43 | 67 | 1129 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 3 | 10 | 311 | 11 | 17 | 282 |
| Total Analysis Volume [veh/h] | 10 | 39 | 1243 | 43 | 67 | 1129 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| | | | |
|------------------------------------|------|------|------|
| Priority Scheme | Stop | Free | Free |
| Flared Lane | No | | |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | No | | |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|-------|-------|------|------|-------|------|
| V/C, Movement V/C Ratio | 0.12 | 0.11 | 0.01 | 0.00 | 0.24 | 0.01 |
| d_M, Delay for Movement [s/veh] | 51.57 | 19.85 | 0.00 | 0.00 | 21.54 | 0.00 |
| Movement LOS | F | C | A | A | C | A |
| 95th-Percentile Queue Length [veh/ln] | 0.84 | 0.84 | 0.00 | 0.00 | 0.90 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 20.99 | 20.99 | 0.00 | 0.00 | 22.41 | 0.00 |
| d_A, Approach Delay [s/veh] | 26.32 | | 0.00 | | 1.21 | |
| Approach LOS | D | | A | | A | |
| d_I, Intersection Delay [s/veh] | 1.08 | | | | | |
| Intersection LOS | F | | | | | |

Intersection Level Of Service Report
Intersection 5: Ocean Avenue at Carson Street

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 26.5 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | D |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.061 |

Intersection Setup

| Name | Ocean Avenue | | | Ocean Avenue | | | Carson Street | | | Carsoon Street | | |
|------------------------------|--------------|--------|--------|--------------|--------|--------|---------------|--------|--------|----------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | ↶ | | | ⊕ | | | ↶↷ | | | ↷ | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 25.00 | | | 25.00 | | | 35.00 | | | 35.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | No | | | No | | | No | | | No | | |

Volumes

| Name | Ocean Avenue | | | Ocean Avenue | | | Carson Street | | | Carsoon Street | | |
|---|--------------|--------|--------|--------------|--------|--------|---------------|--------|--------|----------------|--------|--------|
| Base Volume Input [veh/h] | 0 | 0 | 28 | 24 | 12 | 12 | 9 | 493 | 5 | 0 | 613 | 34 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 0 | 0 | 28 | 24 | 12 | 12 | 9 | 493 | 5 | 0 | 613 | 34 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 0 | 0 | 7 | 6 | 3 | 3 | 2 | 123 | 1 | 0 | 153 | 9 |
| Total Analysis Volume [veh/h] | 0 | 0 | 28 | 24 | 12 | 12 | 9 | 493 | 5 | 0 | 613 | 34 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | | | | |
|------------------------------------|------|------|------|------|
| Priority Scheme | Stop | Stop | Free | Free |
| Flared Lane | | No | | |
| Storage Area [veh] | 0 | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | No | No | | |
| Number of Storage Spaces in Median | 0 | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|---------------------------------------|------|------|-------|-------|-------|-------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.00 | 0.00 | 0.04 | 0.11 | 0.06 | 0.02 | 0.01 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 |
| d_M, Delay for Movement [s/veh] | 0.00 | 0.00 | 9.98 | 24.13 | 26.51 | 13.50 | 8.89 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Movement LOS | | | A | C | D | B | A | A | A | | A | A |
| 95th-Percentile Queue Length [veh/ln] | 0.00 | 0.00 | 0.12 | 0.67 | 0.67 | 0.67 | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 0.00 | 0.00 | 2.90 | 16.67 | 16.67 | 16.67 | 0.73 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| d_A, Approach Delay [s/veh] | 9.98 | | 22.07 | | | | 0.16 | | | 0.00 | | |
| Approach LOS | A | | C | | | | A | | | A | | |
| d_I, Intersection Delay [s/veh] | 1.15 | | | | | | | | | | | |
| Intersection LOS | D | | | | | | | | | | | |

Intersection Level Of Service Report

Intersection 6: Plaza Lane/Village Lane at Torrance Boulevard

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.485 |

Intersection Setup

| Name | Village Lane | | | Plaza Lane | | | Torrance Boulevard | | | Torrance Boulevard | | |
|------------------------------|--------------|--------|--------|------------|--------|--------|--------------------|--------|--------|--------------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | ⇐⇐⇐ | | | ⇐⇐⇐ | | | ⇐⇐⇐⇐⇐ | | | ⇐⇐⇐⇐⇐ | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | No | | | Yes | | |

Volumes

| Name | Village Lane | | | Plaza Lane | | | Torrance Boulevard | | | Torrance Boulevard | | |
|---|--------------|--------|--------|------------|--------|--------|--------------------|--------|--------|--------------------|--------|--------|
| Base Volume Input [veh/h] | 105 | 17 | 117 | 152 | 11 | 55 | 56 | 1028 | 104 | 65 | 1010 | 45 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 105 | 17 | 117 | 152 | 11 | 55 | 56 | 1028 | 104 | 65 | 1010 | 45 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 26 | 4 | 29 | 38 | 3 | 14 | 14 | 257 | 26 | 16 | 253 | 11 |
| Total Analysis Volume [veh/h] | 105 | 17 | 117 | 152 | 11 | 55 | 56 | 1028 | 104 | 65 | 1010 | 45 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Split | Split | Split | Split | Split | Split | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|-------------------------|-------|-------|-------|-------|-------|-------|----------|---------|---------|----------|---------|---------|
| Signal Group | 0 | 8 | 0 | 0 | 4 | 0 | 5 | 2 | 0 | 1 | 6 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | - | - | - | - | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.04 | 0.04 | 0.07 | 0.05 | 0.06 | 0.03 | 0.04 | 0.21 | 0.07 | 0.02 | 0.22 | 0.22 |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.485 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 7: Village Court at Village Lane

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | All-way stop | Delay (sec / veh): | 8.0 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.105 |

Intersection Setup

| Name | Village Court | | Village Lane | | Village Lane | |
|------------------------------|---------------|--------|--------------|--------|--------------|--------|
| Approach | Northbound | | Eastbound | | Westbound | |
| Lane Configuration | ↵↵ | | ↑ | | ↵↑ | |
| Turning Movement | Left | Right | Thru | Right | Left | Thru |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 1 | 0 | 0 | 1 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | Yes | | Yes | | No | |

Volumes

| Name | Village Court | | Village Lane | | Village Lane | |
|---|---------------|--------|--------------|--------|--------------|--------|
| Base Volume Input [veh/h] | 36 | 47 | 34 | 49 | 71 | 25 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 36 | 47 | 34 | 49 | 71 | 25 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 9 | 12 | 9 | 12 | 18 | 6 |
| Total Analysis Volume [veh/h] | 36 | 47 | 34 | 49 | 71 | 25 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

Lanes

| | | | | | |
|---------------------------------|------|------|------|------|------|
| Capacity per Entry Lane [veh/h] | 659 | 844 | 837 | 679 | 750 |
| Degree of Utilization, x | 0.05 | 0.06 | 0.10 | 0.10 | 0.03 |

Movement, Approach, & Intersection Results

| | | | | | |
|------------------------------------|------|------|------|------|------|
| 95th-Percentile Queue Length [veh] | 0.17 | 0.18 | 0.33 | 0.35 | 0.10 |
| 95th-Percentile Queue Length [ft] | 4.32 | 4.41 | 8.23 | 8.72 | 2.58 |
| Approach Delay [s/veh] | 7.76 | | 7.77 | 8.37 | |
| Approach LOS | A | | A | A | |
| Intersection Delay [s/veh] | 7.99 | | | | |
| Intersection LOS | A | | | | |

**Intersection Level Of Service Report
Intersection 8: Village Court at Del Amo Circle**

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 10.0 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.066 |

Intersection Setup

| Name | Village Court | | Del Amo Circle | | Del Amo Circle | |
|------------------------------|---------------|--------|----------------|--------|----------------|--------|
| Approach | Southbound | | Eastbound | | Westbound | |
| Lane Configuration | ↵↵ | | ↵ | | ↵ | |
| Turning Movement | Left | Right | Left | Thru | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 1 | 1 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | Yes | | No | | No | |

Volumes

| Name | Village Court | | Del Amo Circle | | Del Amo Circle | |
|---|---------------|--------|----------------|--------|----------------|--------|
| Base Volume Input [veh/h] | 51 | 62 | 51 | 88 | 62 | 32 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 51 | 62 | 51 | 88 | 62 | 32 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 13 | 16 | 13 | 22 | 16 | 8 |
| Total Analysis Volume [veh/h] | 51 | 62 | 51 | 88 | 62 | 32 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| | | | |
|------------------------------------|------|------|------|
| Priority Scheme | Stop | Free | Free |
| Flared Lane | | | |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | Yes | | |
| Number of Storage Spaces in Median | 2 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.07 | 0.06 | 0.03 | 0.00 | 0.00 | 0.00 |
| d_M, Delay for Movement [s/veh] | 9.96 | 8.79 | 7.49 | 0.00 | 0.00 | 0.00 |
| Movement LOS | A | A | A | A | A | A |
| 95th-Percentile Queue Length [veh/ln] | 0.21 | 0.20 | 0.11 | 0.00 | 0.00 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 5.26 | 4.89 | 2.64 | 0.00 | 0.00 | 0.00 |
| d_A, Approach Delay [s/veh] | 9.32 | | 2.75 | | 0.00 | |
| Approach LOS | A | | A | | A | |
| d_I, Intersection Delay [s/veh] | 4.15 | | | | | |
| Intersection LOS | A | | | | | |

Intersection Level Of Service Report
Intersection 9: Del Amo Circle W at Carson Street

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.390 |

Intersection Setup

| Name | Del Amo Circle W | | | Del Amo Circle W | | | Carson Street | | | Carson Street | | |
|------------------------------|------------------|--------|--------|------------------|--------|--------|---------------|--------|--------|---------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Del Amo Circle W | | | Del Amo Circle W | | | Carson Street | | | Carson Street | | |
|---|------------------|--------|--------|------------------|--------|--------|---------------|--------|--------|---------------|--------|--------|
| Base Volume Input [veh/h] | 23 | 8 | 13 | 61 | 2 | 113 | 58 | 422 | 8 | 8 | 540 | 83 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 23 | 8 | 13 | 61 | 2 | 113 | 58 | 422 | 8 | 8 | 540 | 83 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 6 | 2 | 3 | 15 | 1 | 28 | 15 | 106 | 2 | 2 | 135 | 21 |
| Total Analysis Volume [veh/h] | 23 | 8 | 13 | 61 | 2 | 113 | 58 | 422 | 8 | 8 | 540 | 83 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss |
|-------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Signal Group | 0 | 8 | 0 | 0 | 4 | 0 | 0 | 2 | 0 | 0 | 6 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | - | - | - | - | - | - | - | - | - | - | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.01 | 0.01 | 0.01 | 0.04 | 0.00 | 0.07 | 0.04 | 0.13 | 0.13 | 0.01 | 0.17 | 0.05 |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.390 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 10: Hawthorne Boulevard at Torrance Boulevard

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.729 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Torrance Boulevard | | | Torrance Boulevard | | |
|------------------------------|---------------------|--------|--------|---------------------|--------|--------|--------------------|--------|--------|--------------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | [Diagram] | | | [Diagram] | | | [Diagram] | | | [Diagram] | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Torrance Boulevard | | | Torrance Boulevard | | |
|---|---------------------|--------|--------|---------------------|--------|--------|--------------------|--------|--------|--------------------|--------|--------|
| Base Volume Input [veh/h] | 260 | 1560 | 221 | 249 | 1620 | 154 | 255 | 911 | 272 | 277 | 811 | 143 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 260 | 1560 | 221 | 249 | 1620 | 154 | 255 | 911 | 272 | 277 | 811 | 143 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 65 | 390 | 55 | 62 | 405 | 39 | 64 | 228 | 68 | 69 | 203 | 36 |
| Total Analysis Volume [veh/h] | 260 | 1560 | 221 | 249 | 1620 | 154 | 255 | 911 | 272 | 277 | 811 | 143 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|-------------------------|----------|---------|---------|----------|---------|---------|----------|---------|---------|----------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.09 | 0.24 | 0.14 | 0.09 | 0.25 | 0.10 | 0.09 | 0.19 | 0.17 | 0.10 | 0.17 | 0.09 |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.729 | | | | | | | | | | | |

Intersection Level Of Service Report

Intersection 11: Hawthorne Boulevard at Village Lane/Fashion Way

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.568 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Village Lane | | | Fashion Way | | |
|------------------------------|---------------------|--------|--------|---------------------|--------|--------|--------------|--------|--------|-------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | [Diagram] | | | [Diagram] | | | [Diagram] | | | [Diagram] | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | No | | | No | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Village Lane | | | Fashion Way | | |
|---|---------------------|--------|--------|---------------------|--------|--------|--------------|--------|--------|-------------|--------|--------|
| Base Volume Input [veh/h] | 69 | 1915 | 133 | 170 | 1906 | 46 | 85 | 0 | 111 | 140 | 23 | 163 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 69 | 1915 | 133 | 170 | 1906 | 46 | 85 | 0 | 111 | 140 | 23 | 163 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 17 | 479 | 33 | 43 | 477 | 12 | 21 | 0 | 28 | 35 | 6 | 41 |
| Total Analysis Volume [veh/h] | 69 | 1915 | 133 | 170 | 1906 | 46 | 85 | 0 | 111 | 140 | 23 | 163 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Split | Permiss | Overlap | Split | Split | Overlap |
|-------------------------|----------|---------|---------|----------|---------|---------|-------|---------|---------|-------|-------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 0 | 8 | 0 | 4 | 4 |
| Auxiliary Signal Groups | | | | | | | | | 1,8 | | | 4,5 |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | - | - | - |





Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.02 | 0.30 | 0.08 | 0.06 | 0.30 | 0.03 | 0.05 | 0.00 | 0.05 | 0.05 | 0.06 | 0.04 |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.568 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 12: Hawthorne Boulevard at Del Amo Circle

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.571 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Del Amo Circle | | | Del Amo Circle | | |
|------------------------------|---|--------|--------|---|--------|--------|---|--------|--------|---|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration |  | | |  | | |  | | |  | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Del Amo Circle | | | Del Amo Circle | | |
|---|---------------------|--------|--------|---------------------|--------|--------|----------------|--------|--------|----------------|--------|--------|
| Base Volume Input [veh/h] | 93 | 1789 | 50 | 80 | 1942 | 152 | 125 | 14 | 118 | 69 | 21 | 79 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 93 | 1789 | 50 | 80 | 1942 | 152 | 125 | 14 | 118 | 69 | 21 | 79 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 23 | 447 | 13 | 20 | 486 | 38 | 31 | 4 | 30 | 17 | 5 | 20 |
| Total Analysis Volume [veh/h] | 93 | 1789 | 50 | 80 | 1942 | 152 | 125 | 14 | 118 | 69 | 21 | 79 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss |
|-------------------------|----------|---------|---------|----------|---------|---------|---------|---------|---------|---------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 0 | 8 | 0 | 0 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | - | - | - | - | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.06 | 0.29 | 0.29 | 0.03 | 0.30 | 0.10 | 0.08 | 0.04 | 0.04 | 0.04 | 0.03 | 0.03 |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.571 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 13: Hawthorne Boulevard at Carson Street

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | B |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.698 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Carson Street | | | Carson Street | | |
|------------------------------|---------------------|--------|--------|---------------------|--------|--------|---------------|--------|--------|---------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | ◀ ◀ ◀ ▶ ▶ ▶ | | | ▶ ▶ ▶ ◀ ◀ ◀ | | | ▶ ▶ ▶ | | | ▶ ▶ ▶ ◀ ◀ ◀ | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Carson Street | | | Carson Street | | |
|---|---------------------|--------|--------|---------------------|--------|--------|---------------|--------|--------|---------------|--------|--------|
| Base Volume Input [veh/h] | 106 | 1623 | 228 | 319 | 1705 | 58 | 100 | 441 | 89 | 195 | 444 | 184 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 106 | 1623 | 228 | 319 | 1705 | 58 | 100 | 441 | 89 | 195 | 444 | 184 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 27 | 406 | 57 | 80 | 426 | 15 | 25 | 110 | 22 | 49 | 111 | 46 |
| Total Analysis Volume [veh/h] | 106 | 1623 | 228 | 319 | 1705 | 58 | 100 | 441 | 89 | 195 | 444 | 184 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|-------------------------|----------|---------|---------|----------|---------|---------|----------|---------|---------|----------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.07 | 0.25 | 0.14 | 0.11 | 0.28 | 0.28 | 0.06 | 0.17 | 0.17 | 0.07 | 0.09 | 0.12 |
| Intersection LOS | B | | | | | | | | | | | |
| Intersection V/C | 0.698 | | | | | | | | | | | |

Intersection Level Of Service Report

Intersection 14: Hawthorne Boulevard at Sepulveda Boulevard

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | D |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.806 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Sepulveda Boulevard | | | Sepulveda Boulevard | | |
|------------------------------|---------------------|--------|--------|---------------------|--------|--------|---------------------|--------|--------|---------------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | [Diagram] | | | [Diagram] | | | [Diagram] | | | [Diagram] | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Sepulveda Boulevard | | | Sepulveda Boulevard | | |
|---|---------------------|--------|--------|---------------------|--------|--------|---------------------|--------|--------|---------------------|--------|--------|
| Base Volume Input [veh/h] | 220 | 1563 | 577 | 284 | 1370 | 210 | 227 | 919 | 93 | 439 | 822 | 209 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 220 | 1563 | 577 | 284 | 1370 | 210 | 227 | 919 | 93 | 439 | 822 | 209 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 55 | 391 | 144 | 71 | 343 | 53 | 57 | 230 | 23 | 110 | 206 | 52 |
| Total Analysis Volume [veh/h] | 220 | 1563 | 577 | 284 | 1370 | 210 | 227 | 919 | 93 | 439 | 822 | 209 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Unsigna | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|-------------------------|----------|---------|---------|----------|---------|---------|----------|---------|---------|----------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.08 | 0.24 | 0.00 | 0.10 | 0.21 | 0.13 | 0.08 | 0.21 | 0.21 | 0.15 | 0.17 | 0.13 |
| Intersection LOS | D | | | | | | | | | | | |
| Intersection V/C | 0.806 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 15: Madrona Avenue at Torrance Boulevard

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | D |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.856 |

Intersection Setup

| Name | Madrona Avenue | | | Madrona Avenue | | | Torrance Boulevard | | | Torrance Boulevard | | |
|------------------------------|----------------|--------|--------|----------------|--------|--------|--------------------|--------|--------|--------------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | T T T | | | T T T | | | T T T | | | T T T | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Madrona Avenue | | | Madrona Avenue | | | Torrance Boulevard | | | Torrance Boulevard | | |
|---|----------------|--------|--------|----------------|--------|--------|--------------------|--------|--------|--------------------|--------|--------|
| Base Volume Input [veh/h] | 121 | 1203 | 140 | 156 | 1092 | 210 | 363 | 1062 | 175 | 259 | 815 | 88 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 121 | 1203 | 140 | 156 | 1092 | 210 | 363 | 1062 | 175 | 259 | 815 | 88 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 30 | 301 | 35 | 39 | 273 | 53 | 91 | 266 | 44 | 65 | 204 | 22 |
| Total Analysis Volume [veh/h] | 121 | 1203 | 140 | 156 | 1092 | 210 | 363 | 1062 | 175 | 259 | 815 | 88 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|-------------------------|----------|---------|---------|----------|---------|---------|----------|---------|---------|----------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.04 | 0.28 | 0.28 | 0.05 | 0.23 | 0.13 | 0.13 | 0.33 | 0.11 | 0.09 | 0.19 | 0.19 |
| Intersection LOS | D | | | | | | | | | | | |
| Intersection V/C | 0.856 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 16: Madrona Avenue at Carson Street

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | B |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.627 |

Intersection Setup

| Name | Madrona Avenue | | | Madrona Avenue | | | Carson Street | | | Carson Street | | |
|------------------------------|----------------|--------|--------|----------------|--------|--------|---------------|--------|--------|---------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | [Diagram] | | | [Diagram] | | | [Diagram] | | | [Diagram] | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Madrona Avenue | | | Madrona Avenue | | | Carson Street | | | Carson Street | | |
|---|----------------|--------|--------|----------------|--------|--------|---------------|--------|--------|---------------|--------|--------|
| Base Volume Input [veh/h] | 83 | 833 | 181 | 322 | 950 | 141 | 192 | 920 | 73 | 47 | 728 | 112 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 83 | 833 | 181 | 322 | 950 | 141 | 192 | 920 | 73 | 47 | 728 | 112 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 21 | 208 | 45 | 81 | 238 | 35 | 48 | 230 | 18 | 12 | 182 | 28 |
| Total Analysis Volume [veh/h] | 83 | 833 | 181 | 322 | 950 | 141 | 192 | 920 | 73 | 47 | 728 | 112 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|-------------------------|----------|---------|---------|----------|---------|---------|----------|---------|---------|----------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.03 | 0.17 | 0.11 | 0.11 | 0.20 | 0.09 | 0.07 | 0.19 | 0.05 | 0.03 | 0.18 | 0.18 |
| Intersection LOS | B | | | | | | | | | | | |
| Intersection V/C | 0.627 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 17: Del Amo Circle W at Project Driveway 1

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | All-way stop | Delay (sec / veh): | 8.4 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.181 |

Intersection Setup

| Name | Del Amo Circle W | | Del Amo Circle W | | Project Driveway 1 | |
|------------------------------|------------------|--------|------------------|--------|--------------------|--------|
| Approach | Northbound | | Southbound | | Westbound | |
| Lane Configuration | ↑↑ | | ↙↑↑ | | ↑ | |
| Turning Movement | Thru | Right | Left | Thru | Left | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 1 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | No | | No | | Yes | |

Volumes

| Name | Del Amo Circle W | | Del Amo Circle W | | Project Driveway 1 | |
|---|------------------|--------|------------------|--------|--------------------|--------|
| Base Volume Input [veh/h] | 93 | 37 | 3 | 98 | 73 | 60 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 93 | 37 | 3 | 98 | 73 | 60 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 23 | 9 | 1 | 25 | 18 | 15 |
| Total Analysis Volume [veh/h] | 93 | 37 | 3 | 98 | 73 | 60 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

Lanes

| | | | | | | |
|---------------------------------|------|------|------|------|------|------|
| Capacity per Entry Lane [veh/h] | 699 | 758 | 653 | 718 | 718 | 734 |
| Degree of Utilization, x | 0.09 | 0.09 | 0.00 | 0.07 | 0.07 | 0.18 |




Movement, Approach, & Intersection Results

| | | | | | | |
|------------------------------------|------|------|------|------|------|-------|
| 95th-Percentile Queue Length [veh] | 0.31 | 0.28 | 0.01 | 0.22 | 0.22 | 0.66 |
| 95th-Percentile Queue Length [ft] | 7.66 | 7.01 | 0.35 | 5.48 | 5.48 | 16.46 |
| Approach Delay [s/veh] | 8.14 | | 8.09 | | | 8.99 |
| Approach LOS | A | | A | | | A |
| Intersection Delay [s/veh] | 8.43 | | | | | |
| Intersection LOS | A | | | | | |

Intersection Level Of Service Report
Intersection 18: Project Driveway 2 at Carson Street

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 15.5 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.075 |

Intersection Setup

| Name | Project Driveway 2 | | Carson Street | | Carson Street | |
|------------------------------|---|--------|--|--------|---|--------|
| Approach | Southbound | | Eastbound | | Westbound | |
| Lane Configuration |  | |  | |  | |
| Turning Movement | Left | Right | Left | Thru | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 1 | 1 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 35.00 | | 35.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | Yes | | No | | No | |

Volumes

| Name | Project Driveway 2 | | Carson Street | | Carson Street | |
|---|--------------------|--------|---------------|--------|---------------|--------|
| Base Volume Input [veh/h] | 28 | 22 | 6 | 527 | 604 | 14 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 28 | 22 | 6 | 527 | 604 | 14 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 7 | 6 | 2 | 132 | 151 | 4 |
| Total Analysis Volume [veh/h] | 28 | 22 | 6 | 527 | 604 | 14 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| Priority Scheme | Stop | Free | Free |
|------------------------------------|------|------|------|
| Flared Lane | | | |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | No | | |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|-------|-------|-------|------|------|------|
| V/C, Movement V/C Ratio | 0.08 | 0.04 | 0.01 | 0.01 | 0.01 | 0.00 |
| d_M, Delay for Movement [s/veh] | 15.46 | 11.38 | 11.10 | 0.00 | 0.00 | 0.00 |
| Movement LOS | C | B | B | A | A | A |
| 95th-Percentile Queue Length [veh/ln] | 0.24 | 0.12 | 0.03 | 0.00 | 0.00 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 6.07 | 2.92 | 0.76 | 0.00 | 0.00 | 0.00 |
| d_A, Approach Delay [s/veh] | 13.67 | | 0.12 | | 0.00 | |
| Approach LOS | B | | A | | A | |
| d_I, Intersection Delay [s/veh] | 0.62 | | | | | |
| Intersection LOS | C | | | | | |

APPENDIX C-II

**EXISTING WITH AMBIENT GROWTH (YEAR 2025)
TRAFFIC CONDITIONS**

Intersection Level Of Service Report
Intersection 1: Anza Avenue at Torrance Boulevard

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | D |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.802 |

Intersection Setup

| Name | Anza Avenue | | | Anza Avenue | | | Torrance Boulevard | | | Torrance Boulevard | | |
|------------------------------|-------------|-------|-------|-------------|-------|-------|--------------------|-------|-------|--------------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | T O R | | | T O R | | | E A S T | | | E A S T | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Anza Avenue | | | Anza Avenue | | | Torrance Boulevard | | | Torrance Boulevard | | |
|---|-------------|-------|-------|-------------|-------|-------|--------------------|-------|-------|--------------------|-------|-------|
| Base Volume Input [veh/h] | 301 | 784 | 101 | 128 | 718 | 154 | 147 | 760 | 225 | 89 | 747 | 100 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 301 | 784 | 101 | 128 | 718 | 154 | 147 | 760 | 225 | 89 | 747 | 100 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 75 | 196 | 25 | 32 | 180 | 39 | 37 | 190 | 56 | 22 | 187 | 25 |
| Total Analysis Volume [veh/h] | 301 | 784 | 101 | 128 | 718 | 154 | 147 | 760 | 225 | 89 | 747 | 100 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi |
|-------------------------|--------|-------|-------|--------|-------|-------|--------|-------|-------|--------|-------|-------|
| Signal Group | 3 | 8 | 0 | 7 | 4 | 0 | 5 | 2 | 0 | 1 | 6 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.10 | 0.28 | 0.28 | 0.04 | 0.27 | 0.27 | 0.09 | 0.24 | 0.14 | 0.06 | 0.23 | 0.06 |
| Intersection LOS | D | | | | | | | | | | | |
| Intersection V/C | 0.802 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 2: Anza Avenue at Carson Street

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.720 |

Intersection Setup

| Name | Anza Avenue | | | Anza Avenue | | | Carson Street | | | Carson Street | | |
|------------------------------|-------------|-------|-------|-------------|-------|-------|---------------|-------|-------|---------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | T T T | | | T T T | | | T T T | | | T T T | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Anza Avenue | | | Anza Avenue | | | Carson Street | | | Carson Street | | |
|---|-------------|-------|-------|-------------|-------|-------|---------------|-------|-------|---------------|-------|-------|
| Base Volume Input [veh/h] | 22 | 842 | 253 | 129 | 730 | 34 | 25 | 173 | 37 | 191 | 202 | 218 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 22 | 842 | 253 | 129 | 730 | 34 | 25 | 173 | 37 | 191 | 202 | 218 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 6 | 211 | 63 | 32 | 183 | 9 | 6 | 43 | 9 | 48 | 51 | 55 |
| Total Analysis Volume [veh/h] | 22 | 842 | 253 | 129 | 730 | 34 | 25 | 173 | 37 | 191 | 202 | 218 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi |
|-------------------------|--------|-------|-------|--------|-------|-------|--------|-------|-------|--------|-------|-------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.01 | 0.34 | 0.34 | 0.08 | 0.24 | 0.24 | 0.02 | 0.13 | 0.13 | 0.07 | 0.13 | 0.14 |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.720 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 3: Anza Avenue at Sepulveda Boulevard

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.727 |

Intersection Setup

| Name | Anza Avenue | | | Anza Avenue | | | Sepulveda Boulevard | | | Sepulveda Boulevard | | |
|------------------------------|-------------|-------|-------|-------------|-------|-------|---------------------|-------|-------|---------------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | [Diagram] | | | [Diagram] | | | [Diagram] | | | [Diagram] | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Anza Avenue | | | Anza Avenue | | | Sepulveda Boulevard | | | Sepulveda Boulevard | | |
|---|-------------|-------|-------|-------------|-------|-------|---------------------|-------|-------|---------------------|-------|-------|
| Base Volume Input [veh/h] | 129 | 702 | 232 | 154 | 745 | 66 | 165 | 610 | 233 | 296 | 719 | 234 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 129 | 702 | 232 | 154 | 745 | 66 | 165 | 610 | 233 | 296 | 719 | 234 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 32 | 176 | 58 | 39 | 186 | 17 | 41 | 153 | 58 | 74 | 180 | 59 |
| Total Analysis Volume [veh/h] | 129 | 702 | 232 | 154 | 745 | 66 | 165 | 610 | 233 | 296 | 719 | 234 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi |
|-------------------------|--------|-------|-------|--------|-------|-------|--------|-------|-------|--------|-------|-------|
| Signal Group | 3 | 8 | 0 | 7 | 4 | 0 | 5 | 2 | 0 | 1 | 6 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.08 | 0.22 | 0.15 | 0.10 | 0.25 | 0.25 | 0.06 | 0.19 | 0.15 | 0.10 | 0.22 | 0.15 |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.727 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 4: Ocean Avenue at Torrance Boulevard

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 52.9 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | F |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.076 |

Intersection Setup

| Name | Ocean Avenue | | Torrance Boulevard | | Torrance Boulevard | |
|------------------------------|--------------|--------|--------------------|--------|--------------------|--------|
| Approach | Northbound | | Eastbound | | Westbound | |
| Lane Configuration | | | | | | |
| Turning Movement | Left | Right | Thru | Right | Left | Thru |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 1 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 25.00 | | 40.00 | | 40.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | No | | No | | No | |

Volumes

| Name | Ocean Avenue | | Torrance Boulevard | | Torrance Boulevard | |
|---|--------------|--------|--------------------|--------|--------------------|--------|
| Base Volume Input [veh/h] | 7 | 179 | 966 | 46 | 127 | 1126 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 7 | 179 | 966 | 46 | 127 | 1126 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 2 | 45 | 242 | 12 | 32 | 282 |
| Total Analysis Volume [veh/h] | 7 | 179 | 966 | 46 | 127 | 1126 |
| Pedestrian Volume [ped/h] | 0 | 0 | 0 | 0 | 0 | 0 |

Intersection Settings

| | | | |
|------------------------------------|------|------|------|
| Priority Scheme | Stop | Free | Free |
| Flared Lane | No | | |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | No | | |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|-------|-------|------|------|-------|------|
| V/C, Movement V/C Ratio | 0.08 | 0.41 | 0.01 | 0.00 | 0.33 | 0.01 |
| d_M, Delay for Movement [s/veh] | 52.86 | 21.76 | 0.00 | 0.00 | 18.82 | 0.00 |
| Movement LOS | F | C | A | A | C | A |
| 95th-Percentile Queue Length [veh/ln] | 2.56 | 2.56 | 0.00 | 0.00 | 1.41 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 64.05 | 64.05 | 0.00 | 0.00 | 35.21 | 0.00 |
| d_A, Approach Delay [s/veh] | 22.93 | | 0.00 | | 1.91 | |
| Approach LOS | C | | A | | A | |
| d_I, Intersection Delay [s/veh] | 2.72 | | | | | |
| Intersection LOS | F | | | | | |

**Intersection Level Of Service Report
Intersection 5: Ocean Avenue at Carson Street**

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 41.8 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | E |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.042 |

Intersection Setup

| Name | Ocean Avenue | | | Ocean Avenue | | | Carson Street | | | Carsoon Street | | |
|------------------------------|--------------|-------|-------|--------------|-------|-------|---------------|-------|-------|----------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | ↶ | | | ⊕ | | | ↶↷ | | | ↷ | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 25.00 | | | 25.00 | | | 35.00 | | | 35.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | No | | | No | | | No | | | No | | |

Volumes

| Name | Ocean Avenue | | | Ocean Avenue | | | Carson Street | | | Carsoon Street | | |
|---|--------------|-------|-------|--------------|-------|-------|---------------|-------|-------|----------------|-------|-------|
| Base Volume Input [veh/h] | 0 | 0 | 31 | 28 | 5 | 52 | 120 | 566 | 4 | 0 | 590 | 37 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 0 | 0 | 31 | 28 | 5 | 52 | 120 | 566 | 4 | 0 | 590 | 37 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 0 | 0 | 8 | 7 | 1 | 13 | 30 | 142 | 1 | 0 | 148 | 9 |
| Total Analysis Volume [veh/h] | 0 | 0 | 31 | 28 | 5 | 52 | 120 | 566 | 4 | 0 | 590 | 37 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | | | | |
|------------------------------------|------|------|------|------|
| Priority Scheme | Stop | Stop | Free | Free |
| Flared Lane | | No | | |
| Storage Area [veh] | 0 | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | No | No | | |
| Number of Storage Spaces in Median | 0 | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|---------------------------------------|-------|------|-------|-------|-------|-------|-------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.00 | 0.00 | 0.04 | 0.21 | 0.04 | 0.08 | 0.13 | 0.01 | 0.00 | 0.00 | 0.01 | 0.00 |
| d_M, Delay for Movement [s/veh] | 0.00 | 0.00 | 10.29 | 37.78 | 41.79 | 16.69 | 9.33 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Movement LOS | | | B | E | E | C | A | A | A | | A | A |
| 95th-Percentile Queue Length [veh/ln] | 0.00 | 0.00 | 0.14 | 1.35 | 1.35 | 1.35 | 0.43 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 0.00 | 0.00 | 3.41 | 33.80 | 33.80 | 33.80 | 10.79 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| d_A, Approach Delay [s/veh] | 10.29 | | 25.11 | | | 1.62 | | | 0.00 | | | |
| Approach LOS | B | | D | | | A | | | A | | | |
| d_I, Intersection Delay [s/veh] | 2.49 | | | | | | | | | | | |
| Intersection LOS | E | | | | | | | | | | | |

Intersection Level Of Service Report

Intersection 6: Plaza Lane/Village Lane at Torrance Boulevard

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.408 |

Intersection Setup

| Name | Village Lane | | | Plaza Lane | | | Torrance Boulevard | | | Torrance Boulevard | | |
|------------------------------|--------------|-------|-------|------------|-------|-------|--------------------|-------|-------|--------------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | ⇐⇐⇐ | | | ⇐⇐⇐ | | | ⇐⇐⇐⇐⇐ | | | ⇐⇐⇐⇐ | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | No | | | Yes | | |

Volumes

| Name | Village Lane | | | Plaza Lane | | | Torrance Boulevard | | | Torrance Boulevard | | |
|---|--------------|-------|-------|------------|-------|-------|--------------------|-------|-------|--------------------|-------|-------|
| Base Volume Input [veh/h] | 91 | 7 | 76 | 34 | 3 | 12 | 24 | 847 | 127 | 104 | 1019 | 98 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 91 | 7 | 76 | 34 | 3 | 12 | 24 | 847 | 127 | 104 | 1019 | 98 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 23 | 2 | 19 | 9 | 1 | 3 | 6 | 212 | 32 | 26 | 255 | 25 |
| Total Analysis Volume [veh/h] | 91 | 7 | 76 | 34 | 3 | 12 | 24 | 847 | 127 | 104 | 1019 | 98 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Split | Split | Split | Split | Split | Split | Protec | Permi | Permi | Protec | Permi | Permi |
|-------------------------|-------|-------|-------|-------|-------|-------|--------|-------|-------|--------|-------|-------|
| Signal Group | 0 | 8 | 0 | 0 | 4 | 0 | 5 | 2 | 0 | 1 | 6 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | - | - | - | - | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.03 | 0.03 | 0.05 | 0.01 | 0.01 | 0.01 | 0.02 | 0.18 | 0.08 | 0.04 | 0.23 | 0.23 |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.408 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 7: Village Court at Village Lane

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | All-way stop | Delay (sec / veh): | 7.6 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.064 |

Intersection Setup

| Name | Village Court | | Village Lane | | Village Lane | |
|------------------------------|---------------|--------|--------------|--------|--------------|--------|
| Approach | Northbound | | Eastbound | | Westbound | |
| Lane Configuration | | | | | | |
| Turning Movement | Left | Right | Thru | Right | Left | Thru |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 1 | 0 | 0 | 1 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | Yes | | Yes | | No | |

Volumes

| Name | Village Court | | Village Lane | | Village Lane | |
|---|---------------|--------|--------------|--------|--------------|--------|
| Base Volume Input [veh/h] | 39 | 46 | 12 | 44 | 30 | 15 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 39 | 46 | 12 | 44 | 30 | 15 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 10 | 12 | 3 | 11 | 8 | 4 |
| Total Analysis Volume [veh/h] | 39 | 46 | 12 | 44 | 30 | 15 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

Lanes

| | | | | | |
|---------------------------------|------|------|------|------|------|
| Capacity per Entry Lane [veh/h] | 684 | 886 | 874 | 683 | 754 |
| Degree of Utilization, x | 0.06 | 0.05 | 0.06 | 0.04 | 0.02 |

Movement, Approach, & Intersection Results

| | | | | | |
|------------------------------------|------|------|------|------|------|
| 95th-Percentile Queue Length [veh] | 0.18 | 0.16 | 0.20 | 0.14 | 0.06 |
| 95th-Percentile Queue Length [ft] | 4.53 | 4.10 | 5.12 | 3.44 | 1.52 |
| Approach Delay [s/veh] | 7.58 | | 7.40 | 8.00 | |
| Approach LOS | A | | A | A | |
| Intersection Delay [s/veh] | 7.63 | | | | |
| Intersection LOS | A | | | | |

Intersection Level Of Service Report
Intersection 8: Village Court at Del Amo Circle

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 11.5 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | B |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.002 |

Intersection Setup

| Name | Driveway | | | Village Court | | | Del Amo Circle | | | Del Amo Circle | | |
|------------------------------|------------|-------|-------|---------------|-------|-------|----------------|-------|-------|----------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | + | | | + | | | + | | | + | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | No | | | No | | |

Volumes

| Name | Driveway | | | Village Court | | | Del Amo Circle | | | Del Amo Circle | | |
|---|----------|-------|-------|---------------|-------|-------|----------------|-------|-------|----------------|-------|-------|
| Base Volume Input [veh/h] | 0 | 1 | 0 | 33 | 1 | 30 | 79 | 52 | 0 | 0 | 73 | 15 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 0 | 1 | 0 | 33 | 1 | 30 | 79 | 52 | 0 | 0 | 73 | 15 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 0 | 0 | 0 | 8 | 0 | 8 | 20 | 13 | 0 | 0 | 18 | 4 |
| Total Analysis Volume [veh/h] | 0 | 1 | 0 | 33 | 1 | 30 | 79 | 52 | 0 | 0 | 73 | 15 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | | | | |
|------------------------------------|------|------|------|------|
| Priority Scheme | Stop | Stop | Free | Free |
| Flared Lane | No | | | |
| Storage Area [veh] | 0 | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | No | No | | |
| Number of Storage Spaces in Median | 0 | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|---------------------------------------|-------|-------|------|-------|-------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | 0.03 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| d_M, Delay for Movement [s/veh] | 10.65 | 11.21 | 8.46 | 10.95 | 11.46 | 8.65 | 7.52 | 0.00 | 0.00 | 7.32 | 0.00 | 0.00 |
| Movement LOS | B | B | A | B | B | A | A | A | | A | A | A |
| 95th-Percentile Queue Length [veh/ln] | 0.01 | 0.01 | 0.01 | 0.17 | 0.17 | 0.09 | 0.17 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 0.13 | 0.13 | 0.13 | 4.22 | 4.22 | 2.28 | 4.15 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| d_A, Approach Delay [s/veh] | 11.21 | | | 9.88 | | | 4.54 | | | 0.00 | | |
| Approach LOS | B | | | A | | | A | | | A | | |
| d_I, Intersection Delay [s/veh] | 4.36 | | | | | | | | | | | |
| Intersection LOS | B | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 8: Village Court at Del Amo Circle

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | All-way stop | Delay (sec / veh): | 8.1 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.118 |

Intersection Setup

| Name | Driveway | | | Village Court | | | Del Amo Circle | | | Del Amo Circle | | |
|------------------------------|------------|-------|-------|---------------|-------|-------|----------------|-------|-------|----------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | + | | | + | | | + | | | + | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | No | | | No | | |

Volumes

| Name | Driveway | | | Village Court | | | Del Amo Circle | | | Del Amo Circle | | |
|---|----------|-------|-------|---------------|-------|-------|----------------|-------|-------|----------------|-------|-------|
| Base Volume Input [veh/h] | 0 | 1 | 0 | 33 | 1 | 30 | 79 | 52 | 0 | 0 | 73 | 15 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 0 | 1 | 0 | 33 | 1 | 30 | 79 | 52 | 0 | 0 | 73 | 15 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 0 | 0 | 0 | 8 | 0 | 8 | 20 | 13 | 0 | 0 | 18 | 4 |
| Total Analysis Volume [veh/h] | 0 | 1 | 0 | 33 | 1 | 30 | 79 | 52 | 0 | 0 | 73 | 15 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

Lanes

| | | | | | | | | |
|---------------------------------|------|------|------|------|------|------|------|------|
| Capacity per Entry Lane [veh/h] | 688 | 645 | 818 | 667 | 735 | 735 | 722 | 758 |
| Degree of Utilization, x | 0.00 | 0.05 | 0.04 | 0.12 | 0.04 | 0.04 | 0.06 | 0.06 |

Movement, Approach, & Intersection Results

| | | | | | | | | |
|------------------------------------|------|------|------|-------|------|------|------|------|
| 95th-Percentile Queue Length [veh] | 0.00 | 0.17 | 0.11 | 0.40 | 0.11 | 0.11 | 0.19 | 0.18 |
| 95th-Percentile Queue Length [ft] | 0.11 | 4.16 | 2.85 | 10.02 | 2.75 | 2.75 | 4.86 | 4.61 |
| Approach Delay [s/veh] | 8.24 | 7.97 | | 8.41 | | 7.88 | | |
| Approach LOS | A | A | | A | | A | | |
| Intersection Delay [s/veh] | 8.14 | | | | | | | |
| Intersection LOS | A | | | | | | | |

Intersection Level Of Service Report
Intersection 9: Del Amo Circle W at Carson Street

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.369 |

Intersection Setup

| Name | Del Amo Circle W | | | Del Amo Circle W | | | Carson Street | | | Carson Street | | |
|------------------------------|------------------|-------|-------|------------------|-------|-------|---------------|-------|-------|---------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | ⇌⇌⇌ | | | ⇌⇌⇌ | | | ⇌⇌⇌ | | | ⇌⇌⇌ | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Del Amo Circle W | | | Del Amo Circle W | | | Carson Street | | | Carson Street | | |
|---|------------------|-------|-------|------------------|-------|-------|---------------|-------|-------|---------------|-------|-------|
| Base Volume Input [veh/h] | 2 | 1 | 0 | 13 | 6 | 61 | 85 | 502 | 18 | 16 | 564 | 88 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 2 | 1 | 0 | 13 | 6 | 61 | 85 | 502 | 18 | 16 | 564 | 88 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 1 | 0 | 0 | 3 | 2 | 15 | 21 | 126 | 5 | 4 | 141 | 22 |
| Total Analysis Volume [veh/h] | 2 | 1 | 0 | 13 | 6 | 61 | 85 | 502 | 18 | 16 | 564 | 88 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Permi | Permi | Permi | Permi | Permi | Permi | Permi | Permi | Permi | Permi | Permi | Permi |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Signal Group | 0 | 8 | 0 | 0 | 4 | 0 | 0 | 2 | 0 | 0 | 6 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | - | - | - | - | - | - | - | - | - | - | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.04 | 0.05 | 0.16 | 0.16 | 0.01 | 0.18 | 0.06 |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.369 | | | | | | | | | | | |

Intersection Level Of Service Report

Intersection 10: Hathorne Boulevard at Torrance Boulevard

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.737 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Torrance Boulevard | | | Torrance Boulevard | | |
|------------------------------|---------------------|-------|-------|---------------------|-------|-------|--------------------|-------|-------|--------------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | ◀ ◀ ◀ ▶ ▶ ▶ | | | ▶ ▶ ▶ ◀ ◀ ◀ | | | ▶ ▶ ▶ | | | ▶ ▶ ▶ | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Torrance Boulevard | | | Torrance Boulevard | | |
|---|---------------------|-------|-------|---------------------|-------|-------|--------------------|-------|-------|--------------------|-------|-------|
| Base Volume Input [veh/h] | 199 | 1099 | 121 | 133 | 1730 | 229 | 239 | 784 | 181 | 253 | 1028 | 83 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 199 | 1099 | 121 | 133 | 1730 | 229 | 239 | 784 | 181 | 253 | 1028 | 83 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 50 | 275 | 30 | 33 | 433 | 57 | 60 | 196 | 45 | 63 | 257 | 21 |
| Total Analysis Volume [veh/h] | 199 | 1099 | 121 | 133 | 1730 | 229 | 239 | 784 | 181 | 253 | 1028 | 83 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi |
|-------------------------|--------|-------|-------|--------|-------|-------|--------|-------|-------|--------|-------|-------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.07 | 0.17 | 0.08 | 0.05 | 0.27 | 0.14 | 0.08 | 0.16 | 0.11 | 0.09 | 0.21 | 0.05 |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.737 | | | | | | | | | | | |

Intersection Level Of Service Report

Intersection 11: Hawthorne Boulevard at Village Lane/Fashion Way

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.454 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Village Lane | | | Fashion Way | | |
|------------------------------|---------------------|-------|-------|---------------------|-------|-------|--------------|-------|-------|-------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | [Diagram] | | | [Diagram] | | | [Diagram] | | | [Diagram] | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | No | | | No | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Village Lane | | | Fashion Way | | |
|---|---------------------|-------|-------|---------------------|-------|-------|--------------|-------|-------|-------------|-------|-------|
| Base Volume Input [veh/h] | 60 | 1581 | 114 | 41 | 1768 | 75 | 41 | 0 | 27 | 57 | 33 | 34 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 60 | 1581 | 114 | 41 | 1768 | 75 | 41 | 0 | 27 | 57 | 33 | 34 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 15 | 395 | 29 | 10 | 442 | 19 | 10 | 0 | 7 | 14 | 8 | 9 |
| Total Analysis Volume [veh/h] | 60 | 1581 | 114 | 41 | 1768 | 75 | 41 | 0 | 27 | 57 | 33 | 34 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protec | Permi | Permi | Protec | Permi | Permi | Split | Permi | Overla | Split | Split | Overla |
|-------------------------|--------|-------|-------|--------|-------|-------|-------|-------|--------|-------|-------|--------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 0 | 8 | 0 | 4 | 4 |
| Auxiliary Signal Groups | | | | | | | | | 1,8 | | | 4,5 |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | - | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.02 | 0.25 | 0.07 | 0.01 | 0.28 | 0.05 | 0.03 | 0.00 | 0.00 | 0.02 | 0.03 | 0.01 |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.454 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 12: Hawthorne Boulevard at Del Amo Circle

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.440 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Del Amo Circle | | | Del Amo Circle | | |
|------------------------------|---------------------|-------|-------|---------------------|-------|-------|----------------|-------|-------|----------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | ↵↵↵↵ | | | ↵↵↵↵↵↵ | | | ↵↵ | | | ↵↵ | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Del Amo Circle | | | Del Amo Circle | | |
|---|---------------------|-------|-------|---------------------|-------|-------|----------------|-------|-------|----------------|-------|-------|
| Base Volume Input [veh/h] | 51 | 1509 | 11 | 10 | 1646 | 124 | 76 | 2 | 54 | 8 | 5 | 6 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 51 | 1509 | 11 | 10 | 1646 | 124 | 76 | 2 | 54 | 8 | 5 | 6 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 13 | 377 | 3 | 3 | 412 | 31 | 19 | 1 | 14 | 2 | 1 | 2 |
| Total Analysis Volume [veh/h] | 51 | 1509 | 11 | 10 | 1646 | 124 | 76 | 2 | 54 | 8 | 5 | 6 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protec | Permi | Permi | Protec | Permi | Permi | Permi | Permi | Permi | Permi | Permi | Permi | Permi |
|-------------------------|--------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 0 | 8 | 0 | 0 | 4 | 0 | |
| Auxiliary Signal Groups | | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | - | - | - | - | - | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|--|
| V/C, Movement V/C Ratio | 0.03 | 0.24 | 0.24 | 0.00 | 0.26 | 0.08 | 0.05 | 0.02 | 0.02 | 0.01 | 0.00 | 0.00 | |
| Intersection LOS | A | | | | | | | | | | | | |
| Intersection V/C | 0.440 | | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 13: Hawthorne Boulevard at Carson Street

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | B |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.631 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Carson Street | | | Carson Street | | |
|------------------------------|---------------------|-------|-------|---------------------|-------|-------|---------------|-------|-------|---------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Carson Street | | | Carson Street | | |
|---|---------------------|-------|-------|---------------------|-------|-------|---------------|-------|-------|---------------|-------|-------|
| Base Volume Input [veh/h] | 112 | 1590 | 127 | 112 | 1475 | 66 | 65 | 398 | 60 | 222 | 552 | 132 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 112 | 1590 | 127 | 112 | 1475 | 66 | 65 | 398 | 60 | 222 | 552 | 132 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 28 | 398 | 32 | 28 | 369 | 17 | 16 | 100 | 15 | 56 | 138 | 33 |
| Total Analysis Volume [veh/h] | 112 | 1590 | 127 | 112 | 1475 | 66 | 65 | 398 | 60 | 222 | 552 | 132 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi |
|-------------------------|--------|-------|-------|--------|-------|-------|--------|-------|-------|--------|-------|-------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.07 | 0.25 | 0.08 | 0.04 | 0.24 | 0.24 | 0.04 | 0.14 | 0.14 | 0.08 | 0.12 | 0.08 |
| Intersection LOS | B | | | | | | | | | | | |
| Intersection V/C | 0.631 | | | | | | | | | | | |

Intersection Level Of Service Report

Intersection 14: Hawthorne Boulevard at Sepulveda Boulevard

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.752 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Sepulveda Boulevard | | | Sepulveda Boulevard | | |
|------------------------------|---------------------|-------|-------|---------------------|-------|-------|---------------------|-------|-------|---------------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | [Diagram] | | | [Diagram] | | | [Diagram] | | | [Diagram] | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Sepulveda Boulevard | | | Sepulveda Boulevard | | |
|---|---------------------|-------|-------|---------------------|-------|-------|---------------------|-------|-------|---------------------|-------|-------|
| Base Volume Input [veh/h] | 101 | 1148 | 330 | 148 | 1337 | 206 | 239 | 895 | 96 | 580 | 981 | 208 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 101 | 1148 | 330 | 148 | 1337 | 206 | 239 | 895 | 96 | 580 | 981 | 208 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 25 | 287 | 83 | 37 | 334 | 52 | 60 | 224 | 24 | 145 | 245 | 52 |
| Total Analysis Volume [veh/h] | 101 | 1148 | 330 | 148 | 1337 | 206 | 239 | 895 | 96 | 580 | 981 | 208 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protec | Permi | Unsig | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi |
|-------------------------|--------|-------|-------|--------|-------|-------|--------|-------|-------|--------|-------|-------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.04 | 0.18 | 0.00 | 0.05 | 0.21 | 0.13 | 0.08 | 0.21 | 0.21 | 0.20 | 0.20 | 0.13 |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.752 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 15: Madrona Avenue at Torrance Boulevard

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.701 |

Intersection Setup

| Name | Madrona Avenue | | | Madrona Avenue | | | Torrance Boulevard | | | Torrance Boulevard | | |
|------------------------------|----------------|-------|-------|----------------|-------|-------|--------------------|-------|-------|--------------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | T T T | | | T T T | | | T T T | | | T T T | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Madrona Avenue | | | Madrona Avenue | | | Torrance Boulevard | | | Torrance Boulevard | | |
|---|----------------|-------|-------|----------------|-------|-------|--------------------|-------|-------|--------------------|-------|-------|
| Base Volume Input [veh/h] | 207 | 1061 | 144 | 116 | 1047 | 280 | 307 | 625 | 94 | 119 | 901 | 73 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 207 | 1061 | 144 | 116 | 1047 | 280 | 307 | 625 | 94 | 119 | 901 | 73 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 52 | 265 | 36 | 29 | 262 | 70 | 77 | 156 | 24 | 30 | 225 | 18 |
| Total Analysis Volume [veh/h] | 207 | 1061 | 144 | 116 | 1047 | 280 | 307 | 625 | 94 | 119 | 901 | 73 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi |
|-------------------------|--------|-------|-------|--------|-------|-------|--------|-------|-------|--------|-------|-------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.07 | 0.25 | 0.25 | 0.04 | 0.22 | 0.18 | 0.11 | 0.20 | 0.06 | 0.04 | 0.20 | 0.20 |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.701 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 16: Madrona Avenue at Carson Street

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.565 |

Intersection Setup

| Name | Madrona Avenue | | | Madrona Avenue | | | Carson Street | | | Carson Street | | |
|------------------------------|----------------|-------|-------|----------------|-------|-------|---------------|-------|-------|---------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | [Diagram] | | | [Diagram] | | | [Diagram] | | | [Diagram] | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Madrona Avenue | | | Madrona Avenue | | | Carson Street | | | Carson Street | | |
|---|----------------|-------|-------|----------------|-------|-------|---------------|-------|-------|---------------|-------|-------|
| Base Volume Input [veh/h] | 72 | 892 | 99 | 155 | 781 | 123 | 107 | 470 | 30 | 64 | 737 | 166 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 72 | 892 | 99 | 155 | 781 | 123 | 107 | 470 | 30 | 64 | 737 | 166 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 18 | 223 | 25 | 39 | 195 | 31 | 27 | 118 | 8 | 16 | 184 | 42 |
| Total Analysis Volume [veh/h] | 72 | 892 | 99 | 155 | 781 | 123 | 107 | 470 | 30 | 64 | 737 | 166 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi |
|-------------------------|--------|-------|-------|--------|-------|-------|--------|-------|-------|--------|-------|-------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.03 | 0.19 | 0.06 | 0.05 | 0.16 | 0.08 | 0.04 | 0.10 | 0.02 | 0.04 | 0.19 | 0.19 |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.565 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 17: Del Amo Circle W at Project Driveway 1

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | All-way stop | Delay (sec / veh): | 7.9 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.147 |

Intersection Setup

| Name | Del Amo Circle W | | Del Amo Circle W | | Project Driveway 1 | |
|------------------------------|------------------|--------|------------------|--------|--------------------|--------|
| Approach | Northbound | | Southbound | | Westbound | |
| Lane Configuration | | | | | | |
| Turning Movement | Thru | Right | Left | Thru | Left | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 1 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | No | | No | | Yes | |

Volumes

| Name | Del Amo Circle W | | Del Amo Circle W | | Project Driveway 1 | |
|---|------------------|--------|------------------|--------|--------------------|--------|
| Base Volume Input [veh/h] | 110 | 113 | 32 | 67 | 17 | 13 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 110 | 113 | 32 | 67 | 17 | 13 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 28 | 28 | 8 | 17 | 4 | 3 |
| Total Analysis Volume [veh/h] | 110 | 113 | 32 | 67 | 17 | 13 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings**Lanes**

| | | | | | | |
|---------------------------------|------|------|------|------|------|------|
| Capacity per Entry Lane [veh/h] | 747 | 874 | 683 | 754 | 754 | 713 |
| Degree of Utilization, x | 0.15 | 0.13 | 0.05 | 0.04 | 0.04 | 0.04 |

Movement, Approach, & Intersection Results

| | | | | | | |
|------------------------------------|-------|-------|------|------|------|------|
| 95th-Percentile Queue Length [veh] | 0.51 | 0.44 | 0.15 | 0.14 | 0.14 | 0.13 |
| 95th-Percentile Queue Length [ft] | 12.87 | 11.08 | 3.68 | 3.48 | 3.48 | 3.29 |
| Approach Delay [s/veh] | 7.88 | | 7.87 | | | 8.27 |
| Approach LOS | A | | A | | | A |
| Intersection Delay [s/veh] | 7.91 | | | | | |
| Intersection LOS | A | | | | | |

Intersection Level Of Service Report
Intersection 18: Project Driveway 2 at Carson Street

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 11.7 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | B |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.006 |

Intersection Setup

| Name | Project Driveway 2 | | Carson Street | | Carson Street | |
|------------------------------|--------------------|--------|---------------|--------|---------------|--------|
| Approach | Southbound | | Eastbound | | Westbound | |
| Lane Configuration | | | | | | |
| Turning Movement | Left | Right | Left | Thru | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 1 | 1 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 35.00 | | 35.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | Yes | | No | | No | |

Volumes

| Name | Project Driveway 2 | | Carson Street | | Carson Street | |
|---|--------------------|--------|---------------|--------|---------------|--------|
| Base Volume Input [veh/h] | 0 | 7 | 3 | 505 | 686 | 28 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 0 | 7 | 3 | 505 | 686 | 28 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 0 | 2 | 1 | 126 | 172 | 7 |
| Total Analysis Volume [veh/h] | 0 | 7 | 3 | 505 | 686 | 28 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| | | | |
|------------------------------------|------|------|------|
| Priority Scheme | Stop | Free | Free |
| Flared Lane | | | |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | No | | |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|-------|-------|-------|------|------|------|
| V/C, Movement V/C Ratio | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 |
| d_M, Delay for Movement [s/veh] | 15.49 | 11.68 | 11.75 | 0.00 | 0.00 | 0.00 |
| Movement LOS | C | B | B | A | A | A |
| 95th-Percentile Queue Length [veh/ln] | 0.00 | 0.04 | 0.02 | 0.00 | 0.00 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 0.00 | 0.97 | 0.42 | 0.00 | 0.00 | 0.00 |
| d_A, Approach Delay [s/veh] | 11.68 | | 0.07 | | 0.00 | |
| Approach LOS | B | | A | | A | |
| d_I, Intersection Delay [s/veh] | 0.10 | | | | | |
| Intersection LOS | B | | | | | |

Intersection Level Of Service Report
Intersection 1: Anza Avenue at Torrance Boulevard

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | D |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.830 |

Intersection Setup

| Name | Anza Avenue | | | Anza Avenue | | | Torrance Boulevard | | | Torrance Boulevard | | |
|------------------------------|-------------|-------|-------|-------------|-------|-------|--------------------|-------|-------|--------------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | T O R | | | T O R | | | T O R | | | T O R | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Anza Avenue | | | Anza Avenue | | | Torrance Boulevard | | | Torrance Boulevard | | |
|---|-------------|-------|-------|-------------|-------|-------|--------------------|-------|-------|--------------------|-------|-------|
| Base Volume Input [veh/h] | 249 | 794 | 95 | 145 | 789 | 138 | 150 | 839 | 174 | 146 | 713 | 195 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 249 | 794 | 95 | 145 | 789 | 138 | 150 | 839 | 174 | 146 | 713 | 195 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 62 | 199 | 24 | 36 | 197 | 35 | 38 | 210 | 44 | 37 | 178 | 49 |
| Total Analysis Volume [veh/h] | 249 | 794 | 95 | 145 | 789 | 138 | 150 | 839 | 174 | 146 | 713 | 195 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi |
|-------------------------|--------|-------|-------|--------|-------|-------|--------|-------|-------|--------|-------|-------|
| Signal Group | 3 | 8 | 0 | 7 | 4 | 0 | 5 | 2 | 0 | 1 | 6 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.09 | 0.28 | 0.28 | 0.05 | 0.29 | 0.29 | 0.09 | 0.26 | 0.11 | 0.09 | 0.22 | 0.12 |
| Intersection LOS | D | | | | | | | | | | | |
| Intersection V/C | 0.830 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 2: Anza Avenue at Carson Street

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.717 |

Intersection Setup

| Name | Anza Avenue | | | Anza Avenue | | | Carson Street | | | Carson Street | | |
|------------------------------|-------------|-------|-------|-------------|-------|-------|---------------|-------|-------|---------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | T T T | | | T T T | | | T T T | | | T T T | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Anza Avenue | | | Anza Avenue | | | Carson Street | | | Carson Street | | |
|---|-------------|-------|-------|-------------|-------|-------|---------------|-------|-------|---------------|-------|-------|
| Base Volume Input [veh/h] | 39 | 950 | 159 | 122 | 870 | 41 | 27 | 161 | 37 | 202 | 248 | 169 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 39 | 950 | 159 | 122 | 870 | 41 | 27 | 161 | 37 | 202 | 248 | 169 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 10 | 238 | 40 | 31 | 218 | 10 | 7 | 40 | 9 | 51 | 62 | 42 |
| Total Analysis Volume [veh/h] | 39 | 950 | 159 | 122 | 870 | 41 | 27 | 161 | 37 | 202 | 248 | 169 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi |
|-------------------------|--------|-------|-------|--------|-------|-------|--------|-------|-------|--------|-------|-------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.02 | 0.35 | 0.35 | 0.08 | 0.28 | 0.28 | 0.02 | 0.12 | 0.12 | 0.07 | 0.16 | 0.11 |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.717 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 3: Anza Avenue at Sepulveda Boulevard

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.797 |

Intersection Setup

| Name | Anza Avenue | | | Anza Avenue | | | Sepulveda Boulevard | | | Sepulveda Boulevard | | |
|------------------------------|-------------|-------|-------|-------------|-------|-------|---------------------|-------|-------|---------------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | [Diagram] | | | [Diagram] | | | [Diagram] | | | [Diagram] | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Anza Avenue | | | Anza Avenue | | | Sepulveda Boulevard | | | Sepulveda Boulevard | | |
|---|-------------|-------|-------|-------------|-------|-------|---------------------|-------|-------|---------------------|-------|-------|
| Base Volume Input [veh/h] | 170 | 734 | 165 | 183 | 851 | 88 | 205 | 736 | 270 | 169 | 723 | 220 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 170 | 734 | 165 | 183 | 851 | 88 | 205 | 736 | 270 | 169 | 723 | 220 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 43 | 184 | 41 | 46 | 213 | 22 | 51 | 184 | 68 | 42 | 181 | 55 |
| Total Analysis Volume [veh/h] | 170 | 734 | 165 | 183 | 851 | 88 | 205 | 736 | 270 | 169 | 723 | 220 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi |
|-------------------------|--------|-------|-------|--------|-------|-------|--------|-------|-------|--------|-------|-------|
| Signal Group | 3 | 8 | 0 | 7 | 4 | 0 | 5 | 2 | 0 | 1 | 6 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.11 | 0.23 | 0.10 | 0.11 | 0.29 | 0.29 | 0.07 | 0.23 | 0.17 | 0.06 | 0.23 | 0.14 |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.797 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 4: Ocean Avenue at Torrance Boulevard

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 54.4 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | F |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.123 |

Intersection Setup

| Name | Ocean Avenue | | Torrance Boulevard | | Torrance Boulevard | |
|------------------------------|--------------|--------|--------------------|--------|--------------------|--------|
| Approach | Northbound | | Eastbound | | Westbound | |
| Lane Configuration | | | | | | |
| Turning Movement | Left | Right | Thru | Right | Left | Thru |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 1 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 25.00 | | 40.00 | | 40.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | No | | No | | No | |

Volumes

| Name | Ocean Avenue | | Torrance Boulevard | | Torrance Boulevard | |
|---|--------------|--------|--------------------|--------|--------------------|--------|
| Base Volume Input [veh/h] | 10 | 40 | 1266 | 44 | 68 | 1149 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 10 | 40 | 1266 | 44 | 68 | 1149 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 3 | 10 | 317 | 11 | 17 | 287 |
| Total Analysis Volume [veh/h] | 10 | 40 | 1266 | 44 | 68 | 1149 |
| Pedestrian Volume [ped/h] | 0 | 0 | 0 | 0 | 0 | 0 |

Intersection Settings

| | | | |
|------------------------------------|------|------|------|
| Priority Scheme | Stop | Free | Free |
| Flared Lane | No | | |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | No | | |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|-------|-------|------|------|-------|------|
| V/C, Movement V/C Ratio | 0.12 | 0.11 | 0.01 | 0.00 | 0.25 | 0.01 |
| d_M, Delay for Movement [s/veh] | 54.37 | 20.49 | 0.00 | 0.00 | 22.21 | 0.00 |
| Movement LOS | F | C | A | A | C | A |
| 95th-Percentile Queue Length [veh/ln] | 0.89 | 0.89 | 0.00 | 0.00 | 0.94 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 22.29 | 22.29 | 0.00 | 0.00 | 23.61 | 0.00 |
| d_A, Approach Delay [s/veh] | 27.26 | | 0.00 | | 1.24 | |
| Approach LOS | D | | A | | A | |
| d_I, Intersection Delay [s/veh] | 1.12 | | | | | |
| Intersection LOS | F | | | | | |

Intersection Level Of Service Report
Intersection 5: Ocean Avenue at Carson Street

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 27.5 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | D |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.064 |

Intersection Setup

| Name | Ocean Avenue | | | Ocean Avenue | | | Carson Street | | | Carsoon Street | | |
|------------------------------|--------------|-------|-------|--------------|-------|-------|---------------|-------|-------|----------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | ↶ | | | ⊕ | | | ↶↷ | | | ↷ | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 25.00 | | | 25.00 | | | 35.00 | | | 35.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | No | | | No | | | No | | | No | | |

Volumes

| Name | Ocean Avenue | | | Ocean Avenue | | | Carson Street | | | Carsoon Street | | |
|---|--------------|-------|-------|--------------|-------|-------|---------------|-------|-------|----------------|-------|-------|
| Base Volume Input [veh/h] | 0 | 0 | 28 | 24 | 12 | 12 | 9 | 506 | 5 | 0 | 627 | 35 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 0 | 0 | 28 | 24 | 12 | 12 | 9 | 506 | 5 | 0 | 627 | 35 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 0 | 0 | 7 | 6 | 3 | 3 | 2 | 127 | 1 | 0 | 157 | 9 |
| Total Analysis Volume [veh/h] | 0 | 0 | 28 | 24 | 12 | 12 | 9 | 506 | 5 | 0 | 627 | 35 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | | | | |
|------------------------------------|------|------|------|------|
| Priority Scheme | Stop | Stop | Free | Free |
| Flared Lane | | No | | |
| Storage Area [veh] | 0 | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | No | No | | |
| Number of Storage Spaces in Median | 0 | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|---------------------------------------|-------|------|-------|-------|-------|-------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.00 | 0.00 | 0.04 | 0.11 | 0.06 | 0.02 | 0.01 | 0.01 | 0.00 | 0.00 | 0.01 | 0.00 |
| d_M, Delay for Movement [s/veh] | 0.00 | 0.00 | 10.03 | 24.96 | 27.47 | 13.81 | 8.94 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Movement LOS | | | B | C | D | B | A | A | A | | A | A |
| 95th-Percentile Queue Length [veh/ln] | 0.00 | 0.00 | 0.12 | 0.69 | 0.69 | 0.69 | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 0.00 | 0.00 | 2.93 | 17.35 | 17.35 | 17.35 | 0.74 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| d_A, Approach Delay [s/veh] | 10.03 | | 22.80 | | | 0.15 | | | 0.00 | | | |
| Approach LOS | B | | C | | | A | | | A | | | |
| d_I, Intersection Delay [s/veh] | 1.16 | | | | | | | | | | | |
| Intersection LOS | D | | | | | | | | | | | |

Intersection Level Of Service Report

Intersection 6: Plaza Lane/Village Lane at Torrance Boulevard

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.491 |

Intersection Setup

| Name | Village Lane | | | Plaza Lane | | | Torrance Boulevard | | | Torrance Boulevard | | |
|------------------------------|--------------|-------|-------|------------|-------|-------|--------------------|-------|-------|--------------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | ⇐⇐⇐ | | | ⇐⇐⇐ | | | ⇐⇐⇐⇐⇐ | | | ⇐⇐⇐⇐ | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | No | | | Yes | | |

Volumes

| Name | Village Lane | | | Plaza Lane | | | Torrance Boulevard | | | Torrance Boulevard | | |
|---|--------------|-------|-------|------------|-------|-------|--------------------|-------|-------|--------------------|-------|-------|
| Base Volume Input [veh/h] | 109 | 17 | 119 | 154 | 11 | 56 | 57 | 1044 | 109 | 66 | 1026 | 46 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 109 | 17 | 119 | 154 | 11 | 56 | 57 | 1044 | 109 | 66 | 1026 | 46 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 27 | 4 | 30 | 39 | 3 | 14 | 14 | 261 | 27 | 17 | 257 | 12 |
| Total Analysis Volume [veh/h] | 109 | 17 | 119 | 154 | 11 | 56 | 57 | 1044 | 109 | 66 | 1026 | 46 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Split | Split | Split | Split | Split | Split | Protec | Permi | Permi | Protec | Permi | Permi |
|-------------------------|-------|-------|-------|-------|-------|-------|--------|-------|-------|--------|-------|-------|
| Signal Group | 0 | 8 | 0 | 0 | 4 | 0 | 5 | 2 | 0 | 1 | 6 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | - | - | - | - | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.04 | 0.04 | 0.07 | 0.05 | 0.06 | 0.04 | 0.04 | 0.22 | 0.07 | 0.02 | 0.22 | 0.22 |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.491 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 7: Village Court at Village Lane

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | All-way stop | Delay (sec / veh): | 8.0 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.106 |

Intersection Setup

| Name | Village Court | | Village Lane | | Village Lane | |
|------------------------------|---------------|--------|--------------|--------|--------------|--------|
| Approach | Northbound | | Eastbound | | Westbound | |
| Lane Configuration | | | | | | |
| Turning Movement | Left | Right | Thru | Right | Left | Thru |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 1 | 0 | 0 | 1 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | Yes | | Yes | | No | |

Volumes

| Name | Village Court | | Village Lane | | Village Lane | |
|---|---------------|--------|--------------|--------|--------------|--------|
| Base Volume Input [veh/h] | 39 | 48 | 35 | 53 | 72 | 25 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 39 | 48 | 35 | 53 | 72 | 25 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 10 | 12 | 9 | 13 | 18 | 6 |
| Total Analysis Volume [veh/h] | 39 | 48 | 35 | 53 | 72 | 25 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

Lanes

| | | | | | |
|---------------------------------|------|------|------|------|------|
| Capacity per Entry Lane [veh/h] | 658 | 842 | 836 | 677 | 748 |
| Degree of Utilization, x | 0.06 | 0.06 | 0.11 | 0.11 | 0.03 |

Movement, Approach, & Intersection Results

| | | | | | |
|------------------------------------|------|------|------|------|------|
| 95th-Percentile Queue Length [veh] | 0.19 | 0.18 | 0.35 | 0.36 | 0.10 |
| 95th-Percentile Queue Length [ft] | 4.72 | 4.53 | 8.79 | 8.88 | 2.59 |
| Approach Delay [s/veh] | 7.81 | | 7.81 | 8.40 | |
| Approach LOS | A | | A | A | |
| Intersection Delay [s/veh] | 8.02 | | | | |
| Intersection LOS | A | | | | |

**Intersection Level Of Service Report
Intersection 8: Village Court at Del Amo Circle**

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 11.4 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | B |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.002 |

Intersection Setup

| Name | Driveway | | | Village Court | | | Del Amo Circle | | | Del Amo Circle | | |
|------------------------------|------------|-------|-------|---------------|-------|-------|----------------|-------|-------|----------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | + | | | + | | | + | | | + | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | No | | | No | | |

Volumes

| Name | Driveway | | | Village Court | | | Del Amo Circle | | | Del Amo Circle | | |
|---|----------|-------|-------|---------------|-------|-------|----------------|-------|-------|----------------|-------|-------|
| Base Volume Input [veh/h] | 0 | 1 | 0 | 53 | 1 | 64 | 53 | 96 | 0 | 0 | 66 | 33 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 0 | 1 | 0 | 53 | 1 | 64 | 53 | 96 | 0 | 0 | 66 | 33 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 0 | 0 | 0 | 13 | 0 | 16 | 13 | 24 | 0 | 0 | 17 | 8 |
| Total Analysis Volume [veh/h] | 0 | 1 | 0 | 53 | 1 | 64 | 53 | 96 | 0 | 0 | 66 | 33 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | | | | |
|------------------------------------|------|------|------|------|
| Priority Scheme | Stop | Stop | Free | Free |
| Flared Lane | No | | | |
| Storage Area [veh] | 0 | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | No | No | | |
| Number of Storage Spaces in Median | 0 | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|---------------------------------------|-------|-------|------|-------|-------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.06 | 0.04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| d_M, Delay for Movement [s/veh] | 10.67 | 11.13 | 8.57 | 10.77 | 11.45 | 8.81 | 7.50 | 0.00 | 0.00 | 7.41 | 0.00 | 0.00 |
| Movement LOS | B | B | A | B | B | A | A | A | | A | A | A |
| 95th-Percentile Queue Length [veh/ln] | 0.01 | 0.01 | 0.01 | 0.26 | 0.26 | 0.20 | 0.11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 0.13 | 0.13 | 0.13 | 6.49 | 6.49 | 5.07 | 2.76 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| d_A, Approach Delay [s/veh] | 11.13 | | | 9.72 | | | 2.67 | | | 0.00 | | |
| Approach LOS | B | | | A | | | A | | | A | | |
| d_I, Intersection Delay [s/veh] | 4.24 | | | | | | | | | | | |
| Intersection LOS | B | | | | | | | | | | | |

**Intersection Level Of Service Report
Intersection 8: Village Court at Del Amo Circle**

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | All-way stop | Delay (sec / veh): | 8.2 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.085 |

Intersection Setup

| Name | Driveway | | | Village Court | | | Del Amo Circle | | | Del Amo Circle | | |
|------------------------------|------------|-------|-------|---------------|-------|-------|----------------|-------|-------|----------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | + | | | + | | | + | | | + | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | No | | | No | | |

Volumes

| Name | Driveway | | | Village Court | | | Del Amo Circle | | | Del Amo Circle | | |
|---|----------|-------|-------|---------------|-------|-------|----------------|-------|-------|----------------|-------|-------|
| Base Volume Input [veh/h] | 0 | 1 | 0 | 53 | 1 | 64 | 53 | 96 | 0 | 0 | 66 | 33 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 0 | 1 | 0 | 53 | 1 | 64 | 53 | 96 | 0 | 0 | 66 | 33 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 0 | 0 | 0 | 13 | 0 | 16 | 13 | 24 | 0 | 0 | 17 | 8 |
| Total Analysis Volume [veh/h] | 0 | 1 | 0 | 53 | 1 | 64 | 53 | 96 | 0 | 0 | 66 | 33 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

Lanes

| | | | | | | | | |
|---------------------------------|------|------|------|------|------|------|------|------|
| Capacity per Entry Lane [veh/h] | 667 | 637 | 805 | 646 | 709 | 709 | 695 | 763 |
| Degree of Utilization, x | 0.00 | 0.08 | 0.08 | 0.08 | 0.07 | 0.07 | 0.07 | 0.06 |

Movement, Approach, & Intersection Results

| | | | | | | | | |
|------------------------------------|------|------|------|------|------|------|------|------|
| 95th-Percentile Queue Length [veh] | 0.00 | 0.28 | 0.26 | 0.27 | 0.22 | 0.22 | 0.23 | 0.21 |
| 95th-Percentile Queue Length [ft] | 0.11 | 6.93 | 6.46 | 6.68 | 5.43 | 5.43 | 5.74 | 5.19 |
| Approach Delay [s/veh] | 8.41 | 8.16 | | 8.37 | | 8.01 | | |
| Approach LOS | A | A | | A | | A | | |
| Intersection Delay [s/veh] | 8.21 | | | | | | | |
| Intersection LOS | A | | | | | | | |

Intersection Level Of Service Report
Intersection 9: Del Amo Circle W at Carson Street

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.398 |

Intersection Setup

| Name | Del Amo Circle W | | | Del Amo Circle W | | | Carson Street | | | Carson Street | | |
|------------------------------|------------------|-------|-------|------------------|-------|-------|---------------|-------|-------|---------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Del Amo Circle W | | | Del Amo Circle W | | | Carson Street | | | Carson Street | | |
|---|------------------|-------|-------|------------------|-------|-------|---------------|-------|-------|---------------|-------|-------|
| Base Volume Input [veh/h] | 23 | 8 | 13 | 62 | 2 | 115 | 62 | 432 | 8 | 8 | 553 | 90 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 23 | 8 | 13 | 62 | 2 | 115 | 62 | 432 | 8 | 8 | 553 | 90 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 6 | 2 | 3 | 16 | 1 | 29 | 16 | 108 | 2 | 2 | 138 | 23 |
| Total Analysis Volume [veh/h] | 23 | 8 | 13 | 62 | 2 | 115 | 62 | 432 | 8 | 8 | 553 | 90 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Permi | Permi | Permi | Permi | Permi | Permi | Permi | Permi | Permi | Permi | Permi | Permi |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Signal Group | 0 | 8 | 0 | 0 | 4 | 0 | 0 | 2 | 0 | 0 | 6 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | - | - | - | - | - | - | - | - | - | - | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.01 | 0.01 | 0.01 | 0.04 | 0.00 | 0.07 | 0.04 | 0.14 | 0.14 | 0.01 | 0.17 | 0.06 |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.398 | | | | | | | | | | | |

Intersection Level Of Service Report

Intersection 10: Hathorne Boulevard at Torrance Boulevard

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.741 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Torrance Boulevard | | | Torrance Boulevard | | |
|------------------------------|---------------------|-------|-------|---------------------|-------|-------|--------------------|-------|-------|--------------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Torrance Boulevard | | | Torrance Boulevard | | |
|---|---------------------|-------|-------|---------------------|-------|-------|--------------------|-------|-------|--------------------|-------|-------|
| Base Volume Input [veh/h] | 264 | 1589 | 227 | 253 | 1651 | 156 | 259 | 925 | 276 | 284 | 824 | 145 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 264 | 1589 | 227 | 253 | 1651 | 156 | 259 | 925 | 276 | 284 | 824 | 145 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 66 | 397 | 57 | 63 | 413 | 39 | 65 | 231 | 69 | 71 | 206 | 36 |
| Total Analysis Volume [veh/h] | 264 | 1589 | 227 | 253 | 1651 | 156 | 259 | 925 | 276 | 284 | 824 | 145 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi |
|-------------------------|--------|-------|-------|--------|-------|-------|--------|-------|-------|--------|-------|-------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.09 | 0.25 | 0.14 | 0.09 | 0.26 | 0.10 | 0.09 | 0.19 | 0.17 | 0.10 | 0.17 | 0.09 |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.741 | | | | | | | | | | | |

Intersection Level Of Service Report

Intersection 11: Hawthorne Boulevard at Village Lane/Fashion Way

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.576 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Village Lane | | | Fashion Way | | |
|------------------------------|---------------------|-------|-------|---------------------|-------|-------|--------------|-------|-------|-------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | [Diagram] | | | [Diagram] | | | [Diagram] | | | [Diagram] | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | No | | | No | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Village Lane | | | Fashion Way | | |
|---|---------------------|-------|-------|---------------------|-------|-------|--------------|-------|-------|-------------|-------|-------|
| Base Volume Input [veh/h] | 70 | 1952 | 135 | 173 | 1945 | 47 | 86 | 0 | 113 | 142 | 23 | 166 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 70 | 1952 | 135 | 173 | 1945 | 47 | 86 | 0 | 113 | 142 | 23 | 166 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 18 | 488 | 34 | 43 | 486 | 12 | 22 | 0 | 28 | 36 | 6 | 42 |
| Total Analysis Volume [veh/h] | 70 | 1952 | 135 | 173 | 1945 | 47 | 86 | 0 | 113 | 142 | 23 | 166 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protec | Permi | Permi | Protec | Permi | Permi | Split | Permi | Overla | Split | Split | Overla |
|-------------------------|--------|-------|-------|--------|-------|-------|-------|-------|--------|-------|-------|--------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 0 | 8 | 0 | 4 | 4 |
| Auxiliary Signal Groups | | | | | | | | | 1,8 | | | 4,5 |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | - | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.02 | 0.31 | 0.08 | 0.06 | 0.30 | 0.03 | 0.05 | 0.00 | 0.05 | 0.05 | 0.06 | 0.04 |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.576 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 12: Hawthorne Boulevard at Del Amo Circle

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.582 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Del Amo Circle | | | Del Amo Circle | | |
|------------------------------|---------------------|-------|-------|---------------------|-------|-------|----------------|-------|-------|----------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | ↵↵↵↵ | | | ↵↵↵↵↵↵ | | | ↵↵ | | | ↵↵ | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Del Amo Circle | | | Del Amo Circle | | |
|---|---------------------|-------|-------|---------------------|-------|-------|----------------|-------|-------|----------------|-------|-------|
| Base Volume Input [veh/h] | 94 | 1817 | 51 | 81 | 1973 | 163 | 134 | 14 | 127 | 70 | 21 | 80 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 94 | 1817 | 51 | 81 | 1973 | 163 | 134 | 14 | 127 | 70 | 21 | 80 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 24 | 454 | 13 | 20 | 493 | 41 | 34 | 4 | 32 | 18 | 5 | 20 |
| Total Analysis Volume [veh/h] | 94 | 1817 | 51 | 81 | 1973 | 163 | 134 | 14 | 127 | 70 | 21 | 80 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protec | Permi | Permi | Protec | Permi | Permi | Permi | Permi | Permi | Permi | Permi | Permi | Permi |
|-------------------------|--------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 0 | 8 | 0 | 0 | 4 | 0 | |
| Auxiliary Signal Groups | | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | - | - | - | - | - | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.06 | 0.29 | 0.29 | 0.03 | 0.31 | 0.10 | 0.08 | 0.04 | 0.04 | 0.04 | 0.04 | 0.03 | 0.03 |
| Intersection LOS | A | | | | | | | | | | | | |
| Intersection V/C | 0.582 | | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 13: Hawthorne Boulevard at Carson Street

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.708 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Carson Street | | | Carson Street | | |
|------------------------------|---------------------|-------|-------|---------------------|-------|-------|---------------|-------|-------|---------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Carson Street | | | Carson Street | | |
|---|---------------------|-------|-------|---------------------|-------|-------|---------------|-------|-------|---------------|-------|-------|
| Base Volume Input [veh/h] | 115 | 1649 | 232 | 326 | 1737 | 59 | 102 | 448 | 90 | 198 | 454 | 187 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 115 | 1649 | 232 | 326 | 1737 | 59 | 102 | 448 | 90 | 198 | 454 | 187 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 29 | 412 | 58 | 82 | 434 | 15 | 26 | 112 | 23 | 50 | 114 | 47 |
| Total Analysis Volume [veh/h] | 115 | 1649 | 232 | 326 | 1737 | 59 | 102 | 448 | 90 | 198 | 454 | 187 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi |
|-------------------------|--------|-------|-------|--------|-------|-------|--------|-------|-------|--------|-------|-------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.07 | 0.26 | 0.15 | 0.11 | 0.28 | 0.28 | 0.06 | 0.17 | 0.17 | 0.07 | 0.09 | 0.12 |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.708 | | | | | | | | | | | |

Intersection Level Of Service Report

Intersection 14: Hawthorne Boulevard at Sepulveda Boulevard

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | D |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.818 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Sepulveda Boulevard | | | Sepulveda Boulevard | | |
|------------------------------|---------------------|-------|-------|---------------------|-------|-------|---------------------|-------|-------|---------------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | [Diagram] | | | [Diagram] | | | [Diagram] | | | [Diagram] | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Sepulveda Boulevard | | | Sepulveda Boulevard | | |
|---|---------------------|-------|-------|---------------------|-------|-------|---------------------|-------|-------|---------------------|-------|-------|
| Base Volume Input [veh/h] | 223 | 1592 | 586 | 290 | 1395 | 213 | 231 | 933 | 94 | 446 | 835 | 215 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 223 | 1592 | 586 | 290 | 1395 | 213 | 231 | 933 | 94 | 446 | 835 | 215 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 56 | 398 | 147 | 73 | 349 | 53 | 58 | 233 | 24 | 112 | 209 | 54 |
| Total Analysis Volume [veh/h] | 223 | 1592 | 586 | 290 | 1395 | 213 | 231 | 933 | 94 | 446 | 835 | 215 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protec | Permi | Unsig | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi |
|-------------------------|--------|-------|-------|--------|-------|-------|--------|-------|-------|--------|-------|-------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.08 | 0.25 | 0.00 | 0.10 | 0.22 | 0.13 | 0.08 | 0.21 | 0.21 | 0.15 | 0.17 | 0.13 |
| Intersection LOS | D | | | | | | | | | | | |
| Intersection V/C | 0.818 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 15: Madrona Avenue at Torrance Boulevard

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | D |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.868 |

Intersection Setup

| Name | Madrona Avenue | | | Madrona Avenue | | | Torrance Boulevard | | | Torrance Boulevard | | |
|------------------------------|----------------|-------|-------|----------------|-------|-------|--------------------|-------|-------|--------------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | T O R R | | | R O U T | | | T O R R | | | T O R R | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Madrona Avenue | | | Madrona Avenue | | | Torrance Boulevard | | | Torrance Boulevard | | |
|---|----------------|-------|-------|----------------|-------|-------|--------------------|-------|-------|--------------------|-------|-------|
| Base Volume Input [veh/h] | 123 | 1222 | 142 | 158 | 1110 | 214 | 370 | 1081 | 178 | 263 | 831 | 89 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 123 | 1222 | 142 | 158 | 1110 | 214 | 370 | 1081 | 178 | 263 | 831 | 89 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 31 | 306 | 36 | 40 | 278 | 54 | 93 | 270 | 45 | 66 | 208 | 22 |
| Total Analysis Volume [veh/h] | 123 | 1222 | 142 | 158 | 1110 | 214 | 370 | 1081 | 178 | 263 | 831 | 89 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi |
|-------------------------|--------|-------|-------|--------|-------|-------|--------|-------|-------|--------|-------|-------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.04 | 0.28 | 0.28 | 0.05 | 0.23 | 0.13 | 0.13 | 0.34 | 0.11 | 0.09 | 0.19 | 0.19 |
| Intersection LOS | D | | | | | | | | | | | |
| Intersection V/C | 0.868 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 16: Madrona Avenue at Carson Street

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | B |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.636 |

Intersection Setup

| Name | Madrona Avenue | | | Madrona Avenue | | | Carson Street | | | Carson Street | | |
|------------------------------|----------------|-------|-------|----------------|-------|-------|---------------|-------|-------|---------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | ⌊ ⌋ ⌋ | | | ⌊ ⌋ ⌋ | | | ⌊ ⌋ ⌋ | | | ⌊ ⌋ | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Madrona Avenue | | | Madrona Avenue | | | Carson Street | | | Carson Street | | |
|---|----------------|-------|-------|----------------|-------|-------|---------------|-------|-------|---------------|-------|-------|
| Base Volume Input [veh/h] | 84 | 846 | 184 | 327 | 965 | 144 | 195 | 936 | 74 | 48 | 742 | 114 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 84 | 846 | 184 | 327 | 965 | 144 | 195 | 936 | 74 | 48 | 742 | 114 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 21 | 212 | 46 | 82 | 241 | 36 | 49 | 234 | 19 | 12 | 186 | 29 |
| Total Analysis Volume [veh/h] | 84 | 846 | 184 | 327 | 965 | 144 | 195 | 936 | 74 | 48 | 742 | 114 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi |
|-------------------------|--------|-------|-------|--------|-------|-------|--------|-------|-------|--------|-------|-------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |




Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.03 | 0.18 | 0.12 | 0.11 | 0.20 | 0.09 | 0.07 | 0.20 | 0.05 | 0.03 | 0.18 | 0.18 |
| Intersection LOS | B | | | | | | | | | | | |
| Intersection V/C | 0.636 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 17: Del Amo Circle W at Project Driveway 1

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | All-way stop | Delay (sec / veh): | 8.5 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.195 |

Intersection Setup

| Name | Del Amo Circle W | | Del Amo Circle W | | Project Driveway 1 | |
|------------------------------|---|--------|---|--------|---|--------|
| Approach | Northbound | | Southbound | | Westbound | |
| Lane Configuration |  | |  | |  | |
| Turning Movement | Thru | Right | Left | Thru | Left | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 1 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | No | | No | | Yes | |

Volumes

| Name | Del Amo Circle W | | Del Amo Circle W | | Project Driveway 1 | |
|---|------------------|--------|------------------|--------|--------------------|--------|
| Base Volume Input [veh/h] | 94 | 46 | 6 | 100 | 74 | 69 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 94 | 46 | 6 | 100 | 74 | 69 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 24 | 12 | 2 | 25 | 19 | 17 |
| Total Analysis Volume [veh/h] | 94 | 46 | 6 | 100 | 74 | 69 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

Lanes

| | | | | | | |
|---------------------------------|------|------|------|------|------|------|
| Capacity per Entry Lane [veh/h] | 693 | 761 | 648 | 713 | 713 | 733 |
| Degree of Utilization, x | 0.10 | 0.09 | 0.01 | 0.07 | 0.07 | 0.20 |

Movement, Approach, & Intersection Results

| | | | | | | |
|------------------------------------|------|------|------|------|------|-------|
| 95th-Percentile Queue Length [veh] | 0.34 | 0.30 | 0.03 | 0.23 | 0.23 | 0.72 |
| 95th-Percentile Queue Length [ft] | 8.39 | 7.57 | 0.70 | 5.64 | 5.64 | 18.01 |
| Approach Delay [s/veh] | 8.19 | | 8.14 | | 9.10 | |
| Approach LOS | A | | A | | A | |
| Intersection Delay [s/veh] | 8.51 | | | | | |
| Intersection LOS | A | | | | | |

Intersection Level Of Service Report
Intersection 18: Project Driveway 2 at Carson Street

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 15.9 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.078 |

Intersection Setup

| Name | Project Driveway 2 | | Carson Street | | Carson Street | |
|------------------------------|--------------------|--------|---------------|--------|---------------|--------|
| Approach | Southbound | | Eastbound | | Westbound | |
| Lane Configuration | | | | | | |
| Turning Movement | Left | Right | Left | Thru | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 1 | 1 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 35.00 | | 35.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | Yes | | No | | No | |

Volumes

| Name | Project Driveway 2 | | Carson Street | | Carson Street | |
|---|--------------------|--------|---------------|--------|---------------|--------|
| Base Volume Input [veh/h] | 28 | 26 | 9 | 535 | 620 | 18 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 28 | 26 | 9 | 535 | 620 | 18 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 7 | 7 | 2 | 134 | 155 | 5 |
| Total Analysis Volume [veh/h] | 28 | 26 | 9 | 535 | 620 | 18 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| | | | |
|------------------------------------|------|------|------|
| Priority Scheme | Stop | Free | Free |
| Flared Lane | | | |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | No | | |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|-------|-------|-------|------|------|------|
| V/C, Movement V/C Ratio | 0.08 | 0.05 | 0.02 | 0.01 | 0.01 | 0.00 |
| d_M, Delay for Movement [s/veh] | 15.89 | 11.53 | 11.27 | 0.00 | 0.00 | 0.00 |
| Movement LOS | C | B | B | A | A | A |
| 95th-Percentile Queue Length [veh/ln] | 0.25 | 0.14 | 0.05 | 0.00 | 0.00 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 6.31 | 3.53 | 1.18 | 0.00 | 0.00 | 0.00 |
| d_A, Approach Delay [s/veh] | 13.79 | | 0.19 | | 0.00 | |
| Approach LOS | B | | A | | A | |
| d_I, Intersection Delay [s/veh] | 0.68 | | | | | |
| Intersection LOS | C | | | | | |

APPENDIX C-III

**EXISTING WITH AMBIENT GROWTH (YEAR 2025)
WITH PROJECT TRAFFIC CONDITIONS**

Intersection Level Of Service Report
Intersection 1: Anza Avenue at Torrance Boulevard

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | D |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.804 |

Intersection Setup

| Name | Anza Avenue | | | Anza Avenue | | | Torrance Boulevard | | | Torrance Boulevard | | |
|------------------------------|-------------|-------|-------|-------------|-------|-------|--------------------|-------|-------|--------------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | T O R | | | T O R | | | T O R | | | T O R | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Anza Avenue | | | Anza Avenue | | | Torrance Boulevard | | | Torrance Boulevard | | |
|---|-------------|-------|-------|-------------|-------|-------|--------------------|-------|-------|--------------------|-------|-------|
| Base Volume Input [veh/h] | 301 | 787 | 101 | 129 | 719 | 154 | 147 | 761 | 225 | 89 | 750 | 103 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 301 | 787 | 101 | 129 | 719 | 154 | 147 | 761 | 225 | 89 | 750 | 103 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 75 | 197 | 25 | 32 | 180 | 39 | 37 | 190 | 56 | 22 | 188 | 26 |
| Total Analysis Volume [veh/h] | 301 | 787 | 101 | 129 | 719 | 154 | 147 | 761 | 225 | 89 | 750 | 103 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi |
|-------------------------|--------|-------|-------|--------|-------|-------|--------|-------|-------|--------|-------|-------|
| Signal Group | 3 | 8 | 0 | 7 | 4 | 0 | 5 | 2 | 0 | 1 | 6 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.10 | 0.28 | 0.28 | 0.04 | 0.27 | 0.27 | 0.09 | 0.24 | 0.14 | 0.06 | 0.23 | 0.06 |
| Intersection LOS | D | | | | | | | | | | | |
| Intersection V/C | 0.804 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 2: Anza Avenue at Carson Street

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.724 |

Intersection Setup

| Name | Anza Avenue | | | Anza Avenue | | | Carson Street | | | Carson Street | | |
|------------------------------|-------------|-------|-------|-------------|-------|-------|---------------|-------|-------|---------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | T T T | | | T T T | | | T T T | | | T T T | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Anza Avenue | | | Anza Avenue | | | Carson Street | | | Carson Street | | |
|---|-------------|-------|-------|-------------|-------|-------|---------------|-------|-------|---------------|-------|-------|
| Base Volume Input [veh/h] | 22 | 842 | 255 | 130 | 730 | 34 | 25 | 174 | 37 | 197 | 205 | 221 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 22 | 842 | 255 | 130 | 730 | 34 | 25 | 174 | 37 | 197 | 205 | 221 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 6 | 211 | 64 | 33 | 183 | 9 | 6 | 44 | 9 | 49 | 51 | 55 |
| Total Analysis Volume [veh/h] | 22 | 842 | 255 | 130 | 730 | 34 | 25 | 174 | 37 | 197 | 205 | 221 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi |
|-------------------------|--------|-------|-------|--------|-------|-------|--------|-------|-------|--------|-------|-------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.01 | 0.34 | 0.34 | 0.08 | 0.24 | 0.24 | 0.02 | 0.13 | 0.13 | 0.07 | 0.13 | 0.14 |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.724 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 3: Anza Avenue at Sepulveda Boulevard

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.729 |

Intersection Setup

| Name | Anza Avenue | | | Anza Avenue | | | Sepulveda Boulevard | | | Sepulveda Boulevard | | |
|------------------------------|-------------|-------|-------|-------------|-------|-------|---------------------|-------|-------|---------------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | [Diagram] | | | [Diagram] | | | [Diagram] | | | [Diagram] | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Anza Avenue | | | Anza Avenue | | | Sepulveda Boulevard | | | Sepulveda Boulevard | | |
|---|-------------|-------|-------|-------------|-------|-------|---------------------|-------|-------|---------------------|-------|-------|
| Base Volume Input [veh/h] | 129 | 703 | 232 | 154 | 748 | 69 | 166 | 610 | 233 | 296 | 719 | 234 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 129 | 703 | 232 | 154 | 748 | 69 | 166 | 610 | 233 | 296 | 719 | 234 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 32 | 176 | 58 | 39 | 187 | 17 | 42 | 153 | 58 | 74 | 180 | 59 |
| Total Analysis Volume [veh/h] | 129 | 703 | 232 | 154 | 748 | 69 | 166 | 610 | 233 | 296 | 719 | 234 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi |
|-------------------------|--------|-------|-------|--------|-------|-------|--------|-------|-------|--------|-------|-------|
| Signal Group | 3 | 8 | 0 | 7 | 4 | 0 | 5 | 2 | 0 | 1 | 6 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.08 | 0.22 | 0.15 | 0.10 | 0.26 | 0.26 | 0.06 | 0.19 | 0.15 | 0.10 | 0.22 | 0.15 |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.729 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 4: Ocean Avenue at Torrance Boulevard

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 53.4 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | F |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.077 |

Intersection Setup

| Name | Ocean Avenue | | Torrance Boulevard | | Torrance Boulevard | |
|------------------------------|--------------|--------|--------------------|--------|--------------------|--------|
| Approach | Northbound | | Eastbound | | Westbound | |
| Lane Configuration | | | | | | |
| Turning Movement | Left | Right | Thru | Right | Left | Thru |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 1 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 25.00 | | 40.00 | | 40.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | No | | No | | No | |

Volumes

| Name | Ocean Avenue | | Torrance Boulevard | | Torrance Boulevard | |
|---|--------------|--------|--------------------|--------|--------------------|--------|
| Base Volume Input [veh/h] | 7 | 182 | 968 | 46 | 127 | 1132 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 7 | 182 | 968 | 46 | 127 | 1132 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 2 | 46 | 242 | 12 | 32 | 283 |
| Total Analysis Volume [veh/h] | 7 | 182 | 968 | 46 | 127 | 1132 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| | | | |
|------------------------------------|------|------|------|
| Priority Scheme | Stop | Free | Free |
| Flared Lane | No | | |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | No | | |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|-------|-------|------|------|-------|------|
| V/C, Movement V/C Ratio | 0.08 | 0.42 | 0.01 | 0.00 | 0.33 | 0.01 |
| d_M, Delay for Movement [s/veh] | 53.37 | 22.04 | 0.00 | 0.00 | 18.87 | 0.00 |
| Movement LOS | F | C | A | A | C | A |
| 95th-Percentile Queue Length [veh/ln] | 2.63 | 2.63 | 0.00 | 0.00 | 1.41 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 65.85 | 65.85 | 0.00 | 0.00 | 35.32 | 0.00 |
| d_A, Approach Delay [s/veh] | 23.20 | | 0.00 | | 1.90 | |
| Approach LOS | C | | A | | A | |
| d_I, Intersection Delay [s/veh] | 2.75 | | | | | |
| Intersection LOS | F | | | | | |

**Intersection Level Of Service Report
Intersection 5: Ocean Avenue at Carson Street**

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 42.9 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | E |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.043 |

Intersection Setup

| Name | Ocean Avenue | | | Ocean Avenue | | | Carson Street | | | Carsoon Street | | |
|------------------------------|--------------|-------|-------|--------------|-------|-------|---------------|-------|-------|----------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | ↶ | | | ⊕ | | | ↷ | | | ↷ | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 25.00 | | | 25.00 | | | 35.00 | | | 35.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | No | | | No | | | No | | | No | | |

Volumes

| Name | Ocean Avenue | | | Ocean Avenue | | | Carson Street | | | Carsoon Street | | |
|---|--------------|-------|-------|--------------|-------|-------|---------------|-------|-------|----------------|-------|-------|
| Base Volume Input [veh/h] | 0 | 0 | 31 | 28 | 5 | 52 | 120 | 569 | 4 | 0 | 601 | 40 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 0 | 0 | 31 | 28 | 5 | 52 | 120 | 569 | 4 | 0 | 601 | 40 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 0 | 0 | 8 | 7 | 1 | 13 | 30 | 142 | 1 | 0 | 150 | 10 |
| Total Analysis Volume [veh/h] | 0 | 0 | 31 | 28 | 5 | 52 | 120 | 569 | 4 | 0 | 601 | 40 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | | | | |
|------------------------------------|------|------|------|------|
| Priority Scheme | Stop | Stop | Free | Free |
| Flared Lane | | No | | |
| Storage Area [veh] | 0 | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | No | No | | |
| Number of Storage Spaces in Median | 0 | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|---------------------------------------|-------|------|-------|-------|-------|-------|-------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.00 | 0.00 | 0.04 | 0.21 | 0.04 | 0.08 | 0.13 | 0.01 | 0.00 | 0.00 | 0.01 | 0.00 |
| d_M, Delay for Movement [s/veh] | 0.00 | 0.00 | 10.30 | 38.79 | 42.85 | 17.09 | 9.39 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Movement LOS | | | B | E | E | C | A | A | A | | A | A |
| 95th-Percentile Queue Length [veh/ln] | 0.00 | 0.00 | 0.14 | 1.39 | 1.39 | 1.39 | 0.44 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 0.00 | 0.00 | 3.42 | 34.77 | 34.77 | 34.77 | 10.94 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| d_A, Approach Delay [s/veh] | 10.30 | | 25.75 | | | | 1.63 | | | 0.00 | | |
| Approach LOS | B | | D | | | | A | | | A | | |
| d_I, Intersection Delay [s/veh] | 2.51 | | | | | | | | | | | |
| Intersection LOS | E | | | | | | | | | | | |

Intersection Level Of Service Report

Intersection 6: Plaza Lane/Village Lane at Torrance Boulevard

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.408 |

Intersection Setup

| Name | Village Lane | | | Plaza Lane | | | Torrance Boulevard | | | Torrance Boulevard | | |
|------------------------------|--------------|-------|-------|------------|-------|-------|--------------------|-------|-------|--------------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | ⇐⇐⇐ | | | ⇐⇐⇐ | | | ⇐⇐⇐⇐⇐ | | | ⇐⇐⇐⇐ | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | No | | | Yes | | |

Volumes

| Name | Village Lane | | | Plaza Lane | | | Torrance Boulevard | | | Torrance Boulevard | | |
|---|--------------|-------|-------|------------|-------|-------|--------------------|-------|-------|--------------------|-------|-------|
| Base Volume Input [veh/h] | 97 | 7 | 76 | 34 | 3 | 12 | 24 | 850 | 129 | 104 | 1019 | 98 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 97 | 7 | 76 | 34 | 3 | 12 | 24 | 850 | 129 | 104 | 1019 | 98 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 24 | 2 | 19 | 9 | 1 | 3 | 6 | 213 | 32 | 26 | 255 | 25 |
| Total Analysis Volume [veh/h] | 97 | 7 | 76 | 34 | 3 | 12 | 24 | 850 | 129 | 104 | 1019 | 98 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Split | Split | Split | Split | Split | Split | Protec | Permi | Permi | Protec | Permi | Permi |
|-------------------------|-------|-------|-------|-------|-------|-------|--------|-------|-------|--------|-------|-------|
| Signal Group | 0 | 8 | 0 | 0 | 4 | 0 | 5 | 2 | 0 | 1 | 6 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | - | - | - | - | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.03 | 0.04 | 0.05 | 0.01 | 0.01 | 0.01 | 0.02 | 0.18 | 0.08 | 0.04 | 0.23 | 0.23 |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.408 | | | | | | | | | | | |

**Intersection Level Of Service Report
Intersection 7: Village Court at Village Lane**

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | All-way stop | Delay (sec / veh): | 7.7 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.067 |

Intersection Setup

| Name | Village Court | | Village Lane | | Village Lane | |
|------------------------------|---------------|--------|--------------|--------|--------------|--------|
| Approach | Northbound | | Eastbound | | Westbound | |
| Lane Configuration | | | | | | |
| Turning Movement | Left | Right | Thru | Right | Left | Thru |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 1 | 0 | 0 | 1 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | Yes | | Yes | | No | |

Volumes

| Name | Village Court | | Village Lane | | Village Lane | |
|---|---------------|--------|--------------|--------|--------------|--------|
| Base Volume Input [veh/h] | 45 | 46 | 12 | 46 | 30 | 15 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 45 | 46 | 12 | 46 | 30 | 15 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 11 | 12 | 3 | 12 | 8 | 4 |
| Total Analysis Volume [veh/h] | 45 | 46 | 12 | 46 | 30 | 15 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

Lanes

| | | | | | |
|---------------------------------|------|------|------|------|------|
| Capacity per Entry Lane [veh/h] | 684 | 885 | 872 | 680 | 751 |
| Degree of Utilization, x | 0.07 | 0.05 | 0.07 | 0.04 | 0.02 |

Movement, Approach, & Intersection Results

| | | | | | |
|------------------------------------|------|------|------|------|------|
| 95th-Percentile Queue Length [veh] | 0.21 | 0.16 | 0.21 | 0.14 | 0.06 |
| 95th-Percentile Queue Length [ft] | 5.27 | 4.11 | 5.33 | 3.45 | 1.53 |
| Approach Delay [s/veh] | 7.66 | | 7.42 | 8.02 | |
| Approach LOS | A | | A | A | |
| Intersection Delay [s/veh] | 7.67 | | | | |
| Intersection LOS | A | | | | |

**Intersection Level Of Service Report
Intersection 8: Village Court at Del Amo Circle**

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 11.7 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | B |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.002 |

Intersection Setup

| Name | Driveway | | | Village Court | | | Del Amo Circle | | | Del Amo Circle | | |
|------------------------------|------------|-------|-------|---------------|-------|-------|----------------|-------|-------|----------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | + | | | + | | | + | | | + | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | No | | | No | | |

Volumes

| Name | Driveway | | | Village Court | | | Del Amo Circle | | | Del Amo Circle | | |
|---|----------|-------|-------|---------------|-------|-------|----------------|-------|-------|----------------|-------|-------|
| Base Volume Input [veh/h] | 0 | 1 | 0 | 33 | 1 | 32 | 85 | 62 | 0 | 0 | 77 | 15 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 0 | 1 | 0 | 33 | 1 | 32 | 85 | 62 | 0 | 0 | 77 | 15 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 0 | 0 | 0 | 8 | 0 | 8 | 21 | 16 | 0 | 0 | 19 | 4 |
| Total Analysis Volume [veh/h] | 0 | 1 | 0 | 33 | 1 | 32 | 85 | 62 | 0 | 0 | 77 | 15 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | | | | |
|------------------------------------|------|------|------|------|
| Priority Scheme | Stop | Stop | Free | Free |
| Flared Lane | No | | | |
| Storage Area [veh] | 0 | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | No | No | | |
| Number of Storage Spaces in Median | 0 | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|---------------------------------------|-------|-------|------|-------|-------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | 0.03 | 0.06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| d_M, Delay for Movement [s/veh] | 10.91 | 11.45 | 8.49 | 11.19 | 11.72 | 8.67 | 7.54 | 0.00 | 0.00 | 7.34 | 0.00 | 0.00 |
| Movement LOS | B | B | A | B | B | A | A | A | | A | A | A |
| 95th-Percentile Queue Length [veh/ln] | 0.01 | 0.01 | 0.01 | 0.18 | 0.18 | 0.10 | 0.18 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 0.13 | 0.13 | 0.13 | 4.39 | 4.39 | 2.44 | 4.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| d_A, Approach Delay [s/veh] | 11.45 | | | 9.98 | | | 4.36 | | | 0.00 | | |
| Approach LOS | B | | | A | | | A | | | A | | |
| d_I, Intersection Delay [s/veh] | 4.28 | | | | | | | | | | | |
| Intersection LOS | B | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 8: Village Court at Del Amo Circle

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | All-way stop | Delay (sec / veh): | 8.2 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.128 |

Intersection Setup

| Name | Driveway | | | Village Court | | | Del Amo Circle | | | Del Amo Circle | | |
|------------------------------|------------|-------|-------|---------------|-------|-------|----------------|-------|-------|----------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | + | | | + | | | + | | | + | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | No | | | No | | |

Volumes

| Name | Driveway | | | Village Court | | | Del Amo Circle | | | Del Amo Circle | | |
|---|----------|-------|-------|---------------|-------|-------|----------------|-------|-------|----------------|-------|-------|
| Base Volume Input [veh/h] | 0 | 1 | 0 | 33 | 1 | 32 | 85 | 62 | 0 | 0 | 77 | 15 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 0 | 1 | 0 | 33 | 1 | 32 | 85 | 62 | 0 | 0 | 77 | 15 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 0 | 0 | 0 | 8 | 0 | 8 | 21 | 16 | 0 | 0 | 19 | 4 |
| Total Analysis Volume [veh/h] | 0 | 1 | 0 | 33 | 1 | 32 | 85 | 62 | 0 | 0 | 77 | 15 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

Lanes

| | | | | | | | | |
|---------------------------------|------|------|------|------|------|------|------|------|
| Capacity per Entry Lane [veh/h] | 682 | 640 | 808 | 665 | 733 | 733 | 716 | 750 |
| Degree of Utilization, x | 0.00 | 0.05 | 0.04 | 0.13 | 0.04 | 0.04 | 0.06 | 0.06 |

Movement, Approach, & Intersection Results

| | | | | | | | | |
|------------------------------------|------|------|------|-------|------|------|------|------|
| 95th-Percentile Queue Length [veh] | 0.00 | 0.17 | 0.12 | 0.44 | 0.13 | 0.13 | 0.21 | 0.20 |
| 95th-Percentile Queue Length [ft] | 0.11 | 4.20 | 3.09 | 10.93 | 3.31 | 3.31 | 5.14 | 4.89 |
| Approach Delay [s/veh] | 8.29 | 8.01 | | 8.45 | | 7.94 | | |
| Approach LOS | A | A | | A | | A | | |
| Intersection Delay [s/veh] | 8.20 | | | | | | | |
| Intersection LOS | A | | | | | | | |

Intersection Level Of Service Report
Intersection 9: Del Amo Circle W at Carson Street

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.378 |

Intersection Setup

| Name | Del Amo Circle W | | | Del Amo Circle W | | | Carson Street | | | Carson Street | | |
|------------------------------|------------------|-------|-------|------------------|-------|-------|---------------|-------|-------|---------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Del Amo Circle W | | | Del Amo Circle W | | | Carson Street | | | Carson Street | | |
|---|------------------|-------|-------|------------------|-------|-------|---------------|-------|-------|---------------|-------|-------|
| Base Volume Input [veh/h] | 2 | 1 | 0 | 28 | 6 | 70 | 87 | 504 | 18 | 16 | 570 | 88 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 2 | 1 | 0 | 28 | 6 | 70 | 87 | 504 | 18 | 16 | 570 | 88 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 1 | 0 | 0 | 7 | 2 | 18 | 22 | 126 | 5 | 4 | 143 | 22 |
| Total Analysis Volume [veh/h] | 2 | 1 | 0 | 28 | 6 | 70 | 87 | 504 | 18 | 16 | 570 | 88 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Permi | Permi | Permi | Permi | Permi | Permi | Permi | Permi | Permi | Permi | Permi | Permi |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Signal Group | 0 | 8 | 0 | 0 | 4 | 0 | 0 | 2 | 0 | 0 | 6 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | - | - | - | - | - | - | - | - | - | - | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.00 | 0.00 | 0.00 | 0.02 | 0.00 | 0.04 | 0.05 | 0.16 | 0.16 | 0.01 | 0.18 | 0.06 |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.378 | | | | | | | | | | | |

Intersection Level Of Service Report

Intersection 10: Hathorne Boulevard at Torrance Boulevard

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.737 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Torrance Boulevard | | | Torrance Boulevard | | |
|------------------------------|---------------------|-------|-------|---------------------|-------|-------|--------------------|-------|-------|--------------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Torrance Boulevard | | | Torrance Boulevard | | |
|---|---------------------|-------|-------|---------------------|-------|-------|--------------------|-------|-------|--------------------|-------|-------|
| Base Volume Input [veh/h] | 199 | 1110 | 126 | 133 | 1733 | 229 | 239 | 787 | 181 | 255 | 1028 | 83 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 199 | 1110 | 126 | 133 | 1733 | 229 | 239 | 787 | 181 | 255 | 1028 | 83 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 50 | 278 | 32 | 33 | 433 | 57 | 60 | 197 | 45 | 64 | 257 | 21 |
| Total Analysis Volume [veh/h] | 199 | 1110 | 126 | 133 | 1733 | 229 | 239 | 787 | 181 | 255 | 1028 | 83 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi |
|-------------------------|--------|-------|-------|--------|-------|-------|--------|-------|-------|--------|-------|-------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.07 | 0.17 | 0.08 | 0.05 | 0.27 | 0.14 | 0.08 | 0.16 | 0.11 | 0.09 | 0.21 | 0.05 |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.737 | | | | | | | | | | | |

Intersection Level Of Service Report

Intersection 11: Hawthorne Boulevard at Village Lane/Fashion Way

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.455 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Village Lane | | | Fashion Way | | |
|------------------------------|---------------------|-------|-------|---------------------|-------|-------|--------------|-------|-------|-------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | [Diagram] | | | [Diagram] | | | [Diagram] | | | [Diagram] | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | No | | | No | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Village Lane | | | Fashion Way | | |
|---|---------------------|-------|-------|---------------------|-------|-------|--------------|-------|-------|-------------|-------|-------|
| Base Volume Input [veh/h] | 60 | 1597 | 114 | 41 | 1774 | 75 | 41 | 0 | 27 | 57 | 33 | 34 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 60 | 1597 | 114 | 41 | 1774 | 75 | 41 | 0 | 27 | 57 | 33 | 34 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 15 | 399 | 29 | 10 | 444 | 19 | 10 | 0 | 7 | 14 | 8 | 9 |
| Total Analysis Volume [veh/h] | 60 | 1597 | 114 | 41 | 1774 | 75 | 41 | 0 | 27 | 57 | 33 | 34 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protec | Permi | Permi | Protec | Permi | Permi | Split | Permi | Overla | Split | Split | Overla |
|-------------------------|--------|-------|-------|--------|-------|-------|-------|-------|--------|-------|-------|--------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 0 | 8 | 0 | 4 | 4 |
| Auxiliary Signal Groups | | | | | | | | | 1,8 | | | 4,5 |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | - | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.02 | 0.25 | 0.07 | 0.01 | 0.28 | 0.05 | 0.03 | 0.00 | 0.00 | 0.02 | 0.03 | 0.01 |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.455 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 12: Hawthorne Boulevard at Del Amo Circle

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.447 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Del Amo Circle | | | Del Amo Circle | | |
|------------------------------|---------------------|-------|-------|---------------------|-------|-------|----------------|-------|-------|----------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | ↵↵↵↵ | | | ↵↵↵↵↵↵ | | | ↵↵ | | | ↵↵ | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Del Amo Circle | | | Del Amo Circle | | |
|---|---------------------|-------|-------|---------------------|-------|-------|----------------|-------|-------|----------------|-------|-------|
| Base Volume Input [veh/h] | 51 | 1515 | 11 | 10 | 1648 | 128 | 86 | 2 | 54 | 8 | 5 | 6 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 51 | 1515 | 11 | 10 | 1648 | 128 | 86 | 2 | 54 | 8 | 5 | 6 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 13 | 379 | 3 | 3 | 412 | 32 | 22 | 1 | 14 | 2 | 1 | 2 |
| Total Analysis Volume [veh/h] | 51 | 1515 | 11 | 10 | 1648 | 128 | 86 | 2 | 54 | 8 | 5 | 6 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protec | Permi | Permi | Protec | Permi | Permi | Permi | Permi | Permi | Permi | Permi | Permi | Permi |
|-------------------------|--------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 0 | 8 | 0 | 0 | 4 | 0 | |
| Auxiliary Signal Groups | | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | - | - | - | - | - | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|--|
| V/C, Movement V/C Ratio | 0.03 | 0.24 | 0.24 | 0.00 | 0.26 | 0.08 | 0.05 | 0.02 | 0.02 | 0.01 | 0.00 | 0.00 | |
| Intersection LOS | A | | | | | | | | | | | | |
| Intersection V/C | 0.447 | | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 13: Hawthorne Boulevard at Carson Street

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | B |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.640 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Carson Street | | | Carson Street | | |
|------------------------------|---------------------|-------|-------|---------------------|-------|-------|---------------|-------|-------|---------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Carson Street | | | Carson Street | | |
|---|---------------------|-------|-------|---------------------|-------|-------|---------------|-------|-------|---------------|-------|-------|
| Base Volume Input [veh/h] | 116 | 1590 | 127 | 112 | 1475 | 68 | 71 | 405 | 74 | 222 | 554 | 132 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 116 | 1590 | 127 | 112 | 1475 | 68 | 71 | 405 | 74 | 222 | 554 | 132 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 29 | 398 | 32 | 28 | 369 | 17 | 18 | 101 | 19 | 56 | 139 | 33 |
| Total Analysis Volume [veh/h] | 116 | 1590 | 127 | 112 | 1475 | 68 | 71 | 405 | 74 | 222 | 554 | 132 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi |
|-------------------------|--------|-------|-------|--------|-------|-------|--------|-------|-------|--------|-------|-------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.07 | 0.25 | 0.08 | 0.04 | 0.24 | 0.24 | 0.04 | 0.15 | 0.15 | 0.08 | 0.12 | 0.08 |
| Intersection LOS | B | | | | | | | | | | | |
| Intersection V/C | 0.640 | | | | | | | | | | | |

Intersection Level Of Service Report

Intersection 14: Hawthorne Boulevard at Sepulveda Boulevard

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.753 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Sepulveda Boulevard | | | Sepulveda Boulevard | | |
|------------------------------|---------------------|-------|-------|---------------------|-------|-------|---------------------|-------|-------|---------------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | [Diagram] | | | [Diagram] | | | [Diagram] | | | [Diagram] | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Sepulveda Boulevard | | | Sepulveda Boulevard | | |
|---|---------------------|-------|-------|---------------------|-------|-------|---------------------|-------|-------|---------------------|-------|-------|
| Base Volume Input [veh/h] | 101 | 1151 | 330 | 154 | 1346 | 206 | 239 | 895 | 96 | 580 | 981 | 210 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 101 | 1151 | 330 | 154 | 1346 | 206 | 239 | 895 | 96 | 580 | 981 | 210 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 25 | 288 | 83 | 39 | 337 | 52 | 60 | 224 | 24 | 145 | 245 | 53 |
| Total Analysis Volume [veh/h] | 101 | 1151 | 330 | 154 | 1346 | 206 | 239 | 895 | 96 | 580 | 981 | 210 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protec | Permi | Unsig | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi |
|-------------------------|--------|-------|-------|--------|-------|-------|--------|-------|-------|--------|-------|-------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.04 | 0.18 | 0.00 | 0.05 | 0.21 | 0.13 | 0.08 | 0.21 | 0.21 | 0.20 | 0.20 | 0.13 |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.753 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 15: Madrona Avenue at Torrance Boulevard

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.702 |

Intersection Setup

| Name | Madrona Avenue | | | Madrona Avenue | | | Torrance Boulevard | | | Torrance Boulevard | | |
|------------------------------|----------------|-------|-------|----------------|-------|-------|--------------------|-------|-------|--------------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | TLOTR | | | TLOTR | | | TLOTR | | | TLOTR | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Madrona Avenue | | | Madrona Avenue | | | Torrance Boulevard | | | Torrance Boulevard | | |
|---|----------------|-------|-------|----------------|-------|-------|--------------------|-------|-------|--------------------|-------|-------|
| Base Volume Input [veh/h] | 207 | 1062 | 144 | 116 | 1047 | 281 | 309 | 631 | 94 | 119 | 903 | 73 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 207 | 1062 | 144 | 116 | 1047 | 281 | 309 | 631 | 94 | 119 | 903 | 73 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 52 | 266 | 36 | 29 | 262 | 70 | 77 | 158 | 24 | 30 | 226 | 18 |
| Total Analysis Volume [veh/h] | 207 | 1062 | 144 | 116 | 1047 | 281 | 309 | 631 | 94 | 119 | 903 | 73 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi |
|-------------------------|--------|-------|-------|--------|-------|-------|--------|-------|-------|--------|-------|-------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.07 | 0.25 | 0.25 | 0.04 | 0.22 | 0.18 | 0.11 | 0.20 | 0.06 | 0.04 | 0.20 | 0.20 |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.702 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 16: Madrona Avenue at Carson Street

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.566 |

Intersection Setup

| Name | Madrona Avenue | | | Madrona Avenue | | | Carson Street | | | Carson Street | | |
|------------------------------|----------------|-------|-------|----------------|-------|-------|---------------|-------|-------|---------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | ◀◀◀ | | | ▶▶▶ | | | ◀◀◀ | | | ▶▶▶ | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Madrona Avenue | | | Madrona Avenue | | | Carson Street | | | Carson Street | | |
|---|----------------|-------|-------|----------------|-------|-------|---------------|-------|-------|---------------|-------|-------|
| Base Volume Input [veh/h] | 72 | 892 | 99 | 155 | 781 | 123 | 108 | 476 | 30 | 64 | 739 | 166 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 72 | 892 | 99 | 155 | 781 | 123 | 108 | 476 | 30 | 64 | 739 | 166 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 18 | 223 | 25 | 39 | 195 | 31 | 27 | 119 | 8 | 16 | 185 | 42 |
| Total Analysis Volume [veh/h] | 72 | 892 | 99 | 155 | 781 | 123 | 108 | 476 | 30 | 64 | 739 | 166 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi |
|-------------------------|--------|-------|-------|--------|-------|-------|--------|-------|-------|--------|-------|-------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.03 | 0.19 | 0.06 | 0.05 | 0.16 | 0.08 | 0.04 | 0.10 | 0.02 | 0.04 | 0.19 | 0.19 |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.566 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 17: Del Amo Circle W at Project Driveway 1

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | All-way stop | Delay (sec / veh): | 8.2 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.152 |

Intersection Setup

| Name | Del Amo Circle W | | Del Amo Circle W | | Project Driveway 1 | |
|------------------------------|------------------|--------|------------------|--------|--------------------|--------|
| Approach | Northbound | | Southbound | | Westbound | |
| Lane Configuration | | | | | | |
| Turning Movement | Thru | Right | Left | Thru | Left | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 1 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | No | | No | | Yes | |

Volumes

| Name | Del Amo Circle W | | Del Amo Circle W | | Project Driveway 1 | |
|---|------------------|--------|------------------|--------|--------------------|--------|
| Base Volume Input [veh/h] | 110 | 115 | 38 | 67 | 41 | 29 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 110 | 115 | 38 | 67 | 41 | 29 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 28 | 29 | 10 | 17 | 10 | 7 |
| Total Analysis Volume [veh/h] | 110 | 115 | 38 | 67 | 41 | 29 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings**Lanes**

| | | | | | | |
|---------------------------------|------|------|------|------|------|------|
| Capacity per Entry Lane [veh/h] | 725 | 844 | 666 | 734 | 734 | 706 |
| Degree of Utilization, x | 0.15 | 0.14 | 0.06 | 0.05 | 0.05 | 0.10 |

Movement, Approach, & Intersection Results

| | | | | | | |
|------------------------------------|-------|-------|------|------|------|------|
| 95th-Percentile Queue Length [veh] | 0.53 | 0.47 | 0.18 | 0.14 | 0.14 | 0.33 |
| 95th-Percentile Queue Length [ft] | 13.33 | 11.77 | 4.53 | 3.58 | 3.58 | 8.22 |
| Approach Delay [s/veh] | 8.09 | | 8.06 | | | 8.66 |
| Approach LOS | A | | A | | | A |
| Intersection Delay [s/veh] | 8.18 | | | | | |
| Intersection LOS | A | | | | | |

Intersection Level Of Service Report
Intersection 18: Project Driveway 2 at Carson Street

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 16.2 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.033 |

Intersection Setup

| Name | Project Driveway 2 | | Carson Street | | Carson Street | |
|------------------------------|--------------------|--------|---------------|--------|---------------|--------|
| Approach | Southbound | | Eastbound | | Westbound | |
| Lane Configuration | | | | | | |
| Turning Movement | Left | Right | Left | Thru | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 1 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 35.00 | | 35.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | Yes | | No | | No | |

Volumes

| Name | Project Driveway 2 | | Carson Street | | Carson Street | |
|---|--------------------|--------|---------------|--------|---------------|--------|
| Base Volume Input [veh/h] | 11 | 13 | 5 | 520 | 686 | 36 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 11 | 13 | 5 | 520 | 686 | 36 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 3 | 3 | 1 | 130 | 172 | 9 |
| Total Analysis Volume [veh/h] | 11 | 13 | 5 | 520 | 686 | 36 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| | | | |
|------------------------------------|------|------|------|
| Priority Scheme | Stop | Free | Free |
| Flared Lane | No | | |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | No | | |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|-------|-------|-------|------|------|------|
| V/C, Movement V/C Ratio | 0.03 | 0.02 | 0.01 | 0.01 | 0.01 | 0.00 |
| d_M, Delay for Movement [s/veh] | 16.21 | 12.14 | 11.83 | 0.00 | 0.00 | 0.00 |
| Movement LOS | C | B | B | A | A | A |
| 95th-Percentile Queue Length [veh/ln] | 0.18 | 0.18 | 0.03 | 0.00 | 0.00 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 4.49 | 4.49 | 0.71 | 0.00 | 0.00 | 0.00 |
| d_A, Approach Delay [s/veh] | 14.01 | | 0.11 | | 0.00 | |
| Approach LOS | B | | A | | A | |
| d_I, Intersection Delay [s/veh] | 0.31 | | | | | |
| Intersection LOS | C | | | | | |

Intersection Level Of Service Report
Intersection 1: Anza Avenue at Torrance Boulevard

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | D |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.831 |

Intersection Setup

| Name | Anza Avenue | | | Anza Avenue | | | Torrance Boulevard | | | Torrance Boulevard | | |
|------------------------------|-------------|-------|-------|-------------|-------|-------|--------------------|-------|-------|--------------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | T O R | | | T O R | | | T O R | | | T O R | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Anza Avenue | | | Anza Avenue | | | Torrance Boulevard | | | Torrance Boulevard | | |
|---|-------------|-------|-------|-------------|-------|-------|--------------------|-------|-------|--------------------|-------|-------|
| Base Volume Input [veh/h] | 249 | 796 | 95 | 147 | 791 | 138 | 150 | 841 | 174 | 146 | 715 | 197 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 249 | 796 | 95 | 147 | 791 | 138 | 150 | 841 | 174 | 146 | 715 | 197 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 62 | 199 | 24 | 37 | 198 | 35 | 38 | 210 | 44 | 37 | 179 | 49 |
| Total Analysis Volume [veh/h] | 249 | 796 | 95 | 147 | 791 | 138 | 150 | 841 | 174 | 146 | 715 | 197 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi |
|-------------------------|--------|-------|-------|--------|-------|-------|--------|-------|-------|--------|-------|-------|
| Signal Group | 3 | 8 | 0 | 7 | 4 | 0 | 5 | 2 | 0 | 1 | 6 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.09 | 0.28 | 0.28 | 0.05 | 0.29 | 0.29 | 0.09 | 0.26 | 0.11 | 0.09 | 0.22 | 0.12 |
| Intersection LOS | D | | | | | | | | | | | |
| Intersection V/C | 0.831 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 2: Anza Avenue at Carson Street

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.722 |

Intersection Setup

| Name | Anza Avenue | | | Anza Avenue | | | Carson Street | | | Carson Street | | |
|------------------------------|-------------|-------|-------|-------------|-------|-------|---------------|-------|-------|---------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | T T T | | | T T T | | | T T T | | | T T T | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Anza Avenue | | | Anza Avenue | | | Carson Street | | | Carson Street | | |
|---|-------------|-------|-------|-------------|-------|-------|---------------|-------|-------|---------------|-------|-------|
| Base Volume Input [veh/h] | 39 | 950 | 164 | 124 | 870 | 41 | 27 | 163 | 37 | 205 | 250 | 171 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 39 | 950 | 164 | 124 | 870 | 41 | 27 | 163 | 37 | 205 | 250 | 171 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 10 | 238 | 41 | 31 | 218 | 10 | 7 | 41 | 9 | 51 | 63 | 43 |
| Total Analysis Volume [veh/h] | 39 | 950 | 164 | 124 | 870 | 41 | 27 | 163 | 37 | 205 | 250 | 171 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi |
|-------------------------|--------|-------|-------|--------|-------|-------|--------|-------|-------|--------|-------|-------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.02 | 0.35 | 0.35 | 0.08 | 0.28 | 0.28 | 0.02 | 0.13 | 0.13 | 0.07 | 0.16 | 0.11 |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.722 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 3: Anza Avenue at Sepulveda Boulevard

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.799 |

Intersection Setup

| Name | Anza Avenue | | | Anza Avenue | | | Sepulveda Boulevard | | | Sepulveda Boulevard | | |
|------------------------------|-------------|-------|-------|-------------|-------|-------|---------------------|-------|-------|---------------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | [Diagram] | | | [Diagram] | | | [Diagram] | | | [Diagram] | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Anza Avenue | | | Anza Avenue | | | Sepulveda Boulevard | | | Sepulveda Boulevard | | |
|---|-------------|-------|-------|-------------|-------|-------|---------------------|-------|-------|---------------------|-------|-------|
| Base Volume Input [veh/h] | 170 | 736 | 165 | 183 | 853 | 90 | 207 | 736 | 270 | 169 | 723 | 220 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 170 | 736 | 165 | 183 | 853 | 90 | 207 | 736 | 270 | 169 | 723 | 220 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 43 | 184 | 41 | 46 | 213 | 23 | 52 | 184 | 68 | 42 | 181 | 55 |
| Total Analysis Volume [veh/h] | 170 | 736 | 165 | 183 | 853 | 90 | 207 | 736 | 270 | 169 | 723 | 220 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi |
|-------------------------|--------|-------|-------|--------|-------|-------|--------|-------|-------|--------|-------|-------|
| Signal Group | 3 | 8 | 0 | 7 | 4 | 0 | 5 | 2 | 0 | 1 | 6 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.11 | 0.23 | 0.10 | 0.11 | 0.29 | 0.29 | 0.07 | 0.23 | 0.17 | 0.06 | 0.23 | 0.14 |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.799 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 4: Ocean Avenue at Torrance Boulevard

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 54.9 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | F |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.124 |

Intersection Setup

| Name | Ocean Avenue | | Torrance Boulevard | | Torrance Boulevard | |
|------------------------------|--------------|--------|--------------------|--------|--------------------|--------|
| Approach | Northbound | | Eastbound | | Westbound | |
| Lane Configuration | | | | | | |
| Turning Movement | Left | Right | Thru | Right | Left | Thru |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 1 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 25.00 | | 40.00 | | 40.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | No | | No | | No | |

Volumes

| Name | Ocean Avenue | | Torrance Boulevard | | Torrance Boulevard | |
|---|--------------|--------|--------------------|--------|--------------------|--------|
| Base Volume Input [veh/h] | 10 | 42 | 1271 | 44 | 68 | 1152 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 10 | 42 | 1271 | 44 | 68 | 1152 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 3 | 11 | 318 | 11 | 17 | 288 |
| Total Analysis Volume [veh/h] | 10 | 42 | 1271 | 44 | 68 | 1152 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| | | | |
|------------------------------------|------|------|------|
| Priority Scheme | Stop | Free | Free |
| Flared Lane | No | | |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | No | | |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|-------|-------|------|------|-------|------|
| V/C, Movement V/C Ratio | 0.12 | 0.12 | 0.01 | 0.00 | 0.25 | 0.01 |
| d_M, Delay for Movement [s/veh] | 54.95 | 20.69 | 0.00 | 0.00 | 22.34 | 0.00 |
| Movement LOS | F | C | A | A | C | A |
| 95th-Percentile Queue Length [veh/ln] | 0.93 | 0.93 | 0.00 | 0.00 | 0.95 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 23.16 | 23.16 | 0.00 | 0.00 | 23.77 | 0.00 |
| d_A, Approach Delay [s/veh] | 27.28 | | 0.00 | | 1.25 | |
| Approach LOS | D | | A | | A | |
| d_I, Intersection Delay [s/veh] | 1.14 | | | | | |
| Intersection LOS | F | | | | | |

Intersection Level Of Service Report
Intersection 5: Ocean Avenue at Carson Street

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 28.1 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | D |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.065 |

Intersection Setup

| Name | Ocean Avenue | | | Ocean Avenue | | | Carson Street | | | Carsoon Street | | |
|------------------------------|--------------|-------|-------|--------------|-------|-------|---------------|-------|-------|----------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | ↶ | | | ⊕ | | | ↶↷ | | | ↷ | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 25.00 | | | 25.00 | | | 35.00 | | | 35.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | No | | | No | | | No | | | No | | |

Volumes

| Name | Ocean Avenue | | | Ocean Avenue | | | Carson Street | | | Carsoon Street | | |
|---|--------------|-------|-------|--------------|-------|-------|---------------|-------|-------|----------------|-------|-------|
| Base Volume Input [veh/h] | 0 | 0 | 28 | 24 | 12 | 12 | 9 | 516 | 5 | 0 | 633 | 37 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 0 | 0 | 28 | 24 | 12 | 12 | 9 | 516 | 5 | 0 | 633 | 37 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 0 | 0 | 7 | 6 | 3 | 3 | 2 | 129 | 1 | 0 | 158 | 9 |
| Total Analysis Volume [veh/h] | 0 | 0 | 28 | 24 | 12 | 12 | 9 | 516 | 5 | 0 | 633 | 37 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | | | | |
|------------------------------------|------|------|------|------|
| Priority Scheme | Stop | Stop | Free | Free |
| Flared Lane | | No | | |
| Storage Area [veh] | 0 | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | No | No | | |
| Number of Storage Spaces in Median | 0 | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|---------------------------------------|-------|------|-------|-------|-------|-------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.00 | 0.00 | 0.04 | 0.11 | 0.07 | 0.02 | 0.01 | 0.01 | 0.00 | 0.00 | 0.01 | 0.00 |
| d_M, Delay for Movement [s/veh] | 0.00 | 0.00 | 10.07 | 25.46 | 28.07 | 14.00 | 8.97 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Movement LOS | | | B | D | D | B | A | A | A | | A | A |
| 95th-Percentile Queue Length [veh/ln] | 0.00 | 0.00 | 0.12 | 0.71 | 0.71 | 0.71 | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 0.00 | 0.00 | 2.95 | 17.77 | 17.77 | 17.77 | 0.74 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| d_A, Approach Delay [s/veh] | 10.07 | | 23.25 | | | 0.15 | | | 0.00 | | | |
| Approach LOS | B | | C | | | A | | | A | | | |
| d_I, Intersection Delay [s/veh] | 1.16 | | | | | | | | | | | |
| Intersection LOS | D | | | | | | | | | | | |

Intersection Level Of Service Report

Intersection 6: Plaza Lane/Village Lane at Torrance Boulevard

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.491 |

Intersection Setup

| Name | Village Lane | | | Plaza Lane | | | Torrance Boulevard | | | Torrance Boulevard | | |
|------------------------------|--------------|-------|-------|------------|-------|-------|--------------------|-------|-------|--------------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | ◀◀◀ | | | ▶▶▶ | | | ▶▶▶ | | | ▶▶▶ | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | No | | | Yes | | |

Volumes

| Name | Village Lane | | | Plaza Lane | | | Torrance Boulevard | | | Torrance Boulevard | | |
|---|--------------|-------|-------|------------|-------|-------|--------------------|-------|-------|--------------------|-------|-------|
| Base Volume Input [veh/h] | 112 | 17 | 119 | 154 | 11 | 56 | 57 | 1046 | 114 | 66 | 1026 | 46 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 112 | 17 | 119 | 154 | 11 | 56 | 57 | 1046 | 114 | 66 | 1026 | 46 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 28 | 4 | 30 | 39 | 3 | 14 | 14 | 262 | 29 | 17 | 257 | 12 |
| Total Analysis Volume [veh/h] | 112 | 17 | 119 | 154 | 11 | 56 | 57 | 1046 | 114 | 66 | 1026 | 46 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Split | Split | Split | Split | Split | Split | Protec | Permi | Permi | Protec | Permi | Permi |
|-------------------------|-------|-------|-------|-------|-------|-------|--------|-------|-------|--------|-------|-------|
| Signal Group | 0 | 8 | 0 | 0 | 4 | 0 | 5 | 2 | 0 | 1 | 6 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | - | - | - | - | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.04 | 0.04 | 0.07 | 0.05 | 0.06 | 0.04 | 0.04 | 0.22 | 0.07 | 0.02 | 0.22 | 0.22 |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.491 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 7: Village Court at Village Lane

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | All-way stop | Delay (sec / veh): | 8.0 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.111 |

Intersection Setup

| Name | Village Court | | Village Lane | | Village Lane | |
|------------------------------|---------------|--------|--------------|--------|--------------|--------|
| Approach | Northbound | | Eastbound | | Westbound | |
| Lane Configuration | | | | | | |
| Turning Movement | Left | Right | Thru | Right | Left | Thru |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 1 | 0 | 0 | 1 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | Yes | | Yes | | No | |

Volumes

| Name | Village Court | | Village Lane | | Village Lane | |
|---|---------------|--------|--------------|--------|--------------|--------|
| Base Volume Input [veh/h] | 42 | 48 | 35 | 58 | 72 | 25 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 42 | 48 | 35 | 58 | 72 | 25 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 11 | 12 | 9 | 15 | 18 | 6 |
| Total Analysis Volume [veh/h] | 42 | 48 | 35 | 58 | 72 | 25 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings**Lanes**

| | | | | | |
|---------------------------------|------|------|------|------|------|
| Capacity per Entry Lane [veh/h] | 656 | 840 | 837 | 676 | 745 |
| Degree of Utilization, x | 0.06 | 0.06 | 0.11 | 0.11 | 0.03 |

Movement, Approach, & Intersection Results

| | | | | | |
|------------------------------------|------|------|------|------|------|
| 95th-Percentile Queue Length [veh] | 0.20 | 0.18 | 0.37 | 0.36 | 0.10 |
| 95th-Percentile Queue Length [ft] | 5.12 | 4.54 | 9.34 | 8.91 | 2.60 |
| Approach Delay [s/veh] | 7.86 | | 7.84 | 8.42 | |
| Approach LOS | A | | A | A | |
| Intersection Delay [s/veh] | 8.05 | | | | |
| Intersection LOS | A | | | | |

Intersection Level Of Service Report
Intersection 8: Village Court at Del Amo Circle

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 11.7 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | B |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.002 |

Intersection Setup

| Name | Driveway | | | Village Court | | | Del Amo Circle | | | Del Amo Circle | | |
|------------------------------|------------|-------|-------|---------------|-------|-------|----------------|-------|-------|----------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | + | | | + | | | + | | | + | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | No | | | No | | |

Volumes

| Name | Driveway | | | Village Court | | | Del Amo Circle | | | Del Amo Circle | | |
|---|----------|-------|-------|---------------|-------|-------|----------------|-------|-------|----------------|-------|-------|
| Base Volume Input [veh/h] | 0 | 1 | 0 | 53 | 1 | 69 | 56 | 101 | 0 | 0 | 77 | 33 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 0 | 1 | 0 | 53 | 1 | 69 | 56 | 101 | 0 | 0 | 77 | 33 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 0 | 0 | 0 | 13 | 0 | 17 | 14 | 25 | 0 | 0 | 19 | 8 |
| Total Analysis Volume [veh/h] | 0 | 1 | 0 | 53 | 1 | 69 | 56 | 101 | 0 | 0 | 77 | 33 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | | | | |
|------------------------------------|------|------|------|------|
| Priority Scheme | Stop | Stop | Free | Free |
| Flared Lane | No | | | |
| Storage Area [veh] | 0 | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | No | No | | |
| Number of Storage Spaces in Median | 0 | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|---------------------------------------|-------|-------|------|-------|-------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.07 | 0.04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| d_M, Delay for Movement [s/veh] | 10.87 | 11.32 | 8.59 | 10.99 | 11.67 | 8.87 | 7.53 | 0.00 | 0.00 | 7.42 | 0.00 | 0.00 |
| Movement LOS | B | B | A | B | B | A | A | A | | A | A | A |
| 95th-Percentile Queue Length [veh/ln] | 0.01 | 0.01 | 0.01 | 0.27 | 0.27 | 0.22 | 0.12 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 0.13 | 0.13 | 0.13 | 6.73 | 6.73 | 5.55 | 2.95 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| d_A, Approach Delay [s/veh] | 11.32 | | | 9.80 | | | 2.69 | | | 0.00 | | |
| Approach LOS | B | | | A | | | A | | | A | | |
| d_I, Intersection Delay [s/veh] | 4.19 | | | | | | | | | | | |
| Intersection LOS | B | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 8: Village Court at Del Amo Circle

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | All-way stop | Delay (sec / veh): | 8.3 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.087 |

Intersection Setup

| Name | Driveway | | | Village Court | | | Del Amo Circle | | | Del Amo Circle | | |
|------------------------------|------------|-------|-------|---------------|-------|-------|----------------|-------|-------|----------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | + | | | + | | | + | | | + | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | No | | | No | | |

Volumes

| Name | Driveway | | | Village Court | | | Del Amo Circle | | | Del Amo Circle | | |
|---|----------|-------|-------|---------------|-------|-------|----------------|-------|-------|----------------|-------|-------|
| Base Volume Input [veh/h] | 0 | 1 | 0 | 53 | 1 | 69 | 56 | 101 | 0 | 0 | 77 | 33 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 0 | 1 | 0 | 53 | 1 | 69 | 56 | 101 | 0 | 0 | 77 | 33 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 0 | 0 | 0 | 13 | 0 | 17 | 14 | 25 | 0 | 0 | 19 | 8 |
| Total Analysis Volume [veh/h] | 0 | 1 | 0 | 53 | 1 | 69 | 56 | 101 | 0 | 0 | 77 | 33 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

Lanes

| | | | | | | | | |
|---------------------------------|------|------|------|------|------|------|------|------|
| Capacity per Entry Lane [veh/h] | 659 | 631 | 795 | 641 | 704 | 704 | 690 | 751 |
| Degree of Utilization, x | 0.00 | 0.09 | 0.09 | 0.09 | 0.07 | 0.07 | 0.08 | 0.07 |

Movement, Approach, & Intersection Results

| | | | | | | | | |
|------------------------------------|------|------|------|------|------|------|------|------|
| 95th-Percentile Queue Length [veh] | 0.00 | 0.28 | 0.28 | 0.29 | 0.23 | 0.23 | 0.26 | 0.24 |
| 95th-Percentile Queue Length [ft] | 0.11 | 6.99 | 7.10 | 7.15 | 5.78 | 5.78 | 6.47 | 5.91 |
| Approach Delay [s/veh] | 8.47 | 8.22 | | 8.44 | | 8.12 | | |
| Approach LOS | A | A | | A | | A | | |
| Intersection Delay [s/veh] | 8.28 | | | | | | | |
| Intersection LOS | A | | | | | | | |

Intersection Level Of Service Report
Intersection 9: Del Amo Circle W at Carson Street

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.405 |

Intersection Setup

| Name | Del Amo Circle W | | | Del Amo Circle W | | | Carson Street | | | Carson Street | | |
|------------------------------|------------------|-------|-------|------------------|-------|-------|---------------|-------|-------|---------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Del Amo Circle W | | | Del Amo Circle W | | | Carson Street | | | Carson Street | | |
|---|------------------|-------|-------|------------------|-------|-------|---------------|-------|-------|---------------|-------|-------|
| Base Volume Input [veh/h] | 23 | 8 | 13 | 70 | 2 | 120 | 67 | 437 | 8 | 8 | 556 | 90 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 23 | 8 | 13 | 70 | 2 | 120 | 67 | 437 | 8 | 8 | 556 | 90 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 6 | 2 | 3 | 18 | 1 | 30 | 17 | 109 | 2 | 2 | 139 | 23 |
| Total Analysis Volume [veh/h] | 23 | 8 | 13 | 70 | 2 | 120 | 67 | 437 | 8 | 8 | 556 | 90 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Permi | Permi | Permi | Permi | Permi | Permi | Permi | Permi | Permi | Permi | Permi | Permi | Permi |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Signal Group | 0 | 8 | 0 | 0 | 4 | 0 | 0 | 2 | 0 | 0 | 6 | 0 | |
| Auxiliary Signal Groups | | | | | | | | | | | | | |
| Lead / Lag | - | - | - | - | - | - | - | - | - | - | - | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|--|
| V/C, Movement V/C Ratio | 0.01 | 0.01 | 0.01 | 0.04 | 0.00 | 0.08 | 0.04 | 0.14 | 0.14 | 0.01 | 0.17 | 0.06 | |
| Intersection LOS | A | | | | | | | | | | | | |
| Intersection V/C | 0.405 | | | | | | | | | | | | |

Intersection Level Of Service Report

Intersection 10: Hathorne Boulevard at Torrance Boulevard

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.745 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Torrance Boulevard | | | Torrance Boulevard | | |
|------------------------------|---------------------|-------|-------|---------------------|-------|-------|--------------------|-------|-------|--------------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | [Diagram] | | | [Diagram] | | | [Diagram] | | | [Diagram] | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Torrance Boulevard | | | Torrance Boulevard | | |
|---|---------------------|-------|-------|---------------------|-------|-------|--------------------|-------|-------|--------------------|-------|-------|
| Base Volume Input [veh/h] | 264 | 1595 | 229 | 253 | 1661 | 156 | 259 | 927 | 276 | 290 | 824 | 145 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 264 | 1595 | 229 | 253 | 1661 | 156 | 259 | 927 | 276 | 290 | 824 | 145 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 66 | 399 | 57 | 63 | 415 | 39 | 65 | 232 | 69 | 73 | 206 | 36 |
| Total Analysis Volume [veh/h] | 264 | 1595 | 229 | 253 | 1661 | 156 | 259 | 927 | 276 | 290 | 824 | 145 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi |
|-------------------------|--------|-------|-------|--------|-------|-------|--------|-------|-------|--------|-------|-------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.09 | 0.25 | 0.14 | 0.09 | 0.26 | 0.10 | 0.09 | 0.19 | 0.17 | 0.10 | 0.17 | 0.09 |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.745 | | | | | | | | | | | |

Intersection Level Of Service Report

Intersection 11: Hawthorne Boulevard at Village Lane/Fashion Way

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.577 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Village Lane | | | Fashion Way | | |
|------------------------------|---------------------|-------|-------|---------------------|-------|-------|--------------|-------|-------|-------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | [Diagram] | | | [Diagram] | | | [Diagram] | | | [Diagram] | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | No | | | No | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Village Lane | | | Fashion Way | | |
|---|---------------------|-------|-------|---------------------|-------|-------|--------------|-------|-------|-------------|-------|-------|
| Base Volume Input [veh/h] | 70 | 1960 | 135 | 173 | 1961 | 47 | 86 | 0 | 113 | 142 | 23 | 166 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 70 | 1960 | 135 | 173 | 1961 | 47 | 86 | 0 | 113 | 142 | 23 | 166 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 18 | 490 | 34 | 43 | 490 | 12 | 22 | 0 | 28 | 36 | 6 | 42 |
| Total Analysis Volume [veh/h] | 70 | 1960 | 135 | 173 | 1961 | 47 | 86 | 0 | 113 | 142 | 23 | 166 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protec | Permi | Permi | Protec | Permi | Permi | Split | Permi | Overla | Split | Split | Overla |
|-------------------------|--------|-------|-------|--------|-------|-------|-------|-------|--------|-------|-------|--------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 0 | 8 | 0 | 4 | 4 |
| Auxiliary Signal Groups | | | | | | | | | 1,8 | | | 4,5 |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | - | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.02 | 0.31 | 0.08 | 0.06 | 0.31 | 0.03 | 0.05 | 0.00 | 0.05 | 0.05 | 0.06 | 0.04 |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.577 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 12: Hawthorne Boulevard at Del Amo Circle

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.586 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Del Amo Circle | | | Del Amo Circle | | |
|------------------------------|---------------------|-------|-------|---------------------|-------|-------|----------------|-------|-------|----------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | ↵ ↵ ↵ | | | ↵ ↵ ↵ ↵ | | | ↵ ↵ | | | ↵ ↵ | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Del Amo Circle | | | Del Amo Circle | | |
|---|---------------------|-------|-------|---------------------|-------|-------|----------------|-------|-------|----------------|-------|-------|
| Base Volume Input [veh/h] | 94 | 1820 | 51 | 81 | 1978 | 174 | 139 | 14 | 127 | 70 | 21 | 80 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 94 | 1820 | 51 | 81 | 1978 | 174 | 139 | 14 | 127 | 70 | 21 | 80 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 24 | 455 | 13 | 20 | 495 | 44 | 35 | 4 | 32 | 18 | 5 | 20 |
| Total Analysis Volume [veh/h] | 94 | 1820 | 51 | 81 | 1978 | 174 | 139 | 14 | 127 | 70 | 21 | 80 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protec | Permi | Permi | Protec | Permi | Permi | Permi | Permi | Permi | Permi | Permi | Permi | Permi |
|-------------------------|--------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 0 | 8 | 0 | 0 | 4 | 0 | |
| Auxiliary Signal Groups | | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | - | - | - | - | - | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.06 | 0.29 | 0.29 | 0.03 | 0.31 | 0.11 | 0.09 | 0.04 | 0.04 | 0.04 | 0.04 | 0.03 | 0.03 |
| Intersection LOS | A | | | | | | | | | | | | |
| Intersection V/C | 0.586 | | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 13: Hawthorne Boulevard at Carson Street

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.711 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Carson Street | | | Carson Street | | |
|------------------------------|---------------------|-------|-------|---------------------|-------|-------|---------------|-------|-------|---------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Carson Street | | | Carson Street | | |
|---|---------------------|-------|-------|---------------------|-------|-------|---------------|-------|-------|---------------|-------|-------|
| Base Volume Input [veh/h] | 127 | 1649 | 232 | 326 | 1737 | 64 | 105 | 452 | 98 | 198 | 460 | 187 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 127 | 1649 | 232 | 326 | 1737 | 64 | 105 | 452 | 98 | 198 | 460 | 187 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 32 | 412 | 58 | 82 | 434 | 16 | 26 | 113 | 25 | 50 | 115 | 47 |
| Total Analysis Volume [veh/h] | 127 | 1649 | 232 | 326 | 1737 | 64 | 105 | 452 | 98 | 198 | 460 | 187 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi |
|-------------------------|--------|-------|-------|--------|-------|-------|--------|-------|-------|--------|-------|-------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.08 | 0.26 | 0.15 | 0.11 | 0.28 | 0.28 | 0.07 | 0.17 | 0.17 | 0.07 | 0.10 | 0.12 |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.711 | | | | | | | | | | | |

Intersection Level Of Service Report

Intersection 14: Hawthorne Boulevard at Sepulveda Boulevard

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | D |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.820 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Sepulveda Boulevard | | | Sepulveda Boulevard | | |
|------------------------------|---------------------|-------|-------|---------------------|-------|-------|---------------------|-------|-------|---------------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | [Diagram] | | | [Diagram] | | | [Diagram] | | | [Diagram] | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Sepulveda Boulevard | | | Sepulveda Boulevard | | |
|---|---------------------|-------|-------|---------------------|-------|-------|---------------------|-------|-------|---------------------|-------|-------|
| Base Volume Input [veh/h] | 223 | 1599 | 586 | 293 | 1400 | 213 | 231 | 933 | 94 | 446 | 835 | 220 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 223 | 1599 | 586 | 293 | 1400 | 213 | 231 | 933 | 94 | 446 | 835 | 220 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 56 | 400 | 147 | 73 | 350 | 53 | 58 | 233 | 24 | 112 | 209 | 55 |
| Total Analysis Volume [veh/h] | 223 | 1599 | 586 | 293 | 1400 | 213 | 231 | 933 | 94 | 446 | 835 | 220 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protec | Permi | Unsig | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi |
|-------------------------|--------|-------|-------|--------|-------|-------|--------|-------|-------|--------|-------|-------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.08 | 0.25 | 0.00 | 0.10 | 0.22 | 0.13 | 0.08 | 0.21 | 0.21 | 0.15 | 0.17 | 0.14 |
| Intersection LOS | D | | | | | | | | | | | |
| Intersection V/C | 0.820 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 15: Madrona Avenue at Torrance Boulevard

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | D |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.869 |

Intersection Setup

| Name | Madrona Avenue | | | Madrona Avenue | | | Torrance Boulevard | | | Torrance Boulevard | | |
|------------------------------|----------------|-------|-------|----------------|-------|-------|--------------------|-------|-------|--------------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | TLOTR | | | TLOTR | | | TLOTR | | | TLOTR | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Madrona Avenue | | | Madrona Avenue | | | Torrance Boulevard | | | Torrance Boulevard | | |
|---|----------------|-------|-------|----------------|-------|-------|--------------------|-------|-------|--------------------|-------|-------|
| Base Volume Input [veh/h] | 123 | 1223 | 142 | 158 | 1111 | 215 | 371 | 1084 | 178 | 263 | 836 | 89 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 123 | 1223 | 142 | 158 | 1111 | 215 | 371 | 1084 | 178 | 263 | 836 | 89 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 31 | 306 | 36 | 40 | 278 | 54 | 93 | 271 | 45 | 66 | 209 | 22 |
| Total Analysis Volume [veh/h] | 123 | 1223 | 142 | 158 | 1111 | 215 | 371 | 1084 | 178 | 263 | 836 | 89 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi |
|-------------------------|--------|-------|-------|--------|-------|-------|--------|-------|-------|--------|-------|-------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.04 | 0.28 | 0.28 | 0.05 | 0.23 | 0.13 | 0.13 | 0.34 | 0.11 | 0.09 | 0.19 | 0.19 |
| Intersection LOS | D | | | | | | | | | | | |
| Intersection V/C | 0.869 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 16: Madrona Avenue at Carson Street

| | | | |
|------------------|------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | - |
| Analysis Method: | ICU 1 | Level Of Service: | B |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.637 |

Intersection Setup

| Name | Madrona Avenue | | | Madrona Avenue | | | Carson Street | | | Carson Street | | |
|------------------------------|----------------|-------|-------|----------------|-------|-------|---------------|-------|-------|---------------|-------|-------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Madrona Avenue | | | Madrona Avenue | | | Carson Street | | | Carson Street | | |
|---|----------------|-------|-------|----------------|-------|-------|---------------|-------|-------|---------------|-------|-------|
| Base Volume Input [veh/h] | 84 | 846 | 184 | 327 | 965 | 145 | 196 | 939 | 74 | 48 | 747 | 114 |
| Base Volume Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 84 | 846 | 184 | 327 | 965 | 145 | 196 | 939 | 74 | 48 | 747 | 114 |
| Peak Hour Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Other Adjustment Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Total 15-Minute Volume [veh/h] | 21 | 212 | 46 | 82 | 241 | 36 | 49 | 235 | 19 | 12 | 187 | 29 |
| Total Analysis Volume [veh/h] | 84 | 846 | 184 | 327 | 965 | 145 | 196 | 939 | 74 | 48 | 747 | 114 |
| Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|------------------|-------|
| Cycle Length [s] | 100 |
| Lost time [s] | 10.00 |

Phasing & Timing

| Control Type | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi | Protec | Permi | Permi |
|-------------------------|--------|-------|-------|--------|-------|-------|--------|-------|-------|--------|-------|-------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| V/C, Movement V/C Ratio | 0.03 | 0.18 | 0.12 | 0.11 | 0.20 | 0.09 | 0.07 | 0.20 | 0.05 | 0.03 | 0.18 | 0.18 |
| Intersection LOS | B | | | | | | | | | | | |
| Intersection V/C | 0.637 | | | | | | | | | | | |

Intersection Level Of Service Report
Intersection 17: Del Amo Circle W at Project Driveway 1

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | All-way stop | Delay (sec / veh): | 8.7 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.226 |

Intersection Setup

| Name | Del Amo Circle W | | Del Amo Circle W | | Project Driveway 1 | |
|------------------------------|------------------|--------|------------------|--------|--------------------|--------|
| Approach | Northbound | | Southbound | | Westbound | |
| Lane Configuration | | | | | | |
| Turning Movement | Thru | Right | Left | Thru | Left | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 1 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | No | | No | | Yes | |

Volumes

| Name | Del Amo Circle W | | Del Amo Circle W | | Project Driveway 1 | |
|---|------------------|--------|------------------|--------|--------------------|--------|
| Base Volume Input [veh/h] | 94 | 51 | 22 | 100 | 87 | 77 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 94 | 51 | 22 | 100 | 87 | 77 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 24 | 13 | 6 | 25 | 22 | 19 |
| Total Analysis Volume [veh/h] | 94 | 51 | 22 | 100 | 87 | 77 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings**Lanes**

| | | | | | | |
|---------------------------------|------|------|------|------|------|------|
| Capacity per Entry Lane [veh/h] | 679 | 750 | 640 | 702 | 702 | 725 |
| Degree of Utilization, x | 0.11 | 0.10 | 0.03 | 0.07 | 0.07 | 0.23 |




Movement, Approach, & Intersection Results

| | | | | | | |
|------------------------------------|------|------|------|------|------|-------|
| 95th-Percentile Queue Length [veh] | 0.36 | 0.32 | 0.11 | 0.23 | 0.23 | 0.87 |
| 95th-Percentile Queue Length [ft] | 8.92 | 8.00 | 2.67 | 5.73 | 5.73 | 21.66 |
| Approach Delay [s/veh] | 8.33 | | 8.27 | | | 9.41 |
| Approach LOS | A | | A | | | A |
| Intersection Delay [s/veh] | 8.72 | | | | | |
| Intersection LOS | A | | | | | |

Intersection Level Of Service Report
Intersection 18: Project Driveway 2 at Carson Street

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 16.9 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.098 |

Intersection Setup

| Name | Project Driveway 2 | | Carson Street | | Carson Street | |
|------------------------------|---|--------|---|--------|---|--------|
| Approach | Southbound | | Eastbound | | Westbound | |
| Lane Configuration |  | |  | |  | |
| Turning Movement | Left | Right | Left | Thru | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 1 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 35.00 | | 35.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | Yes | | No | | No | |

Volumes

| Name | Project Driveway 2 | | Carson Street | | Carson Street | |
|---|--------------------|--------|---------------|--------|---------------|--------|
| Base Volume Input [veh/h] | 34 | 29 | 14 | 543 | 620 | 41 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 34 | 29 | 14 | 543 | 620 | 41 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 9 | 7 | 4 | 136 | 155 | 10 |
| Total Analysis Volume [veh/h] | 34 | 29 | 14 | 543 | 620 | 41 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| | | | |
|------------------------------------|------|------|------|
| Priority Scheme | Stop | Free | Free |
| Flared Lane | No | | |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | No | | |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|-------|-------|-------|------|------|------|
| V/C, Movement V/C Ratio | 0.10 | 0.05 | 0.02 | 0.01 | 0.01 | 0.00 |
| d_M, Delay for Movement [s/veh] | 16.92 | 12.84 | 11.49 | 0.00 | 0.00 | 0.00 |
| Movement LOS | C | B | B | A | A | A |
| 95th-Percentile Queue Length [veh/ln] | 0.52 | 0.52 | 0.08 | 0.00 | 0.00 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 13.03 | 13.03 | 1.89 | 0.00 | 0.00 | 0.00 |
| d_A, Approach Delay [s/veh] | 15.04 | | 0.29 | | 0.00 | |
| Approach LOS | C | | A | | A | |
| d_I, Intersection Delay [s/veh] | 0.87 | | | | | |
| Intersection LOS | C | | | | | |

APPENDIX D

CALTRANS INTERSECTION LEVEL OF SERVICE CALCULATION WORKSHEETS

APPENDIX D-1

EXISTING TRAFFIC CONDITIONS

Intersection Level Of Service Report

Intersection 10: Hawthorne Boulevard at Torrance Boulevard

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 33.9 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.662 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Torrance Boulevard | | | Torrance Boulevard | | |
|------------------------------|---------------------|--------|--------|---------------------|--------|--------|--------------------|--------|--------|--------------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | No | | | No | | | No | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Torrance Boulevard | | | Torrance Boulevard | | |
|---|---------------------|--------|--------|---------------------|--------|--------|--------------------|--------|--------|--------------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 196 | 1077 | 116 | 131 | 1700 | 225 | 235 | 772 | 178 | 247 | 1012 | 82 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 196 | 1077 | 116 | 131 | 1700 | 225 | 235 | 772 | 178 | 247 | 1012 | 82 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 49 | 269 | 29 | 33 | 425 | 56 | 59 | 193 | 45 | 62 | 253 | 21 |
| Total Analysis Volume [veh/h] | 196 | 1077 | 116 | 131 | 1700 | 225 | 235 | 772 | 178 | 247 | 1012 | 82 |
| Presence of On-Street Parking | No | | No | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_di, Inbound Pedestrian Volume crossing in | 0 | | | 0 | | | 0 | | | 0 | | |
| v_co, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ci, Inbound Pedestrian Volume crossing mi | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ab, Corner Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 120 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Fully actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|------------------------------|----------|---------|---------|----------|---------|---------|----------|---------|---------|----------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |
| Minimum Green [s] | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 6 | 0 |
| Maximum Green [s] | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 |
| Amber [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| All red [s] | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 |
| Split [s] | 13 | 45 | 0 | 10 | 42 | 0 | 14 | 49 | 0 | 16 | 51 | 0 |
| Vehicle Extension [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 |
| Pedestrian Clearance [s] | 0 | 31 | 0 | 0 | 31 | 0 | 0 | 38 | 0 | 0 | 38 | 0 |
| Delayed Vehicle Green [s] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Rest In Walk | | No | | | No | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| Minimum Recall | No | No | | No | No | | No | No | | No | No | |
| Maximum Recall | No | No | | No | No | | No | No | | No | No | |
| Pedestrian Recall | No | No | | No | No | | No | No | | No | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | L | C | R | L | C | R | L | C | R | L | C | R |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| C, Cycle Length [s] | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | 9 | 60 | 60 | 6 | 57 | 57 | 10 | 28 | 28 | 11 | 28 | 28 |
| g / C, Green / Cycle | 0.07 | 0.50 | 0.50 | 0.05 | 0.47 | 0.47 | 0.08 | 0.23 | 0.23 | 0.09 | 0.24 | 0.24 |
| (v / s)_i Volume / Saturation Flow Rate | 0.06 | 0.16 | 0.07 | 0.04 | 0.25 | 0.14 | 0.07 | 0.15 | 0.11 | 0.07 | 0.20 | 0.05 |
| s, saturation flow rate [veh/h] | 3459 | 6792 | 1589 | 3459 | 6792 | 1589 | 3459 | 5094 | 1589 | 3459 | 5094 | 1589 |
| c, Capacity [veh/h] | 253 | 3362 | 787 | 176 | 3211 | 751 | 290 | 1185 | 370 | 305 | 1207 | 377 |
| d1, Uniform Delay [s] | 54.68 | 18.19 | 16.51 | 56.22 | 22.26 | 19.44 | 54.05 | 41.66 | 39.80 | 53.73 | 43.61 | 36.85 |
| k, delay calibration | 0.11 | 0.50 | 0.50 | 0.11 | 0.50 | 0.50 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 5.08 | 0.25 | 0.40 | 6.18 | 0.63 | 1.02 | 5.36 | 0.61 | 0.97 | 5.08 | 1.63 | 0.29 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | | | | | | |
|---------------------------------------|--------|--------|-------|-------|--------|--------|--------|--------|--------|--------|--------|-------|
| X, volume / capacity | 0.78 | 0.32 | 0.15 | 0.75 | 0.53 | 0.30 | 0.81 | 0.65 | 0.48 | 0.81 | 0.84 | 0.22 |
| d, Delay for Lane Group [s/veh] | 59.76 | 18.45 | 16.91 | 62.40 | 22.89 | 20.46 | 59.41 | 42.27 | 40.78 | 58.82 | 45.24 | 37.13 |
| Lane Group LOS | E | B | B | E | C | C | E | D | D | E | D | D |
| Critical Lane Group | Yes | No | No | No | Yes | No | Yes | No | No | No | Yes | No |
| 50th-Percentile Queue Length [veh/ln] | 3.09 | 4.52 | 1.83 | 2.11 | 8.46 | 4.06 | 3.70 | 6.95 | 4.65 | 3.88 | 9.68 | 1.98 |
| 50th-Percentile Queue Length [ft/ln] | 77.26 | 112.90 | 45.73 | 52.75 | 211.46 | 101.47 | 92.61 | 173.83 | 116.27 | 96.90 | 241.96 | 49.51 |
| 95th-Percentile Queue Length [veh/ln] | 5.56 | 8.00 | 3.29 | 3.80 | 13.23 | 7.31 | 6.67 | 11.28 | 8.19 | 6.98 | 14.78 | 3.56 |
| 95th-Percentile Queue Length [ft/ln] | 139.07 | 200.02 | 82.32 | 94.94 | 330.71 | 182.65 | 166.70 | 281.95 | 204.69 | 174.43 | 369.51 | 89.12 |

Movement, Approach, & Intersection Results

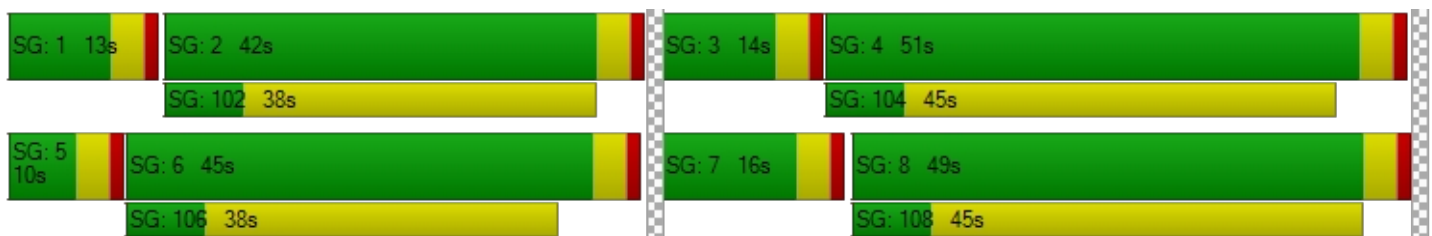
| | | | | | | | | | | | | |
|---------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d_M, Delay for Movement [s/veh] | 59.76 | 18.45 | 16.91 | 62.40 | 22.89 | 20.46 | 59.41 | 42.27 | 40.78 | 58.82 | 45.24 | 37.13 |
| Movement LOS | E | B | B | E | C | C | E | D | D | E | D | D |
| d_A, Approach Delay [s/veh] | 24.15 | | | 25.14 | | | 45.45 | | | 47.24 | | |
| Approach LOS | C | | | C | | | D | | | D | | |
| d_I, Intersection Delay [s/veh] | 33.90 | | | | | | | | | | | |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.662 | | | | | | | | | | | |

Other Modes

| | | | | |
|--|-------|-------|-------|-------|
| g_Walk,mi, Effective Walk Time [s] | 11.0 | 11.0 | 11.0 | 11.0 |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| d_p, Pedestrian Delay [s] | 49.52 | 49.52 | 49.52 | 49.52 |
| I_p,int, Pedestrian LOS Score for Intersection | 3.403 | 3.398 | 3.147 | 3.119 |
| Crosswalk LOS | C | C | C | C |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | 2000 | 2000 | 2000 |
| c_b, Capacity of the bicycle lane [bicycles/h] | 683 | 633 | 750 | 783 |
| d_b, Bicycle Delay [s] | 26.02 | 28.03 | 23.45 | 22.22 |
| I_b,int, Bicycle LOS Score for Intersection | 2.133 | 2.408 | 2.211 | 2.297 |
| Bicycle LOS | B | B | B | B |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 1 | 2 | 3 | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | 5 | 6 | 7 | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |







Intersection Level Of Service Report

Intersection 11: Hawthorne Boulevard at Village Lane/Fashion Way

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 9.8 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.396 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Village Lane | | | Fashion Way | | |
|------------------------------|---|--------|--------|---|--------|--------|---|--------|--------|---|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration |  | | |  | | |  | | |  | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | No | | | No | | | No | | |
| Crosswalk | No | | | No | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Village Lane | | | Fashion Way | | |
|---|---------------------|--------|--------|---------------------|--------|--------|--------------|--------|--------|-------------|--------|--------|
| Base Volume Input [veh/h] | 59 | 1549 | 112 | 40 | 1737 | 74 | 40 | 0 | 27 | 56 | 32 | 33 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 59 | 1549 | 112 | 40 | 1737 | 74 | 40 | 0 | 27 | 56 | 32 | 33 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 15 | 387 | 28 | 10 | 434 | 19 | 10 | 0 | 7 | 14 | 8 | 8 |
| Total Analysis Volume [veh/h] | 59 | 1549 | 112 | 40 | 1737 | 74 | 40 | 0 | 27 | 56 | 32 | 33 |
| Presence of On-Street Parking | No | | No | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_di, Inbound Pedestrian Volume crossing in | 0 | | | 0 | | | 0 | | | 0 | | |
| v_co, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ci, Inbound Pedestrian Volume crossing mi | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ab, Corner Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 90 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Fully actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Split | Permiss | Overlap | Split | Split | Overlap |
|------------------------------|----------|---------|---------|----------|---------|---------|-------|---------|---------|-------|-------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 8 | 0 | 8 | 0 | 4 | 4 |
| Auxiliary Signal Groups | | | | | | | | | 1,8 | | | 4,5 |
| Lead / Lag | Lead | - | - | Lead | - | - | Lag | - | - | - | - | - |
| Minimum Green [s] | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 0 | 6 | 0 | 6 | 6 |
| Maximum Green [s] | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 0 | 30 | 0 | 30 | 30 |
| Amber [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 0.0 | 3.0 | 0.0 | 3.0 | 3.0 |
| All red [s] | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 0.0 | 1.0 | 0.0 | 1.0 | 1.0 |
| Split [s] | 10 | 55 | 0 | 10 | 55 | 0 | 12 | 0 | 12 | 0 | 13 | 13 |
| Vehicle Extension [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 0.0 | 3.0 | 0.0 | 3.0 | 3.0 |
| Walk [s] | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pedestrian Clearance [s] | 0 | 18 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Delayed Vehicle Green [s] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Rest In Walk | | No | | | No | | No | | | | No | |
| I1, Start-Up Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 0.0 | 2.0 | 0.0 | 2.0 | 2.0 |
| I2, Clearance Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 0.0 | 2.0 | 0.0 | 2.0 | 2.0 |
| Minimum Recall | No | No | | No | No | | No | | No | | No | No |
| Maximum Recall | No | No | | No | No | | No | | No | | No | No |
| Pedestrian Recall | No | No | | No | No | | No | | No | | No | No |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | L | C | R | L | C | R | L | R | L | C | R |
|---|-------|------|------|-------|------|------|-------|-------|-------|-------|-------|
| C, Cycle Length [s] | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 0.00 | 2.00 | 2.00 | 0.00 |
| g_i, Effective Green Time [s] | 5 | 59 | 59 | 4 | 58 | 58 | 5 | 14 | 6 | 6 | 23 |
| g / C, Green / Cycle | 0.05 | 0.66 | 0.66 | 0.04 | 0.65 | 0.65 | 0.06 | 0.15 | 0.06 | 0.06 | 0.25 |
| (v / s)_i Volume / Saturation Flow Rate | 0.02 | 0.23 | 0.07 | 0.01 | 0.26 | 0.05 | 0.03 | 0.02 | 0.02 | 0.02 | 0.02 |
| s, saturation flow rate [veh/h] | 3459 | 6792 | 1589 | 3459 | 6792 | 1589 | 1417 | 1589 | 1781 | 1844 | 1589 |
| c, Capacity [veh/h] | 182 | 4470 | 1046 | 151 | 4408 | 1032 | 130 | 244 | 115 | 119 | 402 |
| d1, Uniform Delay [s] | 41.16 | 6.82 | 5.67 | 41.73 | 7.46 | 5.83 | 43.17 | 32.87 | 40.45 | 40.43 | 25.69 |
| k, delay calibration | 0.11 | 0.50 | 0.50 | 0.11 | 0.50 | 0.50 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 1.02 | 0.21 | 0.21 | 0.93 | 0.27 | 0.13 | 1.32 | 0.20 | 2.06 | 1.93 | 0.09 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | | | | | |
|---------------------------------------|-------|--------|-------|-------|--------|-------|-------|-------|-------|-------|-------|
| X, volume / capacity | 0.32 | 0.35 | 0.11 | 0.27 | 0.39 | 0.07 | 0.31 | 0.11 | 0.38 | 0.37 | 0.08 |
| d, Delay for Lane Group [s/veh] | 42.18 | 7.04 | 5.87 | 42.67 | 7.73 | 5.96 | 44.50 | 33.07 | 42.52 | 42.37 | 25.78 |
| Lane Group LOS | D | A | A | D | A | A | D | C | D | D | C |
| Critical Lane Group | Yes | No | No | No | Yes | No | Yes | No | Yes | No | No |
| 50th-Percentile Queue Length [veh/ln] | 0.65 | 2.91 | 0.74 | 0.45 | 3.52 | 0.50 | 0.92 | 0.52 | 0.99 | 1.00 | 0.54 |
| 50th-Percentile Queue Length [ft/ln] | 16.28 | 72.75 | 18.57 | 11.14 | 88.08 | 12.41 | 23.04 | 12.90 | 24.63 | 24.92 | 13.56 |
| 95th-Percentile Queue Length [veh/ln] | 1.17 | 5.24 | 1.34 | 0.80 | 6.34 | 0.89 | 1.66 | 0.93 | 1.77 | 1.79 | 0.98 |
| 95th-Percentile Queue Length [ft/ln] | 29.30 | 130.94 | 33.43 | 20.06 | 158.55 | 22.34 | 41.48 | 23.21 | 44.33 | 44.86 | 24.41 |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|---------------------------------|-------|------|------|-------|------|------|-------|------|-------|-------|-------|-------|
| d_M, Delay for Movement [s/veh] | 42.18 | 7.04 | 5.87 | 42.67 | 7.73 | 5.96 | 44.50 | 0.00 | 33.07 | 42.48 | 42.37 | 25.78 |
| Movement LOS | D | A | A | D | A | A | D | | C | D | D | C |
| d_A, Approach Delay [s/veh] | 8.17 | | | 8.41 | | | 39.89 | | | 37.90 | | |
| Approach LOS | A | | | A | | | D | | | D | | |
| d_I, Intersection Delay [s/veh] | 9.81 | | | | | | | | | | | |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.396 | | | | | | | | | | | |

Other Modes

| | | | | | | | | | | | | |
|--|-------|--|--|-------|--|--|-------|--|--|-------|--|--|
| g_Walk,mi, Effective Walk Time [s] | 0.0 | | | 0.0 | | | 11.0 | | | 11.0 | | |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| d_p, Pedestrian Delay [s] | 0.00 | | | 0.00 | | | 34.72 | | | 34.72 | | |
| I_p,int, Pedestrian LOS Score for Intersection | 0.000 | | | 0.000 | | | 2.187 | | | 2.353 | | |
| Crosswalk LOS | F | | | F | | | B | | | B | | |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | | | 2000 | | | 2000 | | | 2000 | | |
| c_b, Capacity of the bicycle lane [bicycles/h] | 1132 | | | 1132 | | | 178 | | | 200 | | |
| d_b, Bicycle Delay [s] | 8.48 | | | 8.48 | | | 37.40 | | | 36.49 | | |
| I_b,int, Bicycle LOS Score for Intersection | 2.269 | | | 2.323 | | | 1.560 | | | 1.759 | | |
| Bicycle LOS | B | | | B | | | A | | | A | | |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 1 | 2 | 4 | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | 5 | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



Intersection Level Of Service Report
Intersection 12: Hawthorne Boulevard at Del Amo Circle

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 6.3 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.363 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Del Amo Circle | | | Del Amo Circle | | |
|------------------------------|---------------------|--------|--------|---------------------|--------|--------|----------------|--------|--------|----------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | No | | | No | | | No | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Del Amo Circle | | | Del Amo Circle | | |
|---|---------------------|--------|--------|---------------------|--------|--------|----------------|--------|--------|----------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 50 | 1486 | 11 | 10 | 1620 | 118 | 67 | 2 | 44 | 8 | 5 | 6 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 50 | 1486 | 11 | 10 | 1620 | 118 | 67 | 2 | 44 | 8 | 5 | 6 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 13 | 372 | 3 | 3 | 405 | 30 | 17 | 1 | 11 | 2 | 1 | 2 |
| Total Analysis Volume [veh/h] | 50 | 1486 | 11 | 10 | 1620 | 118 | 67 | 2 | 44 | 8 | 5 | 6 |
| Presence of On-Street Parking | No | | No | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_di, Inbound Pedestrian Volume crossing in | 0 | | | 0 | | | 0 | | | 0 | | |
| v_co, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ci, Inbound Pedestrian Volume crossing mi | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ab, Corner Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 90 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Fully actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 12.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss |
|------------------------------|----------|---------|---------|----------|---------|---------|---------|---------|---------|---------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 0 | 8 | 0 | 0 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | - | - | - | - | - | - |
| Minimum Green [s] | 6 | 6 | 0 | 6 | 6 | 0 | 0 | 6 | 0 | 0 | 6 | 0 |
| Maximum Green [s] | 30 | 30 | 0 | 30 | 30 | 0 | 0 | 30 | 0 | 0 | 30 | 0 |
| Amber [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 |
| All red [s] | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 1.0 | 0.0 |
| Split [s] | 10 | 31 | 0 | 10 | 31 | 0 | 0 | 49 | 0 | 0 | 49 | 0 |
| Vehicle Extension [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 |
| Pedestrian Clearance [s] | 0 | 18 | 0 | 0 | 18 | 0 | 0 | 31 | 0 | 0 | 38 | 0 |
| Delayed Vehicle Green [s] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Rest In Walk | | No | | | No | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 |
| Minimum Recall | No | No | | No | No | | | No | | | No | |
| Maximum Recall | No | No | | No | No | | | No | | | No | |
| Pedestrian Recall | No | No | | No | No | | | No | | | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | L | C | C | L | C | R | L | C | C | L | C | C |
|---|-------|------|------|-------|------|------|-------|-------|-------|-------|-------|-------|
| C, Cycle Length [s] | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.00 | 0.00 | 0.00 | 2.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | 4 | 68 | 68 | 1 | 65 | 65 | 8 | 8 | 8 | 8 | 8 | 8 |
| g / C, Green / Cycle | 0.05 | 0.76 | 0.76 | 0.01 | 0.73 | 0.73 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 |
| (v / s)_i Volume / Saturation Flow Rate | 0.03 | 0.22 | 0.22 | 0.00 | 0.24 | 0.07 | 0.05 | 0.00 | 0.03 | 0.01 | 0.00 | 0.00 |
| s, saturation flow rate [veh/h] | 1781 | 5094 | 1861 | 3459 | 6792 | 1589 | 1403 | 1870 | 1589 | 1360 | 1870 | 1589 |
| c, Capacity [veh/h] | 85 | 3868 | 1413 | 52 | 4935 | 1155 | 170 | 172 | 147 | 137 | 172 | 147 |
| d1, Uniform Delay [s] | 41.98 | 3.32 | 3.32 | 43.79 | 4.42 | 3.63 | 41.38 | 37.13 | 38.14 | 41.56 | 37.19 | 37.23 |
| k, delay calibration | 0.11 | 0.50 | 0.50 | 0.11 | 0.50 | 0.50 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 6.26 | 0.18 | 0.50 | 1.76 | 0.18 | 0.18 | 1.48 | 0.03 | 1.13 | 0.18 | 0.07 | 0.11 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | | | | | | |
|---------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X, volume / capacity | 0.59 | 0.28 | 0.28 | 0.19 | 0.33 | 0.10 | 0.39 | 0.01 | 0.30 | 0.06 | 0.03 | 0.04 |
| d, Delay for Lane Group [s/veh] | 48.24 | 3.50 | 3.82 | 45.55 | 4.60 | 3.81 | 42.86 | 37.15 | 39.28 | 41.74 | 37.25 | 37.34 |
| Lane Group LOS | D | A | A | D | A | A | D | D | D | D | D | D |
| Critical Lane Group | Yes | No | No | No | Yes | No | Yes | No | No | No | No | No |
| 50th-Percentile Queue Length [veh/ln] | 1.22 | 1.53 | 1.81 | 0.12 | 2.17 | 0.56 | 1.51 | 0.04 | 0.94 | 0.18 | 0.10 | 0.12 |
| 50th-Percentile Queue Length [ft/ln] | 30.62 | 38.32 | 45.14 | 3.04 | 54.31 | 14.07 | 37.78 | 1.02 | 23.54 | 4.40 | 2.56 | 3.09 |
| 95th-Percentile Queue Length [veh/ln] | 2.20 | 2.76 | 3.25 | 0.22 | 3.91 | 1.01 | 2.72 | 0.07 | 1.70 | 0.32 | 0.18 | 0.22 |
| 95th-Percentile Queue Length [ft/ln] | 55.11 | 68.97 | 81.25 | 5.48 | 97.76 | 25.33 | 68.01 | 1.84 | 42.38 | 7.92 | 4.61 | 5.57 |

Movement, Approach, & Intersection Results

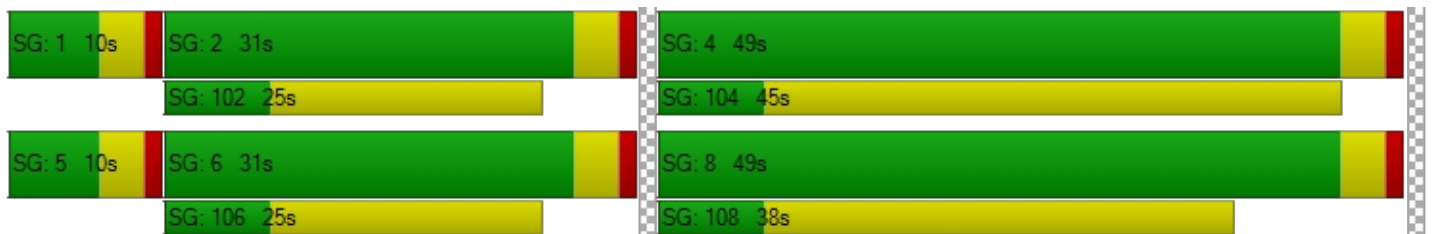
| | | | | | | | | | | | | |
|---------------------------------|-------|------|------|-------|------|------|-------|-------|-------|-------|-------|-------|
| d_M, Delay for Movement [s/veh] | 48.24 | 3.59 | 3.82 | 45.55 | 4.60 | 3.81 | 42.86 | 37.15 | 39.28 | 41.74 | 37.25 | 37.34 |
| Movement LOS | D | A | A | D | A | A | D | D | D | D | D | D |
| d_A, Approach Delay [s/veh] | 5.03 | | | 4.78 | | | 41.36 | | | 39.17 | | |
| Approach LOS | A | | | A | | | D | | | D | | |
| d_I, Intersection Delay [s/veh] | 6.29 | | | | | | | | | | | |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.363 | | | | | | | | | | | |

Other Modes

| | | | | | | | | | | | | |
|--|-------|--|--|-------|--|--|-------|--|--|-------|--|--|
| g_Walk,mi, Effective Walk Time [s] | 11.0 | | | 11.0 | | | 11.0 | | | 11.0 | | |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| d_p, Pedestrian Delay [s] | 34.68 | | | 34.68 | | | 34.68 | | | 34.68 | | |
| I_p,int, Pedestrian LOS Score for Intersection | 3.209 | | | 3.466 | | | 2.355 | | | 2.308 | | |
| Crosswalk LOS | C | | | C | | | B | | | B | | |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | | | 2000 | | | 2000 | | | 2000 | | |
| c_b, Capacity of the bicycle lane [bicycles/h] | 600 | | | 600 | | | 1000 | | | 1000 | | |
| d_b, Bicycle Delay [s] | 22.05 | | | 22.05 | | | 11.25 | | | 11.25 | | |
| I_b,int, Bicycle LOS Score for Intersection | 2.198 | | | 2.281 | | | 1.653 | | | 1.575 | | |
| Bicycle LOS | B | | | B | | | A | | | A | | |

Sequence




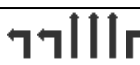
| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 1 | 2 | - | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | 5 | 6 | - | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



Intersection Level Of Service Report
Intersection 13: Hawthorne Boulevard at Carson Street

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 23.6 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.560 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Carson Street | | | Carson Street | | |
|------------------------------|---|--------|--------|---|--------|--------|---|--------|--------|---|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration |  | | |  | | |  | | |  | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | No | | | No | | | No | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Carson Street | | | Carson Street | | |
|---|---------------------|--------|--------|---------------------|--------|--------|---------------|--------|--------|---------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 107 | 1565 | 125 | 107 | 1446 | 65 | 64 | 392 | 59 | 219 | 541 | 130 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 107 | 1565 | 125 | 107 | 1446 | 65 | 64 | 392 | 59 | 219 | 541 | 130 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 27 | 391 | 31 | 27 | 362 | 16 | 16 | 98 | 15 | 55 | 135 | 33 |
| Total Analysis Volume [veh/h] | 107 | 1565 | 125 | 107 | 1446 | 65 | 64 | 392 | 59 | 219 | 541 | 130 |
| Presence of On-Street Parking | No | | No | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | | 0 | | | 0 | | | 0 | | | 0 | |
| v_di, Inbound Pedestrian Volume crossing in | | 0 | | | 0 | | | 0 | | | 0 | |
| v_co, Outbound Pedestrian Volume crossing | | 0 | | | 0 | | | 0 | | | 0 | |
| v_ci, Inbound Pedestrian Volume crossing mi | | 0 | | | 0 | | | 0 | | | 0 | |
| v_ab, Corner Pedestrian Volume [ped/h] | | 0 | | | 0 | | | 0 | | | 0 | |
| Bicycle Volume [bicycles/h] | | 0 | | | 0 | | | 0 | | | 0 | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 95 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Fully actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|------------------------------|----------|---------|---------|----------|---------|---------|----------|---------|---------|----------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |
| Minimum Green [s] | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 6 | 0 |
| Maximum Green [s] | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 |
| Amber [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| All red [s] | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 |
| Split [s] | 11 | 39 | 0 | 10 | 38 | 0 | 11 | 34 | 0 | 12 | 35 | 0 |
| Vehicle Extension [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 |
| Pedestrian Clearance [s] | 0 | 28 | 0 | 0 | 24 | 0 | 0 | 21 | 0 | 0 | 21 | 0 |
| Delayed Vehicle Green [s] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Rest In Walk | | No | | | No | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| Minimum Recall | No | No | | No | No | | No | No | | No | No | |
| Maximum Recall | No | No | | No | No | | No | No | | No | No | |
| Pedestrian Recall | No | No | | No | No | | No | No | | No | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | L | C | R | L | C | C | L | C | C | L | C | R |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| C, Cycle Length [s] | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | 7 | 51 | 51 | 6 | 50 | 50 | 5 | 14 | 14 | 8 | 17 | 17 |
| g / C, Green / Cycle | 0.07 | 0.54 | 0.54 | 0.06 | 0.52 | 0.52 | 0.05 | 0.15 | 0.15 | 0.08 | 0.18 | 0.18 |
| (v / s)_i Volume / Saturation Flow Rate | 0.06 | 0.23 | 0.08 | 0.03 | 0.22 | 0.22 | 0.04 | 0.12 | 0.12 | 0.06 | 0.11 | 0.08 |
| s, saturation flow rate [veh/h] | 1781 | 6792 | 1589 | 3459 | 5094 | 1818 | 1781 | 1870 | 1786 | 3459 | 5094 | 1589 |
| c, Capacity [veh/h] | 133 | 3637 | 851 | 209 | 2656 | 948 | 94 | 284 | 272 | 290 | 934 | 291 |
| d1, Uniform Delay [s] | 43.36 | 13.34 | 11.14 | 43.35 | 13.95 | 13.95 | 44.29 | 39.00 | 39.05 | 42.63 | 35.51 | 34.56 |
| k, delay calibration | 0.11 | 0.50 | 0.50 | 0.11 | 0.50 | 0.50 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 10.86 | 0.37 | 0.36 | 1.94 | 0.49 | 1.37 | 8.42 | 5.39 | 5.90 | 3.98 | 0.57 | 1.07 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | | | | | | |
|---------------------------------------|--------|--------|-------|-------|--------|--------|-------|--------|--------|--------|--------|--------|
| X, volume / capacity | 0.81 | 0.43 | 0.15 | 0.51 | 0.42 | 0.42 | 0.68 | 0.81 | 0.82 | 0.75 | 0.58 | 0.45 |
| d, Delay for Lane Group [s/veh] | 54.22 | 13.71 | 11.51 | 45.28 | 14.44 | 15.32 | 52.71 | 44.38 | 44.95 | 46.62 | 36.08 | 35.63 |
| Lane Group LOS | D | B | B | D | B | B | D | D | D | D | D | D |
| Critical Lane Group | Yes | No | No | No | No | Yes | No | No | Yes | Yes | No | No |
| 50th-Percentile Queue Length [veh/ln] | 2.86 | 4.85 | 1.35 | 1.27 | 4.74 | 5.31 | 1.69 | 5.53 | 5.38 | 2.65 | 3.82 | 2.73 |
| 50th-Percentile Queue Length [ft/ln] | 71.39 | 121.21 | 33.87 | 31.69 | 118.48 | 132.73 | 42.24 | 138.35 | 134.50 | 66.34 | 95.53 | 68.34 |
| 95th-Percentile Queue Length [veh/ln] | 5.14 | 8.46 | 2.44 | 2.28 | 8.31 | 9.09 | 3.04 | 9.39 | 9.18 | 4.78 | 6.88 | 4.92 |
| 95th-Percentile Queue Length [ft/ln] | 128.50 | 211.49 | 60.96 | 57.05 | 207.74 | 227.20 | 76.04 | 234.80 | 229.60 | 119.40 | 171.96 | 123.00 |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|---------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d_M, Delay for Movement [s/veh] | 54.22 | 13.71 | 11.51 | 45.28 | 14.64 | 15.32 | 52.71 | 44.62 | 44.95 | 46.62 | 36.08 | 35.63 |
| Movement LOS | D | B | B | D | B | B | D | D | D | D | D | D |
| d_A, Approach Delay [s/veh] | 15.97 | | | 16.69 | | | 45.66 | | | 38.61 | | |
| Approach LOS | B | | | B | | | D | | | D | | |
| d_I, Intersection Delay [s/veh] | 23.57 | | | | | | | | | | | |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.560 | | | | | | | | | | | |

Other Modes

| | | | | | | | | | | | | |
|--|-------|--|--|-------|--|--|-------|--|--|-------|--|--|
| g_Walk,mi, Effective Walk Time [s] | 11.0 | | | 11.0 | | | 11.0 | | | 11.0 | | |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| d_p, Pedestrian Delay [s] | 37.18 | | | 37.18 | | | 37.18 | | | 37.18 | | |
| I_p,int, Pedestrian LOS Score for Intersection | 3.312 | | | 3.298 | | | 2.655 | | | 2.912 | | |
| Crosswalk LOS | C | | | C | | | B | | | C | | |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | | | 2000 | | | 2000 | | | 2000 | | |
| c_b, Capacity of the bicycle lane [bicycles/h] | 736 | | | 715 | | | 631 | | | 652 | | |
| d_b, Bicycle Delay [s] | 18.98 | | | 19.62 | | | 22.27 | | | 21.59 | | |
| I_b,int, Bicycle LOS Score for Intersection | 2.301 | | | 2.227 | | | 1.984 | | | 2.049 | | |
| Bicycle LOS | B | | | B | | | A | | | B | | |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 1 | 2 | 3 | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | 5 | 6 | 7 | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |







Intersection Level Of Service Report

Intersection 14: Hawthorne Boulevard at Sepulveda Boulevard

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 41.1 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | D |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.658 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Sepulveda Boulevard | | | Sepulveda Boulevard | | |
|------------------------------|---|--------|--------|---|--------|--------|---|--------|--------|---|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration |  | | |  | | |  | | |  | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | No | | | No | | | No | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Sepulveda Boulevard | | | Sepulveda Boulevard | | |
|---|---------------------|--------|--------|---------------------|--------|--------|---------------------|--------|--------|---------------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 99 | 1128 | 325 | 144 | 1312 | 203 | 235 | 881 | 95 | 571 | 966 | 204 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 99 | 1128 | 325 | 144 | 1312 | 203 | 235 | 881 | 95 | 571 | 966 | 204 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 25 | 282 | 81 | 36 | 328 | 51 | 59 | 220 | 24 | 143 | 242 | 51 |
| Total Analysis Volume [veh/h] | 99 | 1128 | 325 | 144 | 1312 | 203 | 235 | 881 | 95 | 571 | 966 | 204 |
| Presence of On-Street Parking | No | | No | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_di, Inbound Pedestrian Volume crossing in | 0 | | | 0 | | | 0 | | | 0 | | |
| v_co, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ci, Inbound Pedestrian Volume crossing mi | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ab, Corner Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 120 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Fully actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Unsigna | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|------------------------------|----------|---------|---------|----------|---------|---------|----------|---------|---------|----------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |
| Minimum Green [s] | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 6 | 0 |
| Maximum Green [s] | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 |
| Amber [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| All red [s] | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 |
| Split [s] | 11 | 42 | 0 | 10 | 41 | 0 | 14 | 46 | 0 | 22 | 54 | 0 |
| Vehicle Extension [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 |
| Pedestrian Clearance [s] | 0 | 31 | 0 | 0 | 28 | 0 | 0 | 35 | 0 | 0 | 35 | 0 |
| Delayed Vehicle Green [s] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Rest In Walk | | No | | | No | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| Minimum Recall | No | No | | No | No | | No | No | | No | No | |
| Maximum Recall | No | No | | No | No | | No | No | | No | No | |
| Pedestrian Recall | No | No | | No | No | | No | No | | No | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | L | C | L | C | R | L | C | C | L | C | R |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| C, Cycle Length [s] | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | 6 | 54 | 6 | 55 | 55 | 10 | 26 | 26 | 18 | 34 | 34 |
| g / C, Green / Cycle | 0.05 | 0.45 | 0.05 | 0.46 | 0.46 | 0.08 | 0.21 | 0.21 | 0.15 | 0.28 | 0.28 |
| (v / s)_i Volume / Saturation Flow Rate | 0.03 | 0.17 | 0.04 | 0.19 | 0.13 | 0.07 | 0.18 | 0.18 | 0.17 | 0.19 | 0.13 |
| s, saturation flow rate [veh/h] | 3459 | 6792 | 3459 | 6792 | 1589 | 3459 | 3560 | 1778 | 3459 | 5094 | 1589 |
| c, Capacity [veh/h] | 169 | 3074 | 176 | 3087 | 722 | 290 | 758 | 379 | 520 | 1423 | 444 |
| d1, Uniform Delay [s] | 55.90 | 21.57 | 56.44 | 22.14 | 20.48 | 54.05 | 45.49 | 45.51 | 51.01 | 38.47 | 35.76 |
| k, delay calibration | 0.11 | 0.50 | 0.11 | 0.50 | 0.50 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 3.18 | 0.34 | 9.09 | 0.43 | 0.97 | 5.36 | 2.96 | 5.75 | 51.45 | 0.58 | 0.74 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | | | | | |
|---------------------------------------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| X, volume / capacity | 0.58 | 0.37 | 0.82 | 0.43 | 0.28 | 0.81 | 0.86 | 0.86 | 1.10 | 0.68 | 0.46 |
| d, Delay for Lane Group [s/veh] | 59.08 | 21.91 | 65.53 | 22.57 | 21.45 | 59.41 | 48.45 | 51.26 | 102.46 | 39.04 | 36.50 |
| Lane Group LOS | E | C | E | C | C | E | D | D | F | D | D |
| Critical Lane Group | Yes | No | No | Yes | No | No | No | Yes | Yes | No | No |
| 50th-Percentile Queue Length [veh/ln] | 1.54 | 5.26 | 2.38 | 6.31 | 3.75 | 3.70 | 9.61 | 9.91 | 11.50 | 8.48 | 5.04 |
| 50th-Percentile Queue Length [ft/ln] | 38.61 | 131.53 | 59.59 | 157.64 | 93.79 | 92.61 | 240.23 | 247.74 | 287.52 | 211.91 | 125.99 |
| 95th-Percentile Queue Length [veh/ln] | 2.78 | 9.02 | 4.29 | 10.42 | 6.75 | 6.67 | 14.69 | 15.07 | 17.80 | 13.25 | 8.72 |
| 95th-Percentile Queue Length [ft/ln] | 69.50 | 225.57 | 107.27 | 260.59 | 168.82 | 166.70 | 367.33 | 376.80 | 445.12 | 331.28 | 218.03 |

Movement, Approach, & Intersection Results

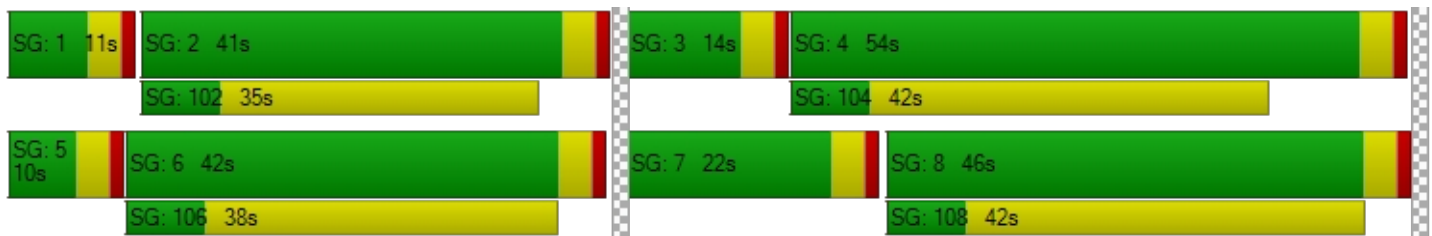
| | | | | | | | | | | | | |
|---------------------------------|-------|-------|------|-------|-------|-------|-------|-------|-------|--------|-------|-------|
| d_M, Delay for Movement [s/veh] | 59.08 | 21.91 | 0.00 | 65.53 | 22.57 | 21.45 | 59.41 | 49.18 | 51.26 | 102.46 | 39.04 | 36.50 |
| Movement LOS | E | C | | E | C | C | E | D | D | F | D | D |
| d_A, Approach Delay [s/veh] | 24.90 | | | 26.17 | | | 51.33 | | | 59.54 | | |
| Approach LOS | C | | | C | | | D | | | E | | |
| d_I, Intersection Delay [s/veh] | 41.07 | | | | | | | | | | | |
| Intersection LOS | D | | | | | | | | | | | |
| Intersection V/C | 0.658 | | | | | | | | | | | |

Other Modes

| | | | | |
|--|-------|-------|-------|-------|
| g_Walk,mi, Effective Walk Time [s] | 11.0 | 11.0 | 11.0 | 11.0 |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| d_p, Pedestrian Delay [s] | 49.52 | 49.52 | 49.52 | 49.52 |
| I_p,int, Pedestrian LOS Score for Intersection | 3.376 | 3.378 | 3.041 | 3.163 |
| Crosswalk LOS | C | C | C | C |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | 2000 | 2000 | 2000 |
| c_b, Capacity of the bicycle lane [bicycles/h] | 633 | 617 | 700 | 833 |
| d_b, Bicycle Delay [s] | 28.03 | 28.72 | 25.36 | 20.43 |
| I_b,int, Bicycle LOS Score for Intersection | 2.066 | 2.244 | 2.226 | 2.517 |
| Bicycle LOS | B | B | B | B |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 1 | 2 | 3 | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | 5 | 6 | 7 | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



Intersection Level Of Service Report

Intersection 10: Hawthorne Boulevard at Torrance Boulevard

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 35.6 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | D |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.661 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Torrance Boulevard | | | Torrance Boulevard | | |
|------------------------------|---------------------|--------|--------|---------------------|--------|--------|--------------------|--------|--------|--------------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | No | | | No | | | No | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Torrance Boulevard | | | Torrance Boulevard | | |
|---|---------------------|--------|--------|---------------------|--------|--------|--------------------|--------|--------|--------------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 260 | 1560 | 221 | 249 | 1620 | 154 | 255 | 911 | 272 | 277 | 811 | 143 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 260 | 1560 | 221 | 249 | 1620 | 154 | 255 | 911 | 272 | 277 | 811 | 143 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 65 | 390 | 55 | 62 | 405 | 39 | 64 | 228 | 68 | 69 | 203 | 36 |
| Total Analysis Volume [veh/h] | 260 | 1560 | 221 | 249 | 1620 | 154 | 255 | 911 | 272 | 277 | 811 | 143 |
| Presence of On-Street Parking | No | | No | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_di, Inbound Pedestrian Volume crossing in | 0 | | | 0 | | | 0 | | | 0 | | |
| v_co, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ci, Inbound Pedestrian Volume crossing mi | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ab, Corner Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 120 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Fully actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|------------------------------|----------|---------|---------|----------|---------|---------|----------|---------|---------|----------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |
| Minimum Green [s] | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 6 | 0 |
| Maximum Green [s] | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 |
| Amber [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| All red [s] | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 |
| Split [s] | 14 | 42 | 0 | 14 | 42 | 0 | 15 | 49 | 0 | 15 | 49 | 0 |
| Vehicle Extension [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 |
| Pedestrian Clearance [s] | 0 | 31 | 0 | 0 | 31 | 0 | 0 | 38 | 0 | 0 | 38 | 0 |
| Delayed Vehicle Green [s] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Rest In Walk | | No | | | No | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| Minimum Recall | No | No | | No | No | | No | No | | No | No | |
| Maximum Recall | No | No | | No | No | | No | No | | No | No | |
| Pedestrian Recall | No | No | | No | No | | No | No | | No | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | L | C | R | L | C | R | L | C | R | L | C | R |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| C, Cycle Length [s] | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | 10 | 57 | 57 | 10 | 57 | 57 | 11 | 26 | 26 | 11 | 27 | 27 |
| g / C, Green / Cycle | 0.08 | 0.47 | 0.47 | 0.08 | 0.47 | 0.47 | 0.09 | 0.22 | 0.22 | 0.09 | 0.22 | 0.22 |
| (v / s)_i Volume / Saturation Flow Rate | 0.08 | 0.23 | 0.14 | 0.07 | 0.24 | 0.10 | 0.07 | 0.18 | 0.17 | 0.08 | 0.16 | 0.09 |
| s, saturation flow rate [veh/h] | 3459 | 6792 | 1589 | 3459 | 6792 | 1589 | 3459 | 5094 | 1589 | 3459 | 5094 | 1589 |
| c, Capacity [veh/h] | 290 | 3203 | 750 | 290 | 3203 | 750 | 311 | 1116 | 348 | 319 | 1128 | 352 |
| d1, Uniform Delay [s] | 54.47 | 21.76 | 19.47 | 54.28 | 22.02 | 18.56 | 53.68 | 44.59 | 44.17 | 53.77 | 43.29 | 39.99 |
| k, delay calibration | 0.11 | 0.50 | 0.50 | 0.11 | 0.50 | 0.50 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 9.55 | 0.53 | 1.00 | 7.25 | 0.57 | 0.62 | 5.36 | 1.52 | 3.84 | 7.17 | 0.88 | 0.75 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | | | | | | |
|---------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| X, volume / capacity | 0.90 | 0.49 | 0.29 | 0.86 | 0.51 | 0.21 | 0.82 | 0.82 | 0.78 | 0.87 | 0.72 | 0.41 |
| d, Delay for Lane Group [s/veh] | 64.02 | 22.30 | 20.47 | 61.54 | 22.59 | 19.18 | 59.04 | 46.11 | 48.02 | 60.95 | 44.16 | 40.75 |
| Lane Group LOS | E | C | C | E | C | B | E | D | D | E | D | D |
| Critical Lane Group | Yes | No | No | No | Yes | No | No | Yes | No | Yes | No | No |
| 50th-Percentile Queue Length [veh/ln] | 4.27 | 7.57 | 3.99 | 4.00 | 7.95 | 2.64 | 4.01 | 8.72 | 7.97 | 4.44 | 7.51 | 3.70 |
| 50th-Percentile Queue Length [ft/ln] | 106.86 | 189.20 | 99.63 | 100.11 | 198.84 | 65.95 | 100.31 | 218.04 | 199.28 | 111.05 | 187.81 | 92.51 |
| 95th-Percentile Queue Length [veh/ln] | 7.67 | 12.08 | 7.17 | 7.21 | 12.58 | 4.75 | 7.22 | 13.56 | 12.60 | 7.90 | 12.01 | 6.66 |
| 95th-Percentile Queue Length [ft/ln] | 191.63 | 301.99 | 179.34 | 180.20 | 314.46 | 118.72 | 180.56 | 339.12 | 315.03 | 197.46 | 300.19 | 166.52 |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|---------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d_M, Delay for Movement [s/veh] | 64.02 | 22.30 | 20.47 | 61.54 | 22.59 | 19.18 | 59.04 | 46.11 | 48.02 | 60.95 | 44.16 | 40.75 |
| Movement LOS | E | C | C | E | C | B | E | D | D | E | D | D |
| d_A, Approach Delay [s/veh] | 27.41 | | | 27.12 | | | 48.77 | | | 47.54 | | |
| Approach LOS | C | | | C | | | D | | | D | | |
| d_I, Intersection Delay [s/veh] | 35.57 | | | | | | | | | | | |
| Intersection LOS | D | | | | | | | | | | | |
| Intersection V/C | 0.661 | | | | | | | | | | | |

Other Modes

| | | | | |
|--|-------|-------|-------|-------|
| g_Walk,mi, Effective Walk Time [s] | 11.0 | 11.0 | 11.0 | 11.0 |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| d_p, Pedestrian Delay [s] | 49.52 | 49.52 | 49.52 | 49.52 |
| I_p,int, Pedestrian LOS Score for Intersection | 3.465 | 3.445 | 3.151 | 3.146 |
| Crosswalk LOS | C | C | C | C |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | 2000 | 2000 | 2000 |
| c_b, Capacity of the bicycle lane [bicycles/h] | 633 | 633 | 750 | 750 |
| d_b, Bicycle Delay [s] | 28.03 | 28.03 | 23.45 | 23.45 |
| I_b,int, Bicycle LOS Score for Intersection | 2.402 | 2.394 | 2.351 | 2.237 |
| Bicycle LOS | B | B | B | B |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 1 | 2 | 3 | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | 5 | 6 | 7 | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |







Intersection Level Of Service Report

Intersection 11: Hawthorne Boulevard at Village Lane/Fashion Way

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 17.6 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | B |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.570 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Village Lane | | | Fashion Way | | |
|------------------------------|---|--------|--------|---|--------|--------|---|--------|--------|---|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration |  | | |  | | |  | | |  | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | No | | | No | | | No | | |
| Crosswalk | No | | | No | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Village Lane | | | Fashion Way | | |
|---|---------------------|--------|--------|---------------------|--------|--------|--------------|--------|--------|-------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 69 | 1915 | 133 | 170 | 1906 | 46 | 85 | 0 | 111 | 140 | 23 | 163 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 69 | 1915 | 133 | 170 | 1906 | 46 | 85 | 0 | 111 | 140 | 23 | 163 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 17 | 479 | 33 | 43 | 477 | 12 | 21 | 0 | 28 | 35 | 6 | 41 |
| Total Analysis Volume [veh/h] | 69 | 1915 | 133 | 170 | 1906 | 46 | 85 | 0 | 111 | 140 | 23 | 163 |
| Presence of On-Street Parking | No | | No | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_di, Inbound Pedestrian Volume crossing in | 0 | | | 0 | | | 0 | | | 0 | | |
| v_co, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ci, Inbound Pedestrian Volume crossing mi | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ab, Corner Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 110 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Fully actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Split | Permiss | Overlap | Split | Split | Overlap |
|------------------------------|----------|---------|---------|----------|---------|---------|-------|---------|---------|-------|-------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 8 | 0 | 8 | 0 | 4 | 4 |
| Auxiliary Signal Groups | | | | | | | | | 1,8 | | | 4,5 |
| Lead / Lag | Lead | - | - | Lead | - | - | Lag | - | - | - | - | - |
| Minimum Green [s] | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 0 | 6 | 0 | 6 | 6 |
| Maximum Green [s] | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 0 | 30 | 0 | 30 | 30 |
| Amber [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 0.0 | 3.0 | 0.0 | 3.0 | 3.0 |
| All red [s] | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 0.0 | 1.0 | 0.0 | 1.0 | 1.0 |
| Split [s] | 10 | 65 | 0 | 17 | 72 | 0 | 14 | 0 | 14 | 0 | 14 | 14 |
| Vehicle Extension [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 0.0 | 3.0 | 0.0 | 3.0 | 3.0 |
| Walk [s] | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pedestrian Clearance [s] | 0 | 18 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Delayed Vehicle Green [s] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Rest In Walk | | No | | | No | | No | | | | No | |
| I1, Start-Up Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 0.0 | 2.0 | 0.0 | 2.0 | 2.0 |
| I2, Clearance Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 0.0 | 2.0 | 0.0 | 2.0 | 2.0 |
| Minimum Recall | No | No | | No | No | | No | | No | | No | No |
| Maximum Recall | No | No | | No | No | | No | | No | | No | No |
| Pedestrian Recall | No | No | | No | No | | No | | No | | No | No |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | L | C | R | L | C | R | L | R | L | C | R |
|---|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|
| C, Cycle Length [s] | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 0.00 | 2.00 | 2.00 | 0.00 |
| g_i, Effective Green Time [s] | 6 | 64 | 64 | 10 | 68 | 68 | 10 | 20 | 10 | 10 | 38 |
| g / C, Green / Cycle | 0.05 | 0.58 | 0.58 | 0.09 | 0.62 | 0.62 | 0.09 | 0.18 | 0.09 | 0.09 | 0.35 |
| (v / s)_i Volume / Saturation Flow Rate | 0.02 | 0.28 | 0.08 | 0.05 | 0.28 | 0.03 | 0.06 | 0.07 | 0.05 | 0.05 | 0.10 |
| s, saturation flow rate [veh/h] | 3459 | 6792 | 1589 | 3459 | 6792 | 1589 | 1417 | 1589 | 1781 | 1805 | 1589 |
| c, Capacity [veh/h] | 189 | 3932 | 920 | 329 | 4206 | 984 | 164 | 287 | 162 | 164 | 554 |
| d1, Uniform Delay [s] | 50.15 | 13.59 | 10.65 | 47.38 | 11.09 | 8.21 | 50.67 | 39.71 | 47.62 | 47.61 | 26.03 |
| k, delay calibration | 0.11 | 0.50 | 0.50 | 0.11 | 0.50 | 0.50 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 1.17 | 0.43 | 0.33 | 1.26 | 0.35 | 0.09 | 2.53 | 0.85 | 2.37 | 2.33 | 0.29 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | | | | | |
|---------------------------------------|-------|--------|-------|--------|--------|-------|--------|--------|-------|--------|--------|
| X, volume / capacity | 0.36 | 0.49 | 0.14 | 0.52 | 0.45 | 0.05 | 0.52 | 0.39 | 0.50 | 0.50 | 0.29 |
| d, Delay for Lane Group [s/veh] | 51.33 | 14.02 | 10.98 | 48.63 | 11.44 | 8.30 | 53.20 | 40.56 | 49.99 | 49.95 | 26.32 |
| Lane Group LOS | D | B | B | D | B | A | D | D | D | D | C |
| Critical Lane Group | No | Yes | No | Yes | No | No | No | Yes | No | No | Yes |
| 50th-Percentile Queue Length [veh/ln] | 0.95 | 6.78 | 1.54 | 2.27 | 5.91 | 0.44 | 2.42 | 2.71 | 2.22 | 2.24 | 3.14 |
| 50th-Percentile Queue Length [ft/ln] | 23.66 | 169.56 | 38.38 | 56.80 | 147.73 | 10.99 | 60.59 | 67.75 | 55.49 | 56.12 | 78.40 |
| 95th-Percentile Queue Length [veh/ln] | 1.70 | 11.05 | 2.76 | 4.09 | 9.90 | 0.79 | 4.36 | 4.88 | 4.00 | 4.04 | 5.64 |
| 95th-Percentile Queue Length [ft/ln] | 42.58 | 276.34 | 69.08 | 102.25 | 247.40 | 19.79 | 109.07 | 121.94 | 99.88 | 101.01 | 141.12 |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|---------------------------------|-------|-------|-------|-------|-------|------|-------|------|-------|-------|-------|-------|
| d_M, Delay for Movement [s/veh] | 51.33 | 14.02 | 10.98 | 48.63 | 11.44 | 8.30 | 53.20 | 0.00 | 40.56 | 49.97 | 49.95 | 26.32 |
| Movement LOS | D | B | B | D | B | A | D | | D | D | D | C |
| d_A, Approach Delay [s/veh] | 15.04 | | | 14.35 | | | 46.04 | | | 38.14 | | |
| Approach LOS | B | | | B | | | D | | | D | | |
| d_I, Intersection Delay [s/veh] | 17.59 | | | | | | | | | | | |
| Intersection LOS | B | | | | | | | | | | | |
| Intersection V/C | 0.570 | | | | | | | | | | | |

Other Modes

| | | | | | | | | | | | | |
|--|-------|--|--|-------|--|--|-------|--|--|-------|--|--|
| g_Walk,mi, Effective Walk Time [s] | 0.0 | | | 0.0 | | | 11.0 | | | 11.0 | | |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| d_p, Pedestrian Delay [s] | 0.00 | | | 0.00 | | | 44.56 | | | 44.56 | | |
| I_p,int, Pedestrian LOS Score for Intersection | 0.000 | | | 0.000 | | | 2.222 | | | 2.432 | | |
| Crosswalk LOS | F | | | F | | | B | | | B | | |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | | | 2000 | | | 2000 | | | 2000 | | |
| c_b, Capacity of the bicycle lane [bicycles/h] | 1109 | | | 1236 | | | 182 | | | 182 | | |
| d_b, Bicycle Delay [s] | 10.92 | | | 8.02 | | | 45.46 | | | 45.46 | | |
| I_b,int, Bicycle LOS Score for Intersection | 2.433 | | | 2.435 | | | 1.560 | | | 2.098 | | |
| Bicycle LOS | B | | | B | | | A | | | B | | |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 1 | 2 | 4 | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | 5 | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



Intersection Level Of Service Report
Intersection 12: Hawthorne Boulevard at Del Amo Circle

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 14.3 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | B |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.494 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Del Amo Circle | | | Del Amo Circle | | |
|------------------------------|---------------------|--------|--------|---------------------|--------|--------|----------------|--------|--------|----------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | No | | | No | | | No | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Del Amo Circle | | | Del Amo Circle | | |
|---|---------------------|--------|--------|---------------------|--------|--------|----------------|--------|--------|----------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 93 | 1789 | 50 | 80 | 1942 | 152 | 125 | 14 | 118 | 69 | 21 | 79 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 93 | 1789 | 50 | 80 | 1942 | 152 | 125 | 14 | 118 | 69 | 21 | 79 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 23 | 447 | 13 | 20 | 486 | 38 | 31 | 4 | 30 | 17 | 5 | 20 |
| Total Analysis Volume [veh/h] | 93 | 1789 | 50 | 80 | 1942 | 152 | 125 | 14 | 118 | 69 | 21 | 79 |
| Presence of On-Street Parking | No | | No | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_di, Inbound Pedestrian Volume crossing in | 0 | | | 0 | | | 0 | | | 0 | | |
| v_co, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ci, Inbound Pedestrian Volume crossing mi | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ab, Corner Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 100 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Fully actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 12.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss |
|------------------------------|----------|---------|---------|----------|---------|---------|---------|---------|---------|---------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 0 | 8 | 0 | 0 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | - | - | - | - | - | - |
| Minimum Green [s] | 6 | 6 | 0 | 6 | 6 | 0 | 0 | 6 | 0 | 0 | 6 | 0 |
| Maximum Green [s] | 30 | 30 | 0 | 30 | 30 | 0 | 0 | 30 | 0 | 0 | 30 | 0 |
| Amber [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 |
| All red [s] | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 1.0 | 0.0 |
| Split [s] | 22 | 41 | 0 | 10 | 29 | 0 | 0 | 49 | 0 | 0 | 49 | 0 |
| Vehicle Extension [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 |
| Pedestrian Clearance [s] | 0 | 18 | 0 | 0 | 18 | 0 | 0 | 31 | 0 | 0 | 38 | 0 |
| Delayed Vehicle Green [s] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Rest In Walk | | No | | | No | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 |
| Minimum Recall | No | No | | No | No | | | No | | | No | |
| Maximum Recall | No | No | | No | No | | | No | | | No | |
| Pedestrian Recall | No | No | | No | No | | | No | | | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | L | C | C | L | C | R | L | C | C | L | C | C |
|---|-------|------|------|-------|------|------|-------|-------|-------|-------|-------|-------|
| C, Cycle Length [s] | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.00 | 0.00 | 0.00 | 2.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | 7 | 64 | 64 | 5 | 62 | 62 | 19 | 19 | 19 | 19 | 19 | 19 |
| g / C, Green / Cycle | 0.07 | 0.64 | 0.64 | 0.05 | 0.62 | 0.62 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 |
| (v / s)_i Volume / Saturation Flow Rate | 0.05 | 0.27 | 0.27 | 0.02 | 0.29 | 0.10 | 0.10 | 0.01 | 0.07 | 0.05 | 0.01 | 0.05 |
| s, saturation flow rate [veh/h] | 1781 | 5094 | 1837 | 3459 | 6792 | 1589 | 1295 | 1870 | 1589 | 1258 | 1870 | 1589 |
| c, Capacity [veh/h] | 120 | 3244 | 1170 | 187 | 4234 | 991 | 229 | 354 | 301 | 196 | 354 | 301 |
| d1, Uniform Delay [s] | 45.89 | 8.98 | 8.98 | 45.81 | 9.93 | 7.84 | 42.73 | 33.12 | 35.50 | 43.00 | 33.24 | 34.59 |
| k, delay calibration | 0.11 | 0.50 | 0.50 | 0.11 | 0.50 | 0.50 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 10.18 | 0.40 | 1.09 | 1.55 | 0.36 | 0.33 | 2.02 | 0.05 | 0.83 | 1.08 | 0.07 | 0.46 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | | | | | | |
|---------------------------------------|--------|--------|--------|-------|--------|-------|--------|-------|--------|-------|-------|-------|
| X, volume / capacity | 0.78 | 0.42 | 0.42 | 0.43 | 0.46 | 0.15 | 0.55 | 0.04 | 0.39 | 0.35 | 0.06 | 0.26 |
| d, Delay for Lane Group [s/veh] | 56.07 | 9.37 | 10.07 | 47.36 | 10.29 | 8.17 | 44.76 | 33.16 | 36.34 | 44.08 | 33.31 | 35.05 |
| Lane Group LOS | E | A | B | D | B | A | D | C | D | D | C | D |
| Critical Lane Group | Yes | No | No | No | Yes | No | Yes | No | No | No | No | No |
| 50th-Percentile Queue Length [veh/ln] | 2.60 | 4.52 | 5.12 | 1.00 | 5.24 | 1.36 | 3.11 | 0.28 | 2.57 | 1.68 | 0.42 | 1.67 |
| 50th-Percentile Queue Length [ft/ln] | 64.96 | 113.11 | 128.03 | 24.96 | 131.10 | 34.02 | 77.72 | 7.04 | 64.36 | 41.93 | 10.61 | 41.80 |
| 95th-Percentile Queue Length [veh/ln] | 4.68 | 8.01 | 8.83 | 1.80 | 9.00 | 2.45 | 5.60 | 0.51 | 4.63 | 3.02 | 0.76 | 3.01 |
| 95th-Percentile Queue Length [ft/ln] | 116.94 | 200.32 | 220.82 | 44.93 | 224.98 | 61.23 | 139.90 | 12.67 | 115.85 | 75.48 | 19.09 | 75.25 |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|---------------------------------|-------|------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|
| d_M, Delay for Movement [s/veh] | 56.07 | 9.55 | 10.07 | 47.36 | 10.29 | 8.17 | 44.76 | 33.16 | 36.34 | 44.08 | 33.31 | 35.05 |
| Movement LOS | E | A | B | D | B | A | D | C | D | D | C | D |
| d_A, Approach Delay [s/veh] | 11.80 | | | 11.51 | | | 40.26 | | | 38.52 | | |
| Approach LOS | B | | | B | | | D | | | D | | |
| d_I, Intersection Delay [s/veh] | 14.27 | | | | | | | | | | | |
| Intersection LOS | B | | | | | | | | | | | |
| Intersection V/C | 0.494 | | | | | | | | | | | |

Other Modes

| | | | | | | | | | | | | |
|--|-------|--|--|-------|--|--|-------|--|--|-------|--|--|
| g_Walk,mi, Effective Walk Time [s] | 11.0 | | | 11.0 | | | 11.0 | | | 11.0 | | |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| d_p, Pedestrian Delay [s] | 39.61 | | | 39.61 | | | 39.61 | | | 39.61 | | |
| I_p,int, Pedestrian LOS Score for Intersection | 3.392 | | | 3.630 | | | 2.407 | | | 2.366 | | |
| Crosswalk LOS | C | | | D | | | B | | | B | | |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | | | 2000 | | | 2000 | | | 2000 | | |
| c_b, Capacity of the bicycle lane [bicycles/h] | 740 | | | 500 | | | 900 | | | 900 | | |
| d_b, Bicycle Delay [s] | 19.85 | | | 28.13 | | | 15.13 | | | 15.13 | | |
| I_b,int, Bicycle LOS Score for Intersection | 2.357 | | | 2.456 | | | 1.772 | | | 1.699 | | |
| Bicycle LOS | B | | | B | | | A | | | A | | |

Sequence





| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 1 | 2 | - | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | 5 | 6 | - | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



Intersection Level Of Service Report
Intersection 13: Hawthorne Boulevard at Carson Street

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 26.9 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.636 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Carson Street | | | Carson Street | | |
|------------------------------|---|--------|--------|---|--------|--------|---|--------|--------|---|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration |  | | |  | | |  | | |  | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | No | | | No | | | No | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Carson Street | | | Carson Street | | |
|---|---------------------|--------|--------|---------------------|--------|--------|---------------|--------|--------|---------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 106 | 1623 | 228 | 319 | 1705 | 58 | 100 | 441 | 89 | 195 | 444 | 184 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 106 | 1623 | 228 | 319 | 1705 | 58 | 100 | 441 | 89 | 195 | 444 | 184 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 27 | 406 | 57 | 80 | 426 | 15 | 25 | 110 | 22 | 49 | 111 | 46 |
| Total Analysis Volume [veh/h] | 106 | 1623 | 228 | 319 | 1705 | 58 | 100 | 441 | 89 | 195 | 444 | 184 |
| Presence of On-Street Parking | No | | No | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | | 0 | | | 0 | | | 0 | | | 0 | |
| v_di, Inbound Pedestrian Volume crossing in | | 0 | | | 0 | | | 0 | | | 0 | |
| v_co, Outbound Pedestrian Volume crossing | | 0 | | | 0 | | | 0 | | | 0 | |
| v_ci, Inbound Pedestrian Volume crossing mi | | 0 | | | 0 | | | 0 | | | 0 | |
| v_ab, Corner Pedestrian Volume [ped/h] | | 0 | | | 0 | | | 0 | | | 0 | |
| Bicycle Volume [bicycles/h] | | 0 | | | 0 | | | 0 | | | 0 | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 100 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Fully actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|------------------------------|----------|---------|---------|----------|---------|---------|----------|---------|---------|----------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |
| Minimum Green [s] | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 6 | 0 |
| Maximum Green [s] | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 |
| Amber [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| All red [s] | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 |
| Split [s] | 11 | 39 | 0 | 15 | 43 | 0 | 14 | 35 | 0 | 11 | 32 | 0 |
| Vehicle Extension [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 |
| Pedestrian Clearance [s] | 0 | 28 | 0 | 0 | 24 | 0 | 0 | 21 | 0 | 0 | 21 | 0 |
| Delayed Vehicle Green [s] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Rest In Walk | | No | | | No | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| Minimum Recall | No | No | | No | No | | No | No | | No | No | |
| Maximum Recall | No | No | | No | No | | No | No | | No | No | |
| Pedestrian Recall | No | No | | No | No | | No | No | | No | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | L | C | R | L | C | C | L | C | C | L | C | R |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| C, Cycle Length [s] | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | 7 | 49 | 49 | 11 | 53 | 53 | 7 | 17 | 17 | 7 | 17 | 17 |
| g / C, Green / Cycle | 0.07 | 0.49 | 0.49 | 0.11 | 0.53 | 0.53 | 0.07 | 0.17 | 0.17 | 0.07 | 0.17 | 0.17 |
| (v / s)_i Volume / Saturation Flow Rate | 0.06 | 0.24 | 0.14 | 0.09 | 0.25 | 0.25 | 0.06 | 0.15 | 0.15 | 0.06 | 0.09 | 0.12 |
| s, saturation flow rate [veh/h] | 1781 | 6792 | 1589 | 3459 | 5094 | 1830 | 1781 | 1870 | 1763 | 3459 | 5094 | 1589 |
| c, Capacity [veh/h] | 126 | 3294 | 771 | 382 | 2673 | 960 | 128 | 325 | 306 | 245 | 879 | 274 |
| d1, Uniform Delay [s] | 45.97 | 17.45 | 15.50 | 43.63 | 15.17 | 15.17 | 45.69 | 39.99 | 40.04 | 45.81 | 37.55 | 38.77 |
| k, delay calibration | 0.11 | 0.50 | 0.50 | 0.11 | 0.50 | 0.50 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 13.67 | 0.53 | 0.98 | 4.80 | 0.63 | 1.75 | 9.78 | 5.69 | 6.25 | 5.84 | 0.45 | 2.83 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | | | | | | |
|---------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| X, volume / capacity | 0.84 | 0.49 | 0.30 | 0.83 | 0.49 | 0.49 | 0.78 | 0.84 | 0.84 | 0.80 | 0.51 | 0.67 |
| d, Delay for Lane Group [s/veh] | 59.64 | 17.98 | 16.48 | 48.43 | 15.80 | 16.92 | 55.47 | 45.68 | 46.29 | 51.65 | 38.00 | 41.60 |
| Lane Group LOS | E | B | B | D | B | B | E | D | D | D | D | D |
| Critical Lane Group | No | Yes | No | Yes | No | No | No | No | Yes | Yes | No | No |
| 50th-Percentile Queue Length [veh/ln] | 3.07 | 6.20 | 3.25 | 4.09 | 6.13 | 6.90 | 2.78 | 6.90 | 6.61 | 2.57 | 3.30 | 4.40 |
| 50th-Percentile Queue Length [ft/ln] | 76.65 | 155.04 | 81.13 | 102.34 | 153.22 | 172.61 | 69.43 | 172.62 | 165.18 | 64.26 | 82.47 | 110.07 |
| 95th-Percentile Queue Length [veh/ln] | 5.52 | 10.29 | 5.84 | 7.37 | 10.19 | 11.21 | 5.00 | 11.21 | 10.82 | 4.63 | 5.94 | 7.84 |
| 95th-Percentile Queue Length [ft/ln] | 137.98 | 257.15 | 146.03 | 184.22 | 254.72 | 280.34 | 124.98 | 280.36 | 270.57 | 115.67 | 148.45 | 196.10 |

Movement, Approach, & Intersection Results

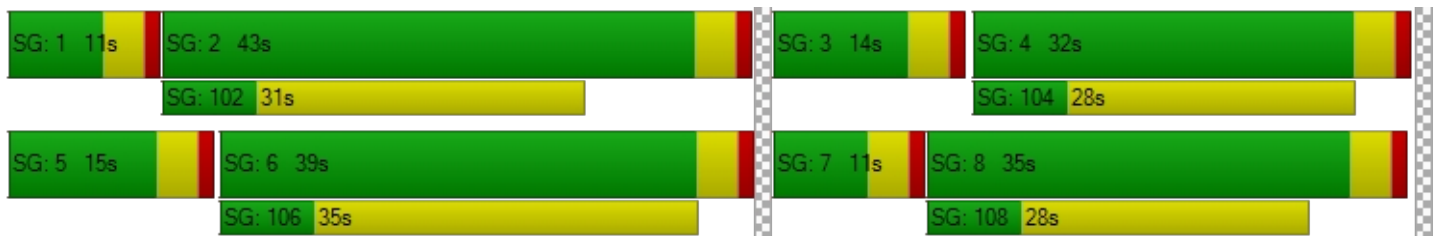
| | | | | | | | | | | | | |
|---------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d_M, Delay for Movement [s/veh] | 59.64 | 17.98 | 16.48 | 48.43 | 16.07 | 16.92 | 55.47 | 45.91 | 46.29 | 51.65 | 38.00 | 41.60 |
| Movement LOS | E | B | B | D | B | B | E | D | D | D | D | D |
| d_A, Approach Delay [s/veh] | 20.06 | | | 21.05 | | | 47.48 | | | 42.04 | | |
| Approach LOS | C | | | C | | | D | | | D | | |
| d_I, Intersection Delay [s/veh] | 26.87 | | | | | | | | | | | |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.636 | | | | | | | | | | | |

Other Modes

| | | | | |
|--|-------|-------|-------|-------|
| g_Walk,mi, Effective Walk Time [s] | 11.0 | 11.0 | 11.0 | 11.0 |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| d_p, Pedestrian Delay [s] | 39.64 | 39.64 | 39.64 | 39.64 |
| I_p,int, Pedestrian LOS Score for Intersection | 3.356 | 3.360 | 2.659 | 2.951 |
| Crosswalk LOS | C | C | B | C |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | 2000 | 2000 | 2000 |
| c_b, Capacity of the bicycle lane [bicycles/h] | 700 | 779 | 620 | 560 |
| d_b, Bicycle Delay [s] | 21.16 | 18.63 | 23.84 | 25.95 |
| I_b,int, Bicycle LOS Score for Intersection | 2.367 | 2.418 | 2.079 | 2.012 |
| Bicycle LOS | B | B | B | B |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 1 | 2 | 3 | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | 5 | 6 | 7 | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |







Intersection Level Of Service Report

Intersection 14: Hawthorne Boulevard at Sepulveda Boulevard

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 40.6 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | D |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.725 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Sepulveda Boulevard | | | Sepulveda Boulevard | | |
|------------------------------|---|--------|--------|---|--------|--------|---|--------|--------|---|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration |  | | |  | | |  | | |  | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | No | | | No | | | No | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Sepulveda Boulevard | | | Sepulveda Boulevard | | |
|---|---------------------|--------|--------|---------------------|--------|--------|---------------------|--------|--------|---------------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 220 | 1563 | 577 | 284 | 1370 | 210 | 227 | 919 | 93 | 439 | 822 | 209 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 220 | 1563 | 577 | 284 | 1370 | 210 | 227 | 919 | 93 | 439 | 822 | 209 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 55 | 391 | 144 | 71 | 343 | 53 | 57 | 230 | 23 | 110 | 206 | 52 |
| Total Analysis Volume [veh/h] | 220 | 1563 | 577 | 284 | 1370 | 210 | 227 | 919 | 93 | 439 | 822 | 209 |
| Presence of On-Street Parking | No | | No | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_di, Inbound Pedestrian Volume crossing in | 0 | | | 0 | | | 0 | | | 0 | | |
| v_co, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ci, Inbound Pedestrian Volume crossing mi | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ab, Corner Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 120 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Fully actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Unsigna | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|------------------------------|----------|---------|---------|----------|---------|---------|----------|---------|---------|----------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |
| Minimum Green [s] | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 6 | 0 |
| Maximum Green [s] | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 |
| Amber [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| All red [s] | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 |
| Split [s] | 13 | 42 | 0 | 14 | 43 | 0 | 14 | 46 | 0 | 18 | 50 | 0 |
| Vehicle Extension [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 |
| Pedestrian Clearance [s] | 0 | 31 | 0 | 0 | 28 | 0 | 0 | 35 | 0 | 0 | 35 | 0 |
| Delayed Vehicle Green [s] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Rest In Walk | | No | | | No | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| Minimum Recall | No | No | | No | No | | No | No | | No | No | |
| Maximum Recall | No | No | | No | No | | No | No | | No | No | |
| Pedestrian Recall | No | No | | No | No | | No | No | | No | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | L | C | L | C | R | L | C | C | L | C | R |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| C, Cycle Length [s] | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | 9 | 54 | 10 | 55 | 55 | 10 | 26 | 26 | 14 | 31 | 31 |
| g / C, Green / Cycle | 0.08 | 0.45 | 0.08 | 0.45 | 0.45 | 0.08 | 0.22 | 0.22 | 0.12 | 0.26 | 0.26 |
| (v / s)_i Volume / Saturation Flow Rate | 0.06 | 0.23 | 0.08 | 0.20 | 0.13 | 0.07 | 0.19 | 0.19 | 0.13 | 0.16 | 0.13 |
| s, saturation flow rate [veh/h] | 3459 | 6792 | 3459 | 6792 | 1589 | 3459 | 3560 | 1783 | 3459 | 5094 | 1589 |
| c, Capacity [veh/h] | 262 | 3027 | 290 | 3084 | 722 | 283 | 783 | 392 | 405 | 1300 | 406 |
| d1, Uniform Delay [s] | 54.78 | 23.96 | 54.88 | 22.42 | 20.62 | 54.16 | 45.06 | 45.07 | 53.00 | 39.71 | 38.34 |
| k, delay calibration | 0.11 | 0.50 | 0.11 | 0.50 | 0.50 | 0.11 | 0.11 | 0.12 | 0.11 | 0.11 | 0.11 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 7.14 | 0.63 | 19.88 | 0.47 | 1.02 | 5.24 | 2.93 | 6.36 | 47.52 | 0.51 | 1.01 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | | | | | |
|---------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| X, volume / capacity | 0.84 | 0.52 | 0.98 | 0.44 | 0.29 | 0.80 | 0.86 | 0.86 | 1.08 | 0.63 | 0.52 |
| d, Delay for Lane Group [s/veh] | 61.92 | 24.59 | 74.76 | 22.88 | 21.64 | 59.40 | 47.99 | 51.42 | 100.52 | 40.22 | 39.36 |
| Lane Group LOS | E | C | E | C | C | E | D | D | F | D | D |
| Critical Lane Group | No | Yes | Yes | No | No | No | No | Yes | Yes | No | No |
| 50th-Percentile Queue Length [veh/ln] | 3.54 | 8.04 | 5.08 | 6.66 | 3.91 | 3.58 | 9.93 | 10.34 | 8.77 | 7.23 | 5.40 |
| 50th-Percentile Queue Length [ft/ln] | 88.56 | 200.97 | 127.05 | 166.59 | 97.66 | 89.39 | 248.34 | 258.42 | 219.18 | 180.84 | 134.91 |
| 95th-Percentile Queue Length [veh/ln] | 6.38 | 12.69 | 8.78 | 10.90 | 7.03 | 6.44 | 15.10 | 15.61 | 14.07 | 11.64 | 9.21 |
| 95th-Percentile Queue Length [ft/ln] | 159.41 | 317.22 | 219.48 | 272.43 | 175.79 | 160.90 | 377.56 | 390.24 | 351.81 | 291.11 | 230.16 |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|---------------------------------|-------|-------|------|-------|-------|-------|-------|-------|-------|--------|-------|-------|
| d_M, Delay for Movement [s/veh] | 61.92 | 24.59 | 0.00 | 74.76 | 22.88 | 21.64 | 59.40 | 48.90 | 51.42 | 100.52 | 40.22 | 39.36 |
| Movement LOS | E | C | | E | C | C | E | D | D | F | D | D |
| d_A, Approach Delay [s/veh] | 29.20 | | | 30.65 | | | 51.02 | | | 58.11 | | |
| Approach LOS | C | | | C | | | D | | | E | | |
| d_I, Intersection Delay [s/veh] | 40.56 | | | | | | | | | | | |
| Intersection LOS | D | | | | | | | | | | | |
| Intersection V/C | 0.725 | | | | | | | | | | | |

Other Modes

| | | | | |
|--|-------|-------|-------|-------|
| g_Walk,mi, Effective Walk Time [s] | 11.0 | 11.0 | 11.0 | 11.0 |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| d_p, Pedestrian Delay [s] | 49.52 | 49.52 | 49.52 | 49.52 |
| I_p,int, Pedestrian LOS Score for Intersection | 3.419 | 3.434 | 3.043 | 3.153 |
| Crosswalk LOS | C | C | C | C |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | 2000 | 2000 | 2000 |
| c_b, Capacity of the bicycle lane [bicycles/h] | 633 | 650 | 700 | 766 |
| d_b, Bicycle Delay [s] | 28.03 | 27.35 | 25.36 | 22.83 |
| I_b,int, Bicycle LOS Score for Intersection | 2.295 | 2.329 | 2.241 | 2.368 |
| Bicycle LOS | B | B | B | B |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 1 | 2 | 3 | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | 5 | 6 | 7 | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



APPENDIX D-II

**EXISTING WITH AMBIENT GROWTH (YEAR 2025)
TRAFFIC CONDITIONS**

Intersection Level Of Service Report

Intersection 10: Hawthorne Boulevard at Torrance Boulevard

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 34.1 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.673 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Torrance Boulevard | | | Torrance Boulevard | | |
|------------------------------|---------------------|--------|--------|---------------------|--------|--------|--------------------|--------|--------|--------------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | No | | | No | | | No | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Torrance Boulevard | | | Torrance Boulevard | | |
|---|---------------------|--------|--------|---------------------|--------|--------|--------------------|--------|--------|--------------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 199 | 1099 | 121 | 133 | 1730 | 229 | 239 | 784 | 181 | 253 | 1028 | 83 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 199 | 1099 | 121 | 133 | 1730 | 229 | 239 | 784 | 181 | 253 | 1028 | 83 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 50 | 275 | 30 | 33 | 433 | 57 | 60 | 196 | 45 | 63 | 257 | 21 |
| Total Analysis Volume [veh/h] | 199 | 1099 | 121 | 133 | 1730 | 229 | 239 | 784 | 181 | 253 | 1028 | 83 |
| Presence of On-Street Parking | No | | No | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_di, Inbound Pedestrian Volume crossing in | 0 | | | 0 | | | 0 | | | 0 | | |
| v_co, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ci, Inbound Pedestrian Volume crossing mi | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ab, Corner Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 120 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Fully actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|------------------------------|----------|---------|---------|----------|---------|---------|----------|---------|---------|----------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |
| Minimum Green [s] | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 6 | 0 |
| Maximum Green [s] | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 |
| Amber [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| All red [s] | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 |
| Split [s] | 13 | 45 | 0 | 10 | 42 | 0 | 14 | 49 | 0 | 16 | 51 | 0 |
| Vehicle Extension [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 |
| Pedestrian Clearance [s] | 0 | 31 | 0 | 0 | 31 | 0 | 0 | 38 | 0 | 0 | 38 | 0 |
| Delayed Vehicle Green [s] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Rest In Walk | | No | | | No | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| Minimum Recall | No | No | | No | No | | No | No | | No | No | |
| Maximum Recall | No | No | | No | No | | No | No | | No | No | |
| Pedestrian Recall | No | No | | No | No | | No | No | | No | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | L | C | R | L | C | R | L | C | R | L | C | R |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| C, Cycle Length [s] | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | 9 | 59 | 59 | 6 | 56 | 56 | 10 | 28 | 28 | 11 | 29 | 29 |
| g / C, Green / Cycle | 0.07 | 0.49 | 0.49 | 0.05 | 0.47 | 0.47 | 0.08 | 0.23 | 0.23 | 0.09 | 0.24 | 0.24 |
| (v / s)_i Volume / Saturation Flow Rate | 0.06 | 0.16 | 0.08 | 0.04 | 0.25 | 0.14 | 0.07 | 0.15 | 0.11 | 0.07 | 0.20 | 0.05 |
| s, saturation flow rate [veh/h] | 3459 | 6792 | 1589 | 3459 | 6792 | 1589 | 3459 | 5094 | 1589 | 3459 | 5094 | 1589 |
| c, Capacity [veh/h] | 255 | 3338 | 781 | 176 | 3181 | 744 | 290 | 1195 | 373 | 311 | 1225 | 382 |
| d1, Uniform Delay [s] | 54.64 | 18.52 | 16.80 | 56.26 | 22.77 | 19.82 | 54.12 | 41.57 | 39.69 | 53.64 | 43.37 | 36.53 |
| k, delay calibration | 0.11 | 0.50 | 0.50 | 0.11 | 0.50 | 0.50 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 5.11 | 0.26 | 0.42 | 6.54 | 0.67 | 1.07 | 5.81 | 0.62 | 0.98 | 5.14 | 1.62 | 0.28 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | | | | | | |
|---------------------------------------|--------|--------|-------|-------|--------|--------|--------|--------|--------|--------|--------|-------|
| X, volume / capacity | 0.78 | 0.33 | 0.15 | 0.76 | 0.54 | 0.31 | 0.82 | 0.66 | 0.49 | 0.81 | 0.84 | 0.22 |
| d, Delay for Lane Group [s/veh] | 59.75 | 18.79 | 17.23 | 62.79 | 23.44 | 20.89 | 59.93 | 42.18 | 40.67 | 58.78 | 44.99 | 36.81 |
| Lane Group LOS | E | B | B | E | C | C | E | D | D | E | D | D |
| Critical Lane Group | Yes | No | No | No | Yes | No | Yes | No | No | No | Yes | No |
| 50th-Percentile Queue Length [veh/ln] | 3.14 | 4.67 | 1.93 | 2.15 | 8.75 | 4.19 | 3.79 | 7.06 | 4.73 | 3.97 | 9.82 | 2.00 |
| 50th-Percentile Queue Length [ft/ln] | 78.45 | 116.64 | 48.28 | 53.74 | 218.71 | 104.66 | 94.66 | 176.53 | 118.15 | 99.27 | 245.42 | 49.88 |
| 95th-Percentile Queue Length [veh/ln] | 5.65 | 8.21 | 3.48 | 3.87 | 13.60 | 7.54 | 6.82 | 11.42 | 8.29 | 7.15 | 14.96 | 3.59 |
| 95th-Percentile Queue Length [ft/ln] | 141.21 | 205.20 | 86.91 | 96.73 | 339.98 | 188.38 | 170.39 | 285.49 | 207.28 | 178.69 | 373.88 | 89.78 |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|---------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d_M, Delay for Movement [s/veh] | 59.75 | 18.79 | 17.23 | 62.79 | 23.44 | 20.89 | 59.93 | 42.18 | 40.67 | 58.78 | 44.99 | 36.81 |
| Movement LOS | E | B | B | E | C | C | E | D | D | E | D | D |
| d_A, Approach Delay [s/veh] | 24.40 | | | 25.66 | | | 45.48 | | | 47.05 | | |
| Approach LOS | C | | | C | | | D | | | D | | |
| d_I, Intersection Delay [s/veh] | 34.09 | | | | | | | | | | | |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.673 | | | | | | | | | | | |

Other Modes

| | | | | | | | | | | | | |
|--|-------|--|--|-------|--|--|-------|--|--|-------|--|--|
| g_Walk,mi, Effective Walk Time [s] | 11.0 | | | 11.0 | | | 11.0 | | | 11.0 | | |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| d_p, Pedestrian Delay [s] | 49.52 | | | 49.52 | | | 49.52 | | | 49.52 | | |
| l_p,int, Pedestrian LOS Score for Intersection | 3.410 | | | 3.403 | | | 3.151 | | | 3.123 | | |
| Crosswalk LOS | C | | | C | | | C | | | C | | |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | | | 2000 | | | 2000 | | | 2000 | | |
| c_b, Capacity of the bicycle lane [bicycles/h] | 683 | | | 633 | | | 750 | | | 783 | | |
| d_b, Bicycle Delay [s] | 26.02 | | | 28.03 | | | 23.45 | | | 22.22 | | |
| l_b,int, Bicycle LOS Score for Intersection | 2.145 | | | 2.423 | | | 2.222 | | | 2.310 | | |
| Bicycle LOS | B | | | B | | | B | | | B | | |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 1 | 2 | 3 | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | 5 | 6 | 7 | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



Intersection Level Of Service Report

Intersection 11: Hawthorne Boulevard at Village Lane/Fashion Way

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 9.9 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.403 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Village Lane | | | Fashion Way | | |
|------------------------------|---------------------|--------|--------|---------------------|--------|--------|--------------|--------|--------|-------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | No | | | No | | | No | | |
| Crosswalk | No | | | No | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Village Lane | | | Fashion Way | | |
|---|---------------------|--------|--------|---------------------|--------|--------|--------------|--------|--------|-------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 60 | 1581 | 114 | 41 | 1768 | 75 | 41 | 0 | 27 | 57 | 33 | 34 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 60 | 1581 | 114 | 41 | 1768 | 75 | 41 | 0 | 27 | 57 | 33 | 34 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 15 | 395 | 29 | 10 | 442 | 19 | 10 | 0 | 7 | 14 | 8 | 9 |
| Total Analysis Volume [veh/h] | 60 | 1581 | 114 | 41 | 1768 | 75 | 41 | 0 | 27 | 57 | 33 | 34 |
| Presence of On-Street Parking | No | | No | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_di, Inbound Pedestrian Volume crossing in | 0 | | | 0 | | | 0 | | | 0 | | |
| v_co, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ci, Inbound Pedestrian Volume crossing mi | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ab, Corner Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 90 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Fully actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Split | Permiss | Overlap | Split | Split | Overlap |
|------------------------------|----------|---------|---------|----------|---------|---------|-------|---------|---------|-------|-------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 8 | 0 | 8 | 0 | 4 | 4 |
| Auxiliary Signal Groups | | | | | | | | | 1,8 | | | 4,5 |
| Lead / Lag | Lead | - | - | Lead | - | - | Lag | - | - | - | - | - |
| Minimum Green [s] | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 0 | 6 | 0 | 6 | 6 |
| Maximum Green [s] | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 0 | 30 | 0 | 30 | 30 |
| Amber [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 0.0 | 3.0 | 0.0 | 3.0 | 3.0 |
| All red [s] | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 0.0 | 1.0 | 0.0 | 1.0 | 1.0 |
| Split [s] | 10 | 55 | 0 | 10 | 55 | 0 | 12 | 0 | 12 | 0 | 13 | 13 |
| Vehicle Extension [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 0.0 | 3.0 | 0.0 | 3.0 | 3.0 |
| Walk [s] | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pedestrian Clearance [s] | 0 | 18 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Delayed Vehicle Green [s] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Rest In Walk | | No | | | No | | No | | | | No | |
| I1, Start-Up Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 0.0 | 2.0 | 0.0 | 2.0 | 2.0 |
| I2, Clearance Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 0.0 | 2.0 | 0.0 | 2.0 | 2.0 |
| Minimum Recall | No | No | | No | No | | No | | No | | No | No |
| Maximum Recall | No | No | | No | No | | No | | No | | No | No |
| Pedestrian Recall | No | No | | No | No | | No | | No | | No | No |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | L | C | R | L | C | R | L | R | L | C | R |
|---|-------|------|------|-------|------|------|-------|-------|-------|-------|-------|
| C, Cycle Length [s] | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 0.00 | 2.00 | 2.00 | 0.00 |
| g_i, Effective Green Time [s] | 5 | 59 | 59 | 4 | 58 | 58 | 5 | 14 | 6 | 6 | 23 |
| g / C, Green / Cycle | 0.05 | 0.66 | 0.66 | 0.04 | 0.65 | 0.65 | 0.06 | 0.16 | 0.06 | 0.06 | 0.25 |
| (v / s)_i Volume / Saturation Flow Rate | 0.02 | 0.23 | 0.07 | 0.01 | 0.26 | 0.05 | 0.03 | 0.02 | 0.03 | 0.02 | 0.02 |
| s, saturation flow rate [veh/h] | 3459 | 6792 | 1589 | 3459 | 6792 | 1589 | 1417 | 1589 | 1781 | 1845 | 1589 |
| c, Capacity [veh/h] | 184 | 4459 | 1044 | 153 | 4398 | 1029 | 131 | 246 | 115 | 119 | 405 |
| d1, Uniform Delay [s] | 41.14 | 6.93 | 5.73 | 41.69 | 7.57 | 5.88 | 43.15 | 32.78 | 40.46 | 40.44 | 25.59 |
| k, delay calibration | 0.11 | 0.50 | 0.50 | 0.11 | 0.50 | 0.50 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 1.03 | 0.22 | 0.21 | 0.93 | 0.27 | 0.14 | 1.35 | 0.20 | 2.12 | 1.98 | 0.09 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | | | | | |
|---------------------------------------|-------|--------|-------|-------|--------|-------|-------|-------|-------|-------|-------|
| X, volume / capacity | 0.33 | 0.35 | 0.11 | 0.27 | 0.40 | 0.07 | 0.31 | 0.11 | 0.39 | 0.38 | 0.08 |
| d, Delay for Lane Group [s/veh] | 42.17 | 7.15 | 5.94 | 42.63 | 7.84 | 6.01 | 44.50 | 32.98 | 42.58 | 42.42 | 25.68 |
| Lane Group LOS | D | A | A | D | A | A | D | C | D | D | C |
| Critical Lane Group | Yes | No | No | No | Yes | No | Yes | No | Yes | No | No |
| 50th-Percentile Queue Length [veh/ln] | 0.66 | 3.01 | 0.76 | 0.46 | 3.63 | 0.51 | 0.94 | 0.51 | 1.01 | 1.02 | 0.56 |
| 50th-Percentile Queue Length [ft/ln] | 16.55 | 75.30 | 19.07 | 11.41 | 90.81 | 12.67 | 23.62 | 12.87 | 25.20 | 25.52 | 13.94 |
| 95th-Percentile Queue Length [veh/ln] | 1.19 | 5.42 | 1.37 | 0.82 | 6.54 | 0.91 | 1.70 | 0.93 | 1.81 | 1.84 | 1.00 |
| 95th-Percentile Queue Length [ft/ln] | 29.79 | 135.53 | 34.33 | 20.54 | 163.46 | 22.80 | 42.51 | 23.17 | 45.36 | 45.93 | 25.09 |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|---------------------------------|-------|------|------|-------|------|------|-------|------|-------|-------|-------|-------|
| d_M, Delay for Movement [s/veh] | 42.17 | 7.15 | 5.94 | 42.63 | 7.84 | 6.01 | 44.50 | 0.00 | 32.98 | 42.54 | 42.42 | 25.68 |
| Movement LOS | D | A | A | D | A | A | D | | C | D | D | C |
| d_A, Approach Delay [s/veh] | 8.27 | | | 8.53 | | | 39.92 | | | 37.89 | | |
| Approach LOS | A | | | A | | | D | | | D | | |
| d_I, Intersection Delay [s/veh] | 9.92 | | | | | | | | | | | |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.403 | | | | | | | | | | | |

Other Modes

| | | | | | | | | | | | | |
|--|-------|--|--|-------|--|--|-------|--|--|-------|--|--|
| g_Walk,mi, Effective Walk Time [s] | 0.0 | | | 0.0 | | | 11.0 | | | 11.0 | | |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| d_p, Pedestrian Delay [s] | 0.00 | | | 0.00 | | | 34.72 | | | 34.72 | | |
| I_p,int, Pedestrian LOS Score for Intersection | 0.000 | | | 0.000 | | | 2.188 | | | 2.354 | | |
| Crosswalk LOS | F | | | F | | | B | | | B | | |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | | | 2000 | | | 2000 | | | 2000 | | |
| c_b, Capacity of the bicycle lane [bicycles/h] | 1132 | | | 1132 | | | 178 | | | 200 | | |
| d_b, Bicycle Delay [s] | 8.48 | | | 8.48 | | | 37.40 | | | 36.49 | | |
| I_b,int, Bicycle LOS Score for Intersection | 2.284 | | | 2.337 | | | 1.560 | | | 1.764 | | |
| Bicycle LOS | B | | | B | | | A | | | A | | |

Sequence





| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 1 | 2 | 4 | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | 5 | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



Intersection Level Of Service Report
Intersection 12: Hawthorne Boulevard at Del Amo Circle

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 6.7 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.375 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Del Amo Circle | | | Del Amo Circle | | |
|------------------------------|---|--------|--------|---|--------|--------|---|--------|--------|---|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration |  | | |  | | |  | | |  | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | No | | | No | | | No | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Del Amo Circle | | | Del Amo Circle | | |
|---|---------------------|--------|--------|---------------------|--------|--------|----------------|--------|--------|----------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 51 | 1509 | 11 | 10 | 1646 | 124 | 76 | 2 | 54 | 8 | 5 | 6 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 51 | 1509 | 11 | 10 | 1646 | 124 | 76 | 2 | 54 | 8 | 5 | 6 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 13 | 377 | 3 | 3 | 412 | 31 | 19 | 1 | 14 | 2 | 1 | 2 |
| Total Analysis Volume [veh/h] | 51 | 1509 | 11 | 10 | 1646 | 124 | 76 | 2 | 54 | 8 | 5 | 6 |
| Presence of On-Street Parking | No | | No | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_di, Inbound Pedestrian Volume crossing in | 0 | | | 0 | | | 0 | | | 0 | | |
| v_co, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ci, Inbound Pedestrian Volume crossing mi | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ab, Corner Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 90 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Fully actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 12.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss |
|------------------------------|----------|---------|---------|----------|---------|---------|---------|---------|---------|---------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 0 | 8 | 0 | 0 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | - | - | - | - | - | - |
| Minimum Green [s] | 6 | 6 | 0 | 6 | 6 | 0 | 0 | 6 | 0 | 0 | 6 | 0 |
| Maximum Green [s] | 30 | 30 | 0 | 30 | 30 | 0 | 0 | 30 | 0 | 0 | 30 | 0 |
| Amber [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 |
| All red [s] | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 1.0 | 0.0 |
| Split [s] | 10 | 31 | 0 | 10 | 31 | 0 | 0 | 49 | 0 | 0 | 49 | 0 |
| Vehicle Extension [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 |
| Pedestrian Clearance [s] | 0 | 18 | 0 | 0 | 18 | 0 | 0 | 31 | 0 | 0 | 38 | 0 |
| Delayed Vehicle Green [s] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Rest In Walk | | No | | | No | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 |
| Minimum Recall | No | No | | No | No | | | No | | | No | |
| Maximum Recall | No | No | | No | No | | | No | | | No | |
| Pedestrian Recall | No | No | | No | No | | | No | | | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | L | C | C | L | C | R | L | C | C | L | C | C |
|---|-------|------|------|-------|------|------|-------|-------|-------|-------|-------|-------|
| C, Cycle Length [s] | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.00 | 0.00 | 0.00 | 2.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | 4 | 67 | 67 | 1 | 64 | 64 | 9 | 9 | 9 | 9 | 9 | 9 |
| g / C, Green / Cycle | 0.05 | 0.75 | 0.75 | 0.01 | 0.72 | 0.72 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| (v / s)_i Volume / Saturation Flow Rate | 0.03 | 0.22 | 0.22 | 0.00 | 0.24 | 0.08 | 0.05 | 0.00 | 0.03 | 0.01 | 0.00 | 0.00 |
| s, saturation flow rate [veh/h] | 1781 | 5094 | 1861 | 3459 | 6792 | 1589 | 1403 | 1870 | 1589 | 1347 | 1870 | 1589 |
| c, Capacity [veh/h] | 86 | 3823 | 1397 | 52 | 4871 | 1140 | 183 | 189 | 161 | 140 | 189 | 161 |
| d1, Uniform Delay [s] | 41.96 | 3.59 | 3.59 | 43.79 | 4.75 | 3.90 | 40.88 | 36.40 | 37.64 | 41.30 | 36.46 | 36.50 |
| k, delay calibration | 0.11 | 0.50 | 0.50 | 0.11 | 0.50 | 0.50 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 6.35 | 0.19 | 0.53 | 1.76 | 0.19 | 0.19 | 1.51 | 0.02 | 1.22 | 0.17 | 0.06 | 0.09 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | | | | | | |
|---------------------------------------|-------|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|
| X, volume / capacity | 0.59 | 0.29 | 0.29 | 0.19 | 0.34 | 0.11 | 0.42 | 0.01 | 0.34 | 0.06 | 0.03 | 0.04 |
| d, Delay for Lane Group [s/veh] | 48.31 | 3.78 | 4.11 | 45.55 | 4.94 | 4.10 | 42.39 | 36.43 | 38.86 | 41.47 | 36.52 | 36.60 |
| Lane Group LOS | D | A | A | D | A | A | D | D | D | D | D | D |
| Critical Lane Group | Yes | No | No | No | Yes | No | Yes | No | No | No | No | No |
| 50th-Percentile Queue Length [veh/ln] | 1.25 | 1.67 | 1.96 | 0.12 | 2.35 | 0.63 | 1.71 | 0.04 | 1.15 | 0.18 | 0.10 | 0.12 |
| 50th-Percentile Queue Length [ft/ln] | 31.24 | 41.71 | 48.98 | 3.04 | 58.64 | 15.65 | 42.63 | 1.01 | 28.71 | 4.38 | 2.53 | 3.05 |
| 95th-Percentile Queue Length [veh/ln] | 2.25 | 3.00 | 3.53 | 0.22 | 4.22 | 1.13 | 3.07 | 0.07 | 2.07 | 0.32 | 0.18 | 0.22 |
| 95th-Percentile Queue Length [ft/ln] | 56.24 | 75.08 | 88.17 | 5.48 | 105.56 | 28.17 | 76.74 | 1.82 | 51.68 | 7.89 | 4.55 | 5.49 |

Movement, Approach, & Intersection Results

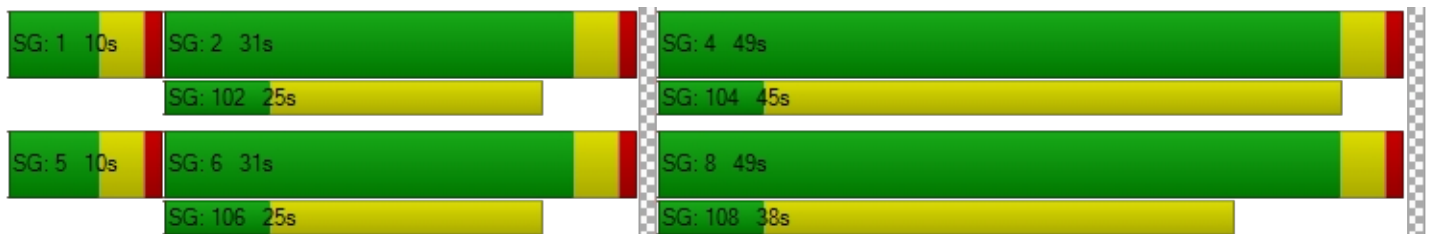
| | | | | | | | | | | | | |
|---------------------------------|-------|------|------|-------|------|------|-------|-------|-------|-------|-------|-------|
| d_M, Delay for Movement [s/veh] | 48.31 | 3.87 | 4.11 | 45.55 | 4.94 | 4.10 | 42.39 | 36.43 | 38.86 | 41.47 | 36.52 | 36.60 |
| Movement LOS | D | A | A | D | A | A | D | D | D | D | D | D |
| d_A, Approach Delay [s/veh] | 5.31 | | | 5.11 | | | 40.86 | | | 38.63 | | |
| Approach LOS | A | | | A | | | D | | | D | | |
| d_I, Intersection Delay [s/veh] | 6.73 | | | | | | | | | | | |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.375 | | | | | | | | | | | |

Other Modes

| | | | | | | | | | | | | |
|--|-------|--|--|-------|--|--|-------|--|--|-------|--|--|
| g_Walk,mi, Effective Walk Time [s] | 11.0 | | | 11.0 | | | 11.0 | | | 11.0 | | |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| d_p, Pedestrian Delay [s] | 34.68 | | | 34.68 | | | 34.68 | | | 34.68 | | |
| I_p,int, Pedestrian LOS Score for Intersection | 3.215 | | | 3.485 | | | 2.360 | | | 2.308 | | |
| Crosswalk LOS | C | | | C | | | B | | | B | | |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | | | 2000 | | | 2000 | | | 2000 | | |
| c_b, Capacity of the bicycle lane [bicycles/h] | 600 | | | 600 | | | 1000 | | | 1000 | | |
| d_b, Bicycle Delay [s] | 22.05 | | | 22.05 | | | 11.25 | | | 11.25 | | |
| I_b,int, Bicycle LOS Score for Intersection | 2.208 | | | 2.294 | | | 1.669 | | | 1.575 | | |
| Bicycle LOS | B | | | B | | | A | | | A | | |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 1 | 2 | - | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | 5 | 6 | - | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



Intersection Level Of Service Report
Intersection 13: Hawthorne Boulevard at Carson Street

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 23.8 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.572 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Carson Street | | | Carson Street | | |
|------------------------------|---------------------|--------|--------|---------------------|--------|--------|---------------|--------|--------|---------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | No | | | No | | | No | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Carson Street | | | Carson Street | | |
|---|---------------------|--------|--------|---------------------|--------|--------|---------------|--------|--------|---------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 112 | 1590 | 127 | 112 | 1475 | 66 | 65 | 398 | 60 | 222 | 552 | 132 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 112 | 1590 | 127 | 112 | 1475 | 66 | 65 | 398 | 60 | 222 | 552 | 132 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 28 | 398 | 32 | 28 | 369 | 17 | 16 | 100 | 15 | 56 | 138 | 33 |
| Total Analysis Volume [veh/h] | 112 | 1590 | 127 | 112 | 1475 | 66 | 65 | 398 | 60 | 222 | 552 | 132 |
| Presence of On-Street Parking | No | | No | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_di, Inbound Pedestrian Volume crossing in | 0 | | | 0 | | | 0 | | | 0 | | |
| v_co, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ci, Inbound Pedestrian Volume crossing mi | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ab, Corner Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 95 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Fully actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|------------------------------|----------|---------|---------|----------|---------|---------|----------|---------|---------|----------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |
| Minimum Green [s] | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 6 | 0 |
| Maximum Green [s] | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 |
| Amber [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| All red [s] | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 |
| Split [s] | 12 | 39 | 0 | 10 | 37 | 0 | 11 | 34 | 0 | 12 | 35 | 0 |
| Vehicle Extension [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 |
| Pedestrian Clearance [s] | 0 | 28 | 0 | 0 | 24 | 0 | 0 | 21 | 0 | 0 | 21 | 0 |
| Delayed Vehicle Green [s] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Rest In Walk | | No | | | No | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| Minimum Recall | No | No | | No | No | | No | No | | No | No | |
| Maximum Recall | No | No | | No | No | | No | No | | No | No | |
| Pedestrian Recall | No | No | | No | No | | No | No | | No | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | L | C | R | L | C | C | L | C | C | L | C | R |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| C, Cycle Length [s] | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | 8 | 51 | 51 | 6 | 49 | 49 | 5 | 15 | 15 | 8 | 18 | 18 |
| g / C, Green / Cycle | 0.08 | 0.53 | 0.53 | 0.06 | 0.51 | 0.51 | 0.05 | 0.15 | 0.15 | 0.08 | 0.19 | 0.19 |
| (v / s)_i Volume / Saturation Flow Rate | 0.06 | 0.23 | 0.08 | 0.03 | 0.22 | 0.22 | 0.04 | 0.12 | 0.13 | 0.06 | 0.11 | 0.08 |
| s, saturation flow rate [veh/h] | 1781 | 6792 | 1589 | 3459 | 5094 | 1818 | 1781 | 1870 | 1786 | 3459 | 5094 | 1589 |
| c, Capacity [veh/h] | 142 | 3615 | 846 | 211 | 2615 | 933 | 94 | 288 | 275 | 293 | 946 | 295 |
| d1, Uniform Delay [s] | 43.00 | 13.59 | 11.31 | 43.37 | 14.50 | 14.50 | 44.29 | 38.90 | 38.95 | 42.60 | 35.38 | 34.40 |
| k, delay calibration | 0.11 | 0.50 | 0.50 | 0.11 | 0.50 | 0.50 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 9.29 | 0.39 | 0.38 | 2.08 | 0.53 | 1.47 | 8.61 | 5.39 | 5.90 | 4.02 | 0.57 | 1.06 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | | | | | | |
|---------------------------------------|--------|--------|-------|-------|--------|--------|-------|--------|--------|--------|--------|--------|
| X, volume / capacity | 0.79 | 0.44 | 0.15 | 0.53 | 0.43 | 0.43 | 0.69 | 0.81 | 0.82 | 0.76 | 0.58 | 0.45 |
| d, Delay for Lane Group [s/veh] | 52.29 | 13.98 | 11.69 | 45.45 | 15.03 | 15.97 | 52.90 | 44.29 | 44.85 | 46.62 | 35.95 | 35.46 |
| Lane Group LOS | D | B | B | D | B | B | D | D | D | D | D | D |
| Critical Lane Group | Yes | No | No | No | No | Yes | No | No | Yes | Yes | No | No |
| 50th-Percentile Queue Length [veh/ln] | 2.93 | 5.00 | 1.39 | 1.33 | 4.97 | 5.57 | 1.72 | 5.62 | 5.46 | 2.69 | 3.89 | 2.77 |
| 50th-Percentile Queue Length [ft/ln] | 73.21 | 124.89 | 34.77 | 33.25 | 124.15 | 139.15 | 42.99 | 140.44 | 136.46 | 67.26 | 97.37 | 69.22 |
| 95th-Percentile Queue Length [veh/ln] | 5.27 | 8.66 | 2.50 | 2.39 | 8.62 | 9.44 | 3.10 | 9.50 | 9.29 | 4.84 | 7.01 | 4.98 |
| 95th-Percentile Queue Length [ft/ln] | 131.78 | 216.52 | 62.58 | 59.85 | 215.52 | 235.88 | 77.38 | 237.61 | 232.25 | 121.06 | 175.26 | 124.59 |

Movement, Approach, & Intersection Results

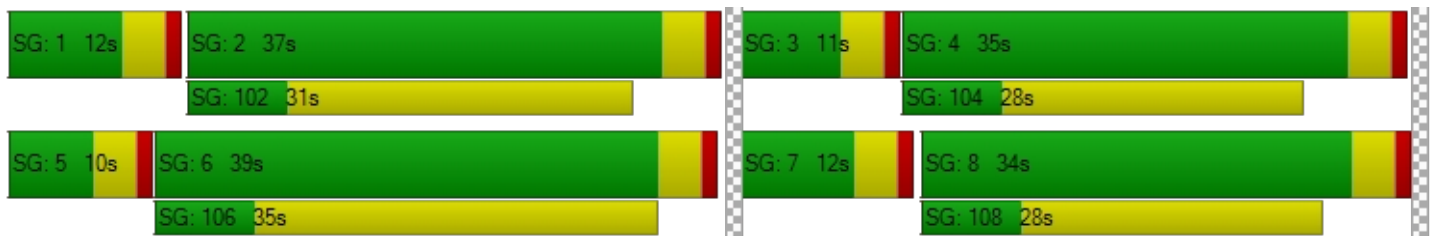
| | | | | | | | | | | | | |
|---------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d_M, Delay for Movement [s/veh] | 52.29 | 13.98 | 11.69 | 45.45 | 15.24 | 15.97 | 52.90 | 44.52 | 44.85 | 46.62 | 35.95 | 35.46 |
| Movement LOS | D | B | B | D | B | B | D | D | D | D | D | D |
| d_A, Approach Delay [s/veh] | 16.17 | | | 17.32 | | | 45.60 | | | 38.50 | | |
| Approach LOS | B | | | B | | | D | | | D | | |
| d_I, Intersection Delay [s/veh] | 23.81 | | | | | | | | | | | |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.572 | | | | | | | | | | | |

Other Modes

| | | | | | | | | | | | | |
|--|-------|--|--|-------|--|--|-------|--|--|-------|--|--|
| g_Walk,mi, Effective Walk Time [s] | 11.0 | | | 11.0 | | | 11.0 | | | 11.0 | | |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| d_p, Pedestrian Delay [s] | 37.18 | | | 37.18 | | | 37.18 | | | 37.18 | | |
| I_p,int, Pedestrian LOS Score for Intersection | 3.318 | | | 3.304 | | | 2.659 | | | 2.916 | | |
| Crosswalk LOS | C | | | C | | | B | | | C | | |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | | | 2000 | | | 2000 | | | 2000 | | |
| c_b, Capacity of the bicycle lane [bicycles/h] | 736 | | | 694 | | | 631 | | | 652 | | |
| d_b, Bicycle Delay [s] | 18.98 | | | 20.27 | | | 22.27 | | | 21.59 | | |
| I_b,int, Bicycle LOS Score for Intersection | 2.314 | | | 2.241 | | | 1.991 | | | 2.058 | | |
| Bicycle LOS | B | | | B | | | A | | | B | | |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 1 | 2 | 3 | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | 5 | 6 | 7 | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |







Intersection Level Of Service Report

Intersection 14: Hawthorne Boulevard at Sepulveda Boulevard

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 41.9 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | D |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.669 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Sepulveda Boulevard | | | Sepulveda Boulevard | | |
|------------------------------|---|--------|--------|---|--------|--------|---|--------|--------|---|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration |  | | |  | | |  | | |  | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | No | | | No | | | No | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Sepulveda Boulevard | | | Sepulveda Boulevard | | |
|---|---------------------|--------|--------|---------------------|--------|--------|---------------------|--------|--------|---------------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 101 | 1148 | 330 | 148 | 1337 | 206 | 239 | 895 | 96 | 580 | 981 | 208 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 101 | 1148 | 330 | 148 | 1337 | 206 | 239 | 895 | 96 | 580 | 981 | 208 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 25 | 287 | 83 | 37 | 334 | 52 | 60 | 224 | 24 | 145 | 245 | 52 |
| Total Analysis Volume [veh/h] | 101 | 1148 | 330 | 148 | 1337 | 206 | 239 | 895 | 96 | 580 | 981 | 208 |
| Presence of On-Street Parking | No | | No | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_di, Inbound Pedestrian Volume crossing in | 0 | | | 0 | | | 0 | | | 0 | | |
| v_co, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ci, Inbound Pedestrian Volume crossing mi | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ab, Corner Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 120 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Fully actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Unsigna | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|------------------------------|----------|---------|---------|----------|---------|---------|----------|---------|---------|----------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |
| Minimum Green [s] | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 6 | 0 |
| Maximum Green [s] | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 |
| Amber [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| All red [s] | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 |
| Split [s] | 11 | 42 | 0 | 10 | 41 | 0 | 14 | 46 | 0 | 22 | 54 | 0 |
| Vehicle Extension [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 |
| Pedestrian Clearance [s] | 0 | 31 | 0 | 0 | 28 | 0 | 0 | 35 | 0 | 0 | 35 | 0 |
| Delayed Vehicle Green [s] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Rest In Walk | | No | | | No | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| Minimum Recall | No | No | | No | No | | No | No | | No | No | |
| Maximum Recall | No | No | | No | No | | No | No | | No | No | |
| Pedestrian Recall | No | No | | No | No | | No | No | | No | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | L | C | L | C | R | L | C | C | L | C | R |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| C, Cycle Length [s] | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | 6 | 54 | 6 | 54 | 54 | 10 | 26 | 26 | 18 | 34 | 34 |
| g / C, Green / Cycle | 0.05 | 0.45 | 0.05 | 0.45 | 0.45 | 0.08 | 0.22 | 0.22 | 0.15 | 0.28 | 0.28 |
| (v / s)_i Volume / Saturation Flow Rate | 0.03 | 0.17 | 0.04 | 0.20 | 0.13 | 0.07 | 0.19 | 0.19 | 0.17 | 0.19 | 0.13 |
| s, saturation flow rate [veh/h] | 3459 | 6792 | 3459 | 6792 | 1589 | 3459 | 3560 | 1779 | 3459 | 5094 | 1589 |
| c, Capacity [veh/h] | 170 | 3054 | 176 | 3066 | 717 | 290 | 769 | 384 | 520 | 1438 | 449 |
| d1, Uniform Delay [s] | 55.92 | 21.88 | 56.51 | 22.50 | 20.76 | 54.12 | 45.31 | 45.32 | 51.01 | 38.29 | 35.57 |
| k, delay calibration | 0.11 | 0.50 | 0.11 | 0.50 | 0.50 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 3.31 | 0.35 | 10.38 | 0.45 | 1.01 | 5.81 | 2.95 | 6.01 | 58.48 | 0.58 | 0.75 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | | | | | |
|---------------------------------------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| X, volume / capacity | 0.60 | 0.38 | 0.84 | 0.44 | 0.29 | 0.82 | 0.86 | 0.86 | 1.12 | 0.68 | 0.46 |
| d, Delay for Lane Group [s/veh] | 59.23 | 22.23 | 66.89 | 22.95 | 21.77 | 59.93 | 48.25 | 51.33 | 109.48 | 38.87 | 36.32 |
| Lane Group LOS | E | C | E | C | C | E | D | D | F | D | D |
| Critical Lane Group | Yes | No | No | Yes | No | No | No | Yes | Yes | No | No |
| 50th-Percentile Queue Length [veh/ln] | 1.58 | 5.41 | 2.48 | 6.50 | 3.84 | 3.79 | 9.75 | 10.08 | 12.01 | 8.60 | 5.13 |
| 50th-Percentile Queue Length [ft/ln] | 39.45 | 135.22 | 61.95 | 162.50 | 96.06 | 94.66 | 243.69 | 252.02 | 300.20 | 214.99 | 128.23 |
| 95th-Percentile Queue Length [veh/ln] | 2.84 | 9.22 | 4.46 | 10.68 | 6.92 | 6.82 | 14.87 | 15.29 | 18.59 | 13.41 | 8.84 |
| 95th-Percentile Queue Length [ft/ln] | 71.01 | 230.58 | 111.50 | 267.02 | 172.90 | 170.39 | 371.70 | 382.19 | 464.68 | 335.22 | 221.08 |

Movement, Approach, & Intersection Results

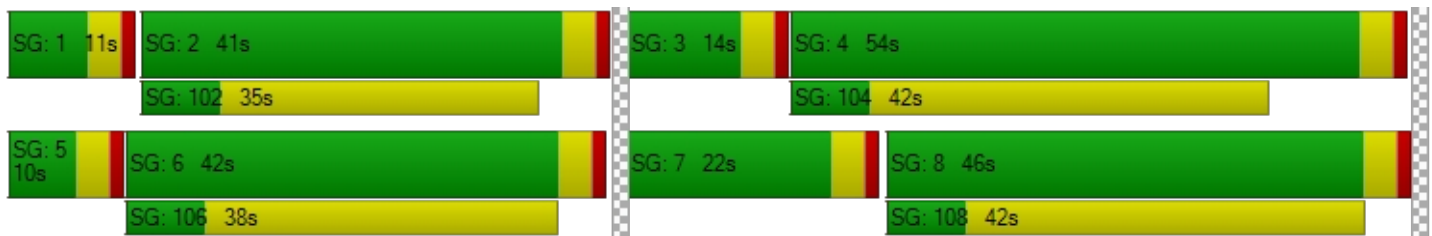
| | | | | | | | | | | | | |
|---------------------------------|-------|-------|------|-------|-------|-------|-------|-------|-------|--------|-------|-------|
| d_M, Delay for Movement [s/veh] | 59.23 | 22.23 | 0.00 | 66.89 | 22.95 | 21.77 | 59.93 | 49.06 | 51.33 | 109.48 | 38.87 | 36.32 |
| Movement LOS | E | C | | E | C | C | E | D | D | F | D | D |
| d_A, Approach Delay [s/veh] | 25.22 | | | 26.65 | | | 51.35 | | | 61.72 | | |
| Approach LOS | C | | | C | | | D | | | E | | |
| d_I, Intersection Delay [s/veh] | 41.91 | | | | | | | | | | | |
| Intersection LOS | D | | | | | | | | | | | |
| Intersection V/C | 0.669 | | | | | | | | | | | |

Other Modes

| | | | | |
|--|-------|-------|-------|-------|
| g_Walk,mi, Effective Walk Time [s] | 11.0 | 11.0 | 11.0 | 11.0 |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| d_p, Pedestrian Delay [s] | 49.52 | 49.52 | 49.52 | 49.52 |
| I_p,int, Pedestrian LOS Score for Intersection | 3.381 | 3.383 | 3.046 | 3.168 |
| Crosswalk LOS | C | C | C | C |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | 2000 | 2000 | 2000 |
| c_b, Capacity of the bicycle lane [bicycles/h] | 633 | 617 | 700 | 833 |
| d_b, Bicycle Delay [s] | 28.03 | 28.72 | 25.36 | 20.43 |
| I_b,int, Bicycle LOS Score for Intersection | 2.075 | 2.257 | 2.236 | 2.533 |
| Bicycle LOS | B | B | B | B |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 1 | 2 | 3 | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | 5 | 6 | 7 | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



Intersection Level Of Service Report

Intersection 10: Hawthorne Boulevard at Torrance Boulevard

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 35.8 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | D |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.673 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Torrance Boulevard | | | Torrance Boulevard | | |
|------------------------------|---------------------|--------|--------|---------------------|--------|--------|--------------------|--------|--------|--------------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | No | | | No | | | No | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Torrance Boulevard | | | Torrance Boulevard | | |
|---|---------------------|--------|--------|---------------------|--------|--------|--------------------|--------|--------|--------------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 264 | 1589 | 227 | 253 | 1651 | 156 | 259 | 925 | 276 | 284 | 824 | 145 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 264 | 1589 | 227 | 253 | 1651 | 156 | 259 | 925 | 276 | 284 | 824 | 145 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 66 | 397 | 57 | 63 | 413 | 39 | 65 | 231 | 69 | 71 | 206 | 36 |
| Total Analysis Volume [veh/h] | 264 | 1589 | 227 | 253 | 1651 | 156 | 259 | 925 | 276 | 284 | 824 | 145 |
| Presence of On-Street Parking | No | | No | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_di, Inbound Pedestrian Volume crossing in | 0 | | | 0 | | | 0 | | | 0 | | |
| v_co, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ci, Inbound Pedestrian Volume crossing mi | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ab, Corner Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 120 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Fully actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|------------------------------|----------|---------|---------|----------|---------|---------|----------|---------|---------|----------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |
| Minimum Green [s] | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 6 | 0 |
| Maximum Green [s] | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 |
| Amber [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| All red [s] | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 |
| Split [s] | 14 | 42 | 0 | 14 | 42 | 0 | 15 | 49 | 0 | 15 | 49 | 0 |
| Vehicle Extension [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 |
| Pedestrian Clearance [s] | 0 | 31 | 0 | 0 | 31 | 0 | 0 | 38 | 0 | 0 | 38 | 0 |
| Delayed Vehicle Green [s] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Rest In Walk | | No | | | No | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| Minimum Recall | No | No | | No | No | | No | No | | No | No | |
| Maximum Recall | No | No | | No | No | | No | No | | No | No | |
| Pedestrian Recall | No | No | | No | No | | No | No | | No | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | L | C | R | L | C | R | L | C | R | L | C | R |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| C, Cycle Length [s] | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | 10 | 56 | 56 | 10 | 56 | 56 | 11 | 27 | 27 | 11 | 27 | 27 |
| g / C, Green / Cycle | 0.08 | 0.47 | 0.47 | 0.08 | 0.47 | 0.47 | 0.09 | 0.22 | 0.22 | 0.09 | 0.22 | 0.22 |
| (v / s)_i Volume / Saturation Flow Rate | 0.08 | 0.23 | 0.14 | 0.07 | 0.24 | 0.10 | 0.07 | 0.18 | 0.17 | 0.08 | 0.16 | 0.09 |
| s, saturation flow rate [veh/h] | 3459 | 6792 | 1589 | 3459 | 6792 | 1589 | 3459 | 5094 | 1589 | 3459 | 5094 | 1589 |
| c, Capacity [veh/h] | 290 | 3181 | 745 | 290 | 3181 | 745 | 314 | 1132 | 353 | 319 | 1138 | 355 |
| d1, Uniform Delay [s] | 54.54 | 22.15 | 19.79 | 54.35 | 22.41 | 18.81 | 53.63 | 44.38 | 43.95 | 53.89 | 43.18 | 39.83 |
| k, delay calibration | 0.11 | 0.50 | 0.50 | 0.11 | 0.50 | 0.50 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 10.66 | 0.56 | 1.06 | 7.98 | 0.61 | 0.64 | 5.40 | 1.51 | 3.79 | 8.45 | 0.89 | 0.75 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | | | | | | |
|---------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| X, volume / capacity | 0.91 | 0.50 | 0.30 | 0.87 | 0.52 | 0.21 | 0.82 | 0.82 | 0.78 | 0.89 | 0.72 | 0.41 |
| d, Delay for Lane Group [s/veh] | 65.19 | 22.71 | 20.85 | 62.33 | 23.02 | 19.45 | 59.03 | 45.89 | 47.75 | 62.34 | 44.07 | 40.59 |
| Lane Group LOS | E | C | C | E | C | B | E | D | D | E | D | D |
| Critical Lane Group | Yes | No | No | No | Yes | No | No | Yes | No | Yes | No | No |
| 50th-Percentile Queue Length [veh/ln] | 4.38 | 7.81 | 4.14 | 4.10 | 8.22 | 2.70 | 4.08 | 8.84 | 8.07 | 4.61 | 7.63 | 3.75 |
| 50th-Percentile Queue Length [ft/ln] | 109.60 | 195.23 | 103.57 | 102.46 | 205.38 | 67.39 | 101.91 | 221.09 | 201.80 | 115.30 | 190.84 | 93.64 |
| 95th-Percentile Queue Length [veh/ln] | 7.82 | 12.39 | 7.46 | 7.38 | 12.92 | 4.85 | 7.34 | 13.72 | 12.73 | 8.13 | 12.16 | 6.74 |
| 95th-Percentile Queue Length [ft/ln] | 195.44 | 309.80 | 186.43 | 184.42 | 322.90 | 121.30 | 183.44 | 343.02 | 318.29 | 203.34 | 304.12 | 168.56 |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|---------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d_M, Delay for Movement [s/veh] | 65.19 | 22.71 | 20.85 | 62.33 | 23.02 | 19.45 | 59.03 | 45.89 | 47.75 | 62.34 | 44.07 | 40.59 |
| Movement LOS | E | C | C | E | C | B | E | D | D | E | D | D |
| d_A, Approach Delay [s/veh] | 27.90 | | | 27.58 | | | 48.57 | | | 47.81 | | |
| Approach LOS | C | | | C | | | D | | | D | | |
| d_I, Intersection Delay [s/veh] | 35.85 | | | | | | | | | | | |
| Intersection LOS | D | | | | | | | | | | | |
| Intersection V/C | 0.673 | | | | | | | | | | | |

Other Modes

| | | | | |
|--|-------|-------|-------|-------|
| g_Walk,mi, Effective Walk Time [s] | 11.0 | 11.0 | 11.0 | 11.0 |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| d_p, Pedestrian Delay [s] | 49.52 | 49.52 | 49.52 | 49.52 |
| I_p,int, Pedestrian LOS Score for Intersection | 3.472 | 3.451 | 3.156 | 3.151 |
| Crosswalk LOS | C | C | C | C |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | 2000 | 2000 | 2000 |
| c_b, Capacity of the bicycle lane [bicycles/h] | 633 | 633 | 750 | 750 |
| d_b, Bicycle Delay [s] | 28.03 | 28.03 | 23.45 | 23.45 |
| I_b,int, Bicycle LOS Score for Intersection | 2.418 | 2.409 | 2.363 | 2.249 |
| Bicycle LOS | B | B | B | B |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 1 | 2 | 3 | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | 5 | 6 | 7 | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



Intersection Level Of Service Report

Intersection 11: Hawthorne Boulevard at Village Lane/Fashion Way

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 17.7 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | B |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.585 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Village Lane | | | Fashion Way | | |
|------------------------------|---------------------|--------|--------|---------------------|--------|--------|--------------|--------|--------|-------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | No | | | No | | | No | | |
| Crosswalk | No | | | No | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Village Lane | | | Fashion Way | | |
|---|---------------------|--------|--------|---------------------|--------|--------|--------------|--------|--------|-------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 70 | 1952 | 135 | 173 | 1945 | 47 | 86 | 0 | 113 | 142 | 23 | 166 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 70 | 1952 | 135 | 173 | 1945 | 47 | 86 | 0 | 113 | 142 | 23 | 166 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 18 | 488 | 34 | 43 | 486 | 12 | 22 | 0 | 28 | 36 | 6 | 42 |
| Total Analysis Volume [veh/h] | 70 | 1952 | 135 | 173 | 1945 | 47 | 86 | 0 | 113 | 142 | 23 | 166 |
| Presence of On-Street Parking | No | | No | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_di, Inbound Pedestrian Volume crossing in | 0 | | | 0 | | | 0 | | | 0 | | |
| v_co, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ci, Inbound Pedestrian Volume crossing mi | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ab, Corner Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 105 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Fully actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Split | Permiss | Overlap | Split | Split | Overlap |
|------------------------------|----------|---------|---------|----------|---------|---------|-------|---------|---------|-------|-------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 8 | 0 | 8 | 0 | 4 | 4 |
| Auxiliary Signal Groups | | | | | | | | | 1,8 | | | 4,5 |
| Lead / Lag | Lead | - | - | Lead | - | - | Lag | - | - | - | - | - |
| Minimum Green [s] | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 0 | 6 | 0 | 6 | 6 |
| Maximum Green [s] | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 0 | 30 | 0 | 30 | 30 |
| Amber [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 0.0 | 3.0 | 0.0 | 3.0 | 3.0 |
| All red [s] | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 0.0 | 1.0 | 0.0 | 1.0 | 1.0 |
| Split [s] | 10 | 60 | 0 | 17 | 67 | 0 | 14 | 0 | 14 | 0 | 14 | 14 |
| Vehicle Extension [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 0.0 | 3.0 | 0.0 | 3.0 | 3.0 |
| Walk [s] | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pedestrian Clearance [s] | 0 | 18 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Delayed Vehicle Green [s] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Rest In Walk | | No | | | No | | No | | | | No | |
| I1, Start-Up Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 0.0 | 2.0 | 0.0 | 2.0 | 2.0 |
| I2, Clearance Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 0.0 | 2.0 | 0.0 | 2.0 | 2.0 |
| Minimum Recall | No | No | | No | No | | No | | No | | No | No |
| Maximum Recall | No | No | | No | No | | No | | No | | No | No |
| Pedestrian Recall | No | No | | No | No | | No | | No | | No | No |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | L | C | R | L | C | R | L | R | L | C | R |
|---|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|
| C, Cycle Length [s] | 105 | 105 | 105 | 105 | 105 | 105 | 105 | 105 | 105 | 105 | 105 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 0.00 | 2.00 | 2.00 | 0.00 |
| g_i, Effective Green Time [s] | 6 | 59 | 59 | 10 | 63 | 63 | 10 | 20 | 10 | 10 | 38 |
| g / C, Green / Cycle | 0.06 | 0.56 | 0.56 | 0.10 | 0.60 | 0.60 | 0.10 | 0.19 | 0.09 | 0.09 | 0.36 |
| (v / s)_i Volume / Saturation Flow Rate | 0.02 | 0.29 | 0.08 | 0.05 | 0.29 | 0.03 | 0.06 | 0.07 | 0.05 | 0.05 | 0.10 |
| s, saturation flow rate [veh/h] | 3459 | 6792 | 1589 | 3459 | 6792 | 1589 | 1417 | 1589 | 1781 | 1805 | 1589 |
| c, Capacity [veh/h] | 198 | 3820 | 894 | 333 | 4086 | 956 | 173 | 302 | 168 | 170 | 574 |
| d1, Uniform Delay [s] | 47.63 | 14.11 | 10.98 | 45.13 | 11.68 | 8.59 | 48.00 | 37.09 | 45.17 | 45.17 | 23.92 |
| k, delay calibration | 0.11 | 0.50 | 0.50 | 0.11 | 0.50 | 0.50 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 1.07 | 0.49 | 0.36 | 1.25 | 0.40 | 0.10 | 2.22 | 0.77 | 2.20 | 2.16 | 0.28 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | | | | | |
|---------------------------------------|-------|--------|-------|-------|--------|-------|--------|--------|-------|-------|--------|
| X, volume / capacity | 0.35 | 0.51 | 0.15 | 0.52 | 0.48 | 0.05 | 0.50 | 0.37 | 0.49 | 0.49 | 0.29 |
| d, Delay for Lane Group [s/veh] | 48.69 | 14.60 | 11.34 | 46.38 | 12.08 | 8.69 | 50.21 | 37.86 | 47.37 | 47.33 | 24.19 |
| Lane Group LOS | D | B | B | D | B | A | D | D | D | D | C |
| Critical Lane Group | No | Yes | No | Yes | No | No | No | Yes | No | No | Yes |
| 50th-Percentile Queue Length [veh/ln] | 0.91 | 6.90 | 1.55 | 2.20 | 6.08 | 0.45 | 2.31 | 2.59 | 2.13 | 2.15 | 2.96 |
| 50th-Percentile Queue Length [ft/ln] | 22.72 | 172.59 | 38.70 | 54.90 | 151.96 | 11.25 | 57.86 | 64.63 | 53.16 | 53.76 | 74.01 |
| 95th-Percentile Queue Length [veh/ln] | 1.64 | 11.21 | 2.79 | 3.95 | 10.12 | 0.81 | 4.17 | 4.65 | 3.83 | 3.87 | 5.33 |
| 95th-Percentile Queue Length [ft/ln] | 40.89 | 280.31 | 69.66 | 98.82 | 253.04 | 20.24 | 104.15 | 116.33 | 95.70 | 96.78 | 133.22 |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|---------------------------------|-------|-------|-------|-------|-------|------|-------|------|-------|-------|-------|-------|
| d_M, Delay for Movement [s/veh] | 48.69 | 14.60 | 11.34 | 46.38 | 12.08 | 8.69 | 50.21 | 0.00 | 37.86 | 47.35 | 47.33 | 24.19 |
| Movement LOS | D | B | B | D | B | A | D | | D | D | D | C |
| d_A, Approach Delay [s/veh] | 15.50 | | | 14.75 | | | 43.20 | | | 35.74 | | |
| Approach LOS | B | | | B | | | D | | | D | | |
| d_I, Intersection Delay [s/veh] | 17.68 | | | | | | | | | | | |
| Intersection LOS | B | | | | | | | | | | | |
| Intersection V/C | 0.585 | | | | | | | | | | | |

Other Modes

| | | | | | | | | | | | | |
|--|-------|--|--|-------|--|--|-------|--|--|-------|--|--|
| g_Walk,mi, Effective Walk Time [s] | 0.0 | | | 0.0 | | | 11.0 | | | 11.0 | | |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| d_p, Pedestrian Delay [s] | 0.00 | | | 0.00 | | | 42.08 | | | 42.08 | | |
| I_p,int, Pedestrian LOS Score for Intersection | 0.000 | | | 0.000 | | | 2.221 | | | 2.432 | | |
| Crosswalk LOS | F | | | F | | | B | | | B | | |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | | | 2000 | | | 2000 | | | 2000 | | |
| c_b, Capacity of the bicycle lane [bicycles/h] | 1067 | | | 1200 | | | 190 | | | 190 | | |
| d_b, Bicycle Delay [s] | 11.44 | | | 8.40 | | | 42.98 | | | 42.98 | | |
| I_b,int, Bicycle LOS Score for Intersection | 2.449 | | | 2.453 | | | 1.560 | | | 2.106 | | |
| Bicycle LOS | B | | | B | | | A | | | B | | |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 1 | 2 | 4 | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | 5 | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



Intersection Level Of Service Report
Intersection 12: Hawthorne Boulevard at Del Amo Circle

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 14.4 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | B |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.511 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Del Amo Circle | | | Del Amo Circle | | |
|------------------------------|---------------------|--------|--------|---------------------|--------|--------|----------------|--------|--------|----------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | No | | | No | | | No | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Del Amo Circle | | | Del Amo Circle | | |
|---|---------------------|--------|--------|---------------------|--------|--------|----------------|--------|--------|----------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 94 | 1817 | 51 | 81 | 1973 | 163 | 134 | 14 | 127 | 70 | 21 | 80 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 94 | 1817 | 51 | 81 | 1973 | 163 | 134 | 14 | 127 | 70 | 21 | 80 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 24 | 454 | 13 | 20 | 493 | 41 | 34 | 4 | 32 | 18 | 5 | 20 |
| Total Analysis Volume [veh/h] | 94 | 1817 | 51 | 81 | 1973 | 163 | 134 | 14 | 127 | 70 | 21 | 80 |
| Presence of On-Street Parking | No | | No | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_di, Inbound Pedestrian Volume crossing in | 0 | | | 0 | | | 0 | | | 0 | | |
| v_co, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ci, Inbound Pedestrian Volume crossing mi | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ab, Corner Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 95 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Fully actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 12.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss |
|------------------------------|----------|---------|---------|----------|---------|---------|---------|---------|---------|---------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 0 | 8 | 0 | 0 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | - | - | - | - | - | - |
| Minimum Green [s] | 6 | 6 | 0 | 6 | 6 | 0 | 0 | 6 | 0 | 0 | 6 | 0 |
| Maximum Green [s] | 30 | 30 | 0 | 30 | 30 | 0 | 0 | 30 | 0 | 0 | 30 | 0 |
| Amber [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 |
| All red [s] | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 1.0 | 0.0 |
| Split [s] | 17 | 36 | 0 | 10 | 29 | 0 | 0 | 49 | 0 | 0 | 49 | 0 |
| Vehicle Extension [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 |
| Pedestrian Clearance [s] | 0 | 18 | 0 | 0 | 18 | 0 | 0 | 31 | 0 | 0 | 38 | 0 |
| Delayed Vehicle Green [s] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Rest In Walk | | No | | | No | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 |
| Minimum Recall | No | No | | No | No | | | No | | | No | |
| Maximum Recall | No | No | | No | No | | | No | | | No | |
| Pedestrian Recall | No | No | | No | No | | | No | | | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | L | C | C | L | C | R | L | C | C | L | C | C |
|---|-------|------|------|-------|-------|------|-------|-------|-------|-------|-------|-------|
| C, Cycle Length [s] | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.00 | 0.00 | 0.00 | 2.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | 6 | 59 | 59 | 5 | 58 | 58 | 19 | 19 | 19 | 19 | 19 | 19 |
| g / C, Green / Cycle | 0.07 | 0.62 | 0.62 | 0.06 | 0.61 | 0.61 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| (v / s)_i Volume / Saturation Flow Rate | 0.05 | 0.27 | 0.27 | 0.02 | 0.29 | 0.10 | 0.10 | 0.01 | 0.08 | 0.06 | 0.01 | 0.05 |
| s, saturation flow rate [veh/h] | 1781 | 5094 | 1837 | 3459 | 6792 | 1589 | 1293 | 1870 | 1589 | 1247 | 1870 | 1589 |
| c, Capacity [veh/h] | 121 | 3150 | 1136 | 194 | 4121 | 964 | 245 | 372 | 316 | 204 | 372 | 316 |
| d1, Uniform Delay [s] | 43.57 | 9.47 | 9.47 | 43.33 | 10.36 | 8.19 | 40.07 | 30.71 | 33.13 | 40.49 | 30.83 | 32.09 |
| k, delay calibration | 0.11 | 0.50 | 0.50 | 0.11 | 0.50 | 0.50 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 10.14 | 0.44 | 1.22 | 1.42 | 0.40 | 0.38 | 1.91 | 0.04 | 0.82 | 0.99 | 0.06 | 0.42 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | | | | | | |
|---------------------------------------|--------|--------|--------|-------|--------|-------|--------|-------|--------|-------|-------|-------|
| X, volume / capacity | 0.78 | 0.44 | 0.44 | 0.42 | 0.48 | 0.17 | 0.55 | 0.04 | 0.40 | 0.34 | 0.06 | 0.25 |
| d, Delay for Lane Group [s/veh] | 53.71 | 9.91 | 10.69 | 44.75 | 10.76 | 8.57 | 41.98 | 30.75 | 33.95 | 41.48 | 30.89 | 32.51 |
| Lane Group LOS | D | A | B | D | B | A | D | C | C | D | C | C |
| Critical Lane Group | Yes | No | No | No | Yes | No | Yes | No | No | No | No | No |
| 50th-Percentile Queue Length [veh/ln] | 2.50 | 4.61 | 5.23 | 0.95 | 5.31 | 1.46 | 3.13 | 0.26 | 2.59 | 1.60 | 0.39 | 1.58 |
| 50th-Percentile Queue Length [ft/ln] | 62.41 | 115.30 | 130.85 | 23.80 | 132.66 | 36.45 | 78.31 | 6.55 | 64.87 | 39.98 | 9.87 | 39.40 |
| 95th-Percentile Queue Length [veh/ln] | 4.49 | 8.13 | 8.99 | 1.71 | 9.08 | 2.62 | 5.64 | 0.47 | 4.67 | 2.88 | 0.71 | 2.84 |
| 95th-Percentile Queue Length [ft/ln] | 112.33 | 203.35 | 224.65 | 42.84 | 227.10 | 65.61 | 140.96 | 11.79 | 116.77 | 71.97 | 17.76 | 70.93 |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|---------------------------------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|
| d_M, Delay for Movement [s/veh] | 53.71 | 10.10 | 10.69 | 44.75 | 10.76 | 8.57 | 41.98 | 30.75 | 33.95 | 41.48 | 30.89 | 32.51 |
| Movement LOS | D | B | B | D | B | A | D | C | C | D | C | C |
| d_A, Approach Delay [s/veh] | 12.20 | | | 11.84 | | | 37.70 | | | 35.98 | | |
| Approach LOS | B | | | B | | | D | | | D | | |
| d_I, Intersection Delay [s/veh] | 14.42 | | | | | | | | | | | |
| Intersection LOS | B | | | | | | | | | | | |
| Intersection V/C | 0.511 | | | | | | | | | | | |

Other Modes

| | | | | | | | | |
|--|-------|--|-------|--|-------|--|-------|--|
| g_Walk,mi, Effective Walk Time [s] | 11.0 | | 11.0 | | 11.0 | | 11.0 | |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | | 0.00 | | 0.00 | | 0.00 | |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | | 0.00 | | 0.00 | | 0.00 | |
| d_p, Pedestrian Delay [s] | 37.14 | | 37.14 | | 37.14 | | 37.14 | |
| I_p,int, Pedestrian LOS Score for Intersection | 3.399 | | 3.648 | | 2.410 | | 2.364 | |
| Crosswalk LOS | C | | D | | B | | B | |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | | 2000 | | 2000 | | 2000 | |
| c_b, Capacity of the bicycle lane [bicycles/h] | 674 | | 526 | | 947 | | 947 | |
| d_b, Bicycle Delay [s] | 20.89 | | 25.79 | | 13.16 | | 13.16 | |
| I_b,int, Bicycle LOS Score for Intersection | 2.369 | | 2.474 | | 1.786 | | 1.701 | |
| Bicycle LOS | B | | B | | A | | A | |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 1 | 2 | - | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | 5 | 6 | - | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



Intersection Level Of Service Report
Intersection 13: Hawthorne Boulevard at Carson Street

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 27.3 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.646 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Carson Street | | | Carson Street | | |
|------------------------------|---------------------|--------|--------|---------------------|--------|--------|---------------|--------|--------|---------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | ↵ ↑ ↑ ↑↵ | | | ↵ ↑ ↑ ↑↵ | | | ↵ ↑ | | | ↵ ↑ ↑ ↑↵ | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | No | | | No | | | No | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Carson Street | | | Carson Street | | |
|---|---------------------|--------|--------|---------------------|--------|--------|---------------|--------|--------|---------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 115 | 1649 | 232 | 326 | 1737 | 59 | 102 | 448 | 90 | 198 | 454 | 187 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 115 | 1649 | 232 | 326 | 1737 | 59 | 102 | 448 | 90 | 198 | 454 | 187 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 29 | 412 | 58 | 82 | 434 | 15 | 26 | 112 | 23 | 50 | 114 | 47 |
| Total Analysis Volume [veh/h] | 115 | 1649 | 232 | 326 | 1737 | 59 | 102 | 448 | 90 | 198 | 454 | 187 |
| Presence of On-Street Parking | No | | No | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_di, Inbound Pedestrian Volume crossing in | 0 | | | 0 | | | 0 | | | 0 | | |
| v_co, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ci, Inbound Pedestrian Volume crossing mi | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ab, Corner Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 100 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Fully actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|------------------------------|----------|---------|---------|----------|---------|---------|----------|---------|---------|----------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |
| Minimum Green [s] | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 6 | 0 |
| Maximum Green [s] | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 |
| Amber [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| All red [s] | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 |
| Split [s] | 12 | 39 | 0 | 16 | 43 | 0 | 13 | 34 | 0 | 11 | 32 | 0 |
| Vehicle Extension [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 |
| Pedestrian Clearance [s] | 0 | 28 | 0 | 0 | 24 | 0 | 0 | 21 | 0 | 0 | 21 | 0 |
| Delayed Vehicle Green [s] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Rest In Walk | | No | | | No | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| Minimum Recall | No | No | | No | No | | No | No | | No | No | |
| Maximum Recall | No | No | | No | No | | No | No | | No | No | |
| Pedestrian Recall | No | No | | No | No | | No | No | | No | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | L | C | R | L | C | C | L | C | C | L | C | R |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| C, Cycle Length [s] | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | 8 | 48 | 48 | 11 | 51 | 51 | 7 | 18 | 18 | 7 | 17 | 17 |
| g / C, Green / Cycle | 0.08 | 0.48 | 0.48 | 0.11 | 0.51 | 0.51 | 0.07 | 0.18 | 0.18 | 0.07 | 0.17 | 0.17 |
| (v / s)_i Volume / Saturation Flow Rate | 0.06 | 0.24 | 0.15 | 0.09 | 0.26 | 0.26 | 0.06 | 0.15 | 0.15 | 0.06 | 0.09 | 0.12 |
| s, saturation flow rate [veh/h] | 1781 | 6792 | 1589 | 3459 | 5094 | 1830 | 1781 | 1870 | 1763 | 3459 | 5094 | 1589 |
| c, Capacity [veh/h] | 144 | 3257 | 762 | 394 | 2613 | 939 | 130 | 329 | 310 | 245 | 883 | 276 |
| d1, Uniform Delay [s] | 45.23 | 17.91 | 15.88 | 43.39 | 16.04 | 16.04 | 45.63 | 39.90 | 39.95 | 45.86 | 37.56 | 38.77 |
| k, delay calibration | 0.11 | 0.50 | 0.50 | 0.11 | 0.50 | 0.50 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 9.74 | 0.57 | 1.03 | 4.44 | 0.70 | 1.95 | 9.79 | 5.74 | 6.29 | 6.26 | 0.46 | 2.92 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | | | | | | |
|---------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| X, volume / capacity | 0.80 | 0.51 | 0.30 | 0.83 | 0.51 | 0.51 | 0.78 | 0.84 | 0.85 | 0.81 | 0.51 | 0.68 |
| d, Delay for Lane Group [s/veh] | 54.98 | 18.47 | 16.91 | 47.83 | 16.74 | 17.99 | 55.42 | 45.65 | 46.24 | 52.11 | 38.02 | 41.69 |
| Lane Group LOS | D | B | B | D | B | B | E | D | D | D | D | D |
| Critical Lane Group | No | Yes | No | Yes | No | No | No | No | Yes | Yes | No | No |
| 50th-Percentile Queue Length [veh/ln] | 3.18 | 6.42 | 3.36 | 4.16 | 6.49 | 7.32 | 2.83 | 7.01 | 6.71 | 2.62 | 3.38 | 4.48 |
| 50th-Percentile Queue Length [ft/ln] | 79.43 | 160.45 | 83.91 | 103.96 | 162.27 | 183.02 | 70.78 | 175.29 | 167.67 | 65.59 | 84.42 | 112.07 |
| 95th-Percentile Queue Length [veh/ln] | 5.72 | 10.57 | 6.04 | 7.49 | 10.67 | 11.76 | 5.10 | 11.35 | 10.95 | 4.72 | 6.08 | 7.95 |
| 95th-Percentile Queue Length [ft/ln] | 142.98 | 264.32 | 151.04 | 187.13 | 266.73 | 293.96 | 127.41 | 283.86 | 273.85 | 118.05 | 151.96 | 198.87 |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|---------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d_M, Delay for Movement [s/veh] | 54.98 | 18.47 | 16.91 | 47.83 | 17.04 | 17.99 | 55.42 | 45.88 | 46.24 | 52.11 | 38.02 | 41.69 |
| Movement LOS | D | B | B | D | B | B | E | D | D | D | D | D |
| d_A, Approach Delay [s/veh] | 20.39 | | | 21.80 | | | 47.45 | | | 42.16 | | |
| Approach LOS | C | | | C | | | D | | | D | | |
| d_I, Intersection Delay [s/veh] | 27.28 | | | | | | | | | | | |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.646 | | | | | | | | | | | |

Other Modes

| | | | | | | | | | | | | |
|--|-------|--|--|-------|--|--|-------|--|--|-------|--|--|
| g_Walk,mi, Effective Walk Time [s] | 11.0 | | | 11.0 | | | 11.0 | | | 11.0 | | |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| d_p, Pedestrian Delay [s] | 39.64 | | | 39.64 | | | 39.64 | | | 39.64 | | |
| I_p,int, Pedestrian LOS Score for Intersection | 3.363 | | | 3.367 | | | 2.664 | | | 2.955 | | |
| Crosswalk LOS | C | | | C | | | B | | | C | | |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | | | 2000 | | | 2000 | | | 2000 | | |
| c_b, Capacity of the bicycle lane [bicycles/h] | 700 | | | 779 | | | 600 | | | 560 | | |
| d_b, Bicycle Delay [s] | 21.16 | | | 18.63 | | | 24.53 | | | 25.95 | | |
| I_b,int, Bicycle LOS Score for Intersection | 2.383 | | | 2.435 | | | 2.088 | | | 2.021 | | |
| Bicycle LOS | B | | | B | | | B | | | B | | |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 1 | 2 | 3 | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | 5 | 6 | 7 | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |







Intersection Level Of Service Report

Intersection 14: Hawthorne Boulevard at Sepulveda Boulevard

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 41.4 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | D |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.738 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Sepulveda Boulevard | | | Sepulveda Boulevard | | |
|------------------------------|---|--------|--------|---|--------|--------|---|--------|--------|---|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration |  | | |  | | |  | | |  | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | No | | | No | | | No | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Sepulveda Boulevard | | | Sepulveda Boulevard | | |
|---|---------------------|--------|--------|---------------------|--------|--------|---------------------|--------|--------|---------------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 223 | 1592 | 586 | 290 | 1395 | 213 | 231 | 933 | 94 | 446 | 835 | 215 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 223 | 1592 | 586 | 290 | 1395 | 213 | 231 | 933 | 94 | 446 | 835 | 215 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 56 | 398 | 147 | 73 | 349 | 53 | 58 | 233 | 24 | 112 | 209 | 54 |
| Total Analysis Volume [veh/h] | 223 | 1592 | 586 | 290 | 1395 | 213 | 231 | 933 | 94 | 446 | 835 | 215 |
| Presence of On-Street Parking | No | | No | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_di, Inbound Pedestrian Volume crossing in | 0 | | | 0 | | | 0 | | | 0 | | |
| v_co, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ci, Inbound Pedestrian Volume crossing mi | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ab, Corner Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 120 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Fully actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Unsigna | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|------------------------------|----------|---------|---------|----------|---------|---------|----------|---------|---------|----------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |
| Minimum Green [s] | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 6 | 0 |
| Maximum Green [s] | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 |
| Amber [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| All red [s] | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 |
| Split [s] | 13 | 42 | 0 | 14 | 43 | 0 | 14 | 46 | 0 | 18 | 50 | 0 |
| Vehicle Extension [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 |
| Pedestrian Clearance [s] | 0 | 31 | 0 | 0 | 28 | 0 | 0 | 35 | 0 | 0 | 35 | 0 |
| Delayed Vehicle Green [s] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Rest In Walk | | No | | | No | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| Minimum Recall | No | No | | No | No | | No | No | | No | No | |
| Maximum Recall | No | No | | No | No | | No | No | | No | No | |
| Pedestrian Recall | No | No | | No | No | | No | No | | No | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | L | C | L | C | R | L | C | C | L | C | R |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| C, Cycle Length [s] | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | 9 | 53 | 10 | 54 | 54 | 10 | 27 | 27 | 14 | 31 | 31 |
| g / C, Green / Cycle | 0.08 | 0.44 | 0.08 | 0.45 | 0.45 | 0.08 | 0.22 | 0.22 | 0.12 | 0.26 | 0.26 |
| (v / s)_i Volume / Saturation Flow Rate | 0.06 | 0.23 | 0.08 | 0.21 | 0.13 | 0.07 | 0.19 | 0.19 | 0.13 | 0.16 | 0.14 |
| s, saturation flow rate [veh/h] | 3459 | 6792 | 3459 | 6792 | 1589 | 3459 | 3560 | 1784 | 3459 | 5094 | 1589 |
| c, Capacity [veh/h] | 262 | 3007 | 290 | 3063 | 717 | 287 | 794 | 398 | 405 | 1310 | 409 |
| d1, Uniform Delay [s] | 54.83 | 24.35 | 54.99 | 22.77 | 20.89 | 54.10 | 44.87 | 44.88 | 53.00 | 39.63 | 38.31 |
| k, delay calibration | 0.11 | 0.50 | 0.11 | 0.50 | 0.50 | 0.11 | 0.11 | 0.13 | 0.11 | 0.11 | 0.11 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 7.69 | 0.67 | 24.30 | 0.49 | 1.06 | 5.29 | 2.92 | 6.60 | 54.22 | 0.52 | 1.05 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | | | | | |
|---------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| X, volume / capacity | 0.85 | 0.53 | 1.00 | 0.46 | 0.30 | 0.81 | 0.86 | 0.86 | 1.10 | 0.64 | 0.53 |
| d, Delay for Lane Group [s/veh] | 62.52 | 25.02 | 79.28 | 23.26 | 21.95 | 59.39 | 47.79 | 51.48 | 107.22 | 40.15 | 39.37 |
| Lane Group LOS | E | C | E | C | C | E | D | D | F | D | D |
| Critical Lane Group | No | Yes | Yes | No | No | No | No | Yes | Yes | No | No |
| 50th-Percentile Queue Length [veh/ln] | 3.61 | 8.29 | 5.36 | 6.86 | 4.00 | 3.64 | 10.07 | 10.51 | 9.14 | 7.35 | 5.56 |
| 50th-Percentile Queue Length [ft/ln] | 90.26 | 207.22 | 133.97 | 171.56 | 99.94 | 90.98 | 251.78 | 262.71 | 228.59 | 183.74 | 139.03 |
| 95th-Percentile Queue Length [veh/ln] | 6.50 | 13.01 | 9.16 | 11.16 | 7.20 | 6.55 | 15.28 | 15.82 | 14.66 | 11.80 | 9.43 |
| 95th-Percentile Queue Length [ft/ln] | 162.46 | 325.26 | 228.88 | 278.96 | 179.90 | 163.77 | 381.89 | 395.62 | 366.48 | 294.90 | 235.72 |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|---------------------------------|-------|-------|------|-------|-------|-------|-------|-------|-------|--------|-------|-------|
| d_M, Delay for Movement [s/veh] | 62.52 | 25.02 | 0.00 | 79.28 | 23.26 | 21.95 | 59.39 | 48.78 | 51.48 | 107.22 | 40.15 | 39.37 |
| Movement LOS | E | C | | E | C | C | E | D | D | F | D | D |
| d_A, Approach Delay [s/veh] | 29.63 | | | 31.67 | | | 50.93 | | | 60.03 | | |
| Approach LOS | C | | | C | | | D | | | E | | |
| d_I, Intersection Delay [s/veh] | 41.40 | | | | | | | | | | | |
| Intersection LOS | D | | | | | | | | | | | |
| Intersection V/C | 0.738 | | | | | | | | | | | |

Other Modes

| | | | | |
|--|-------|-------|-------|-------|
| g_Walk,mi, Effective Walk Time [s] | 11.0 | 11.0 | 11.0 | 11.0 |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| d_p, Pedestrian Delay [s] | 49.52 | 49.52 | 49.52 | 49.52 |
| I_p,int, Pedestrian LOS Score for Intersection | 3.424 | 3.441 | 3.047 | 3.158 |
| Crosswalk LOS | C | C | C | C |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | 2000 | 2000 | 2000 |
| c_b, Capacity of the bicycle lane [bicycles/h] | 633 | 650 | 700 | 766 |
| d_b, Bicycle Delay [s] | 28.03 | 27.35 | 25.36 | 22.83 |
| I_b,int, Bicycle LOS Score for Intersection | 2.308 | 2.343 | 2.252 | 2.382 |
| Bicycle LOS | B | B | B | B |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 1 | 2 | 3 | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | 5 | 6 | 7 | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



APPENDIX D-III

**EXISTING WITH AMBIENT GROWTH (YEAR 2025)
WITH PROJECT TRAFFIC CONDITIONS**

Intersection Level Of Service Report

Intersection 10: Hawthorne Boulevard at Torrance Boulevard

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 34.1 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.673 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Torrance Boulevard | | | Torrance Boulevard | | |
|------------------------------|---------------------|--------|--------|---------------------|--------|--------|--------------------|--------|--------|--------------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | No | | | No | | | No | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Torrance Boulevard | | | Torrance Boulevard | | |
|---|---------------------|--------|--------|---------------------|--------|--------|--------------------|--------|--------|--------------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 199 | 1110 | 126 | 133 | 1733 | 229 | 239 | 787 | 181 | 255 | 1028 | 83 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 199 | 1110 | 126 | 133 | 1733 | 229 | 239 | 787 | 181 | 255 | 1028 | 83 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 50 | 278 | 32 | 33 | 433 | 57 | 60 | 197 | 45 | 64 | 257 | 21 |
| Total Analysis Volume [veh/h] | 199 | 1110 | 126 | 133 | 1733 | 229 | 239 | 787 | 181 | 255 | 1028 | 83 |
| Presence of On-Street Parking | No | | No | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_di, Inbound Pedestrian Volume crossing in | 0 | | | 0 | | | 0 | | | 0 | | |
| v_co, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ci, Inbound Pedestrian Volume crossing mi | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ab, Corner Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 120 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Fully actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|------------------------------|----------|---------|---------|----------|---------|---------|----------|---------|---------|----------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |
| Minimum Green [s] | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 6 | 0 |
| Maximum Green [s] | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 |
| Amber [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| All red [s] | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 |
| Split [s] | 13 | 45 | 0 | 10 | 42 | 0 | 14 | 49 | 0 | 16 | 51 | 0 |
| Vehicle Extension [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 |
| Pedestrian Clearance [s] | 0 | 31 | 0 | 0 | 31 | 0 | 0 | 38 | 0 | 0 | 38 | 0 |
| Delayed Vehicle Green [s] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Rest In Walk | | No | | | No | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| Minimum Recall | No | No | | No | No | | No | No | | No | No | |
| Maximum Recall | No | No | | No | No | | No | No | | No | No | |
| Pedestrian Recall | No | No | | No | No | | No | No | | No | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | L | C | R | L | C | R | L | C | R | L | C | R |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| C, Cycle Length [s] | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | 9 | 59 | 59 | 6 | 56 | 56 | 10 | 28 | 28 | 11 | 29 | 29 |
| g / C, Green / Cycle | 0.07 | 0.49 | 0.49 | 0.05 | 0.47 | 0.47 | 0.08 | 0.23 | 0.23 | 0.09 | 0.24 | 0.24 |
| (v / s)_i Volume / Saturation Flow Rate | 0.06 | 0.16 | 0.08 | 0.04 | 0.26 | 0.14 | 0.07 | 0.15 | 0.11 | 0.07 | 0.20 | 0.05 |
| s, saturation flow rate [veh/h] | 3459 | 6792 | 1589 | 3459 | 6792 | 1589 | 3459 | 5094 | 1589 | 3459 | 5094 | 1589 |
| c, Capacity [veh/h] | 255 | 3338 | 781 | 176 | 3181 | 744 | 290 | 1192 | 372 | 313 | 1225 | 382 |
| d1, Uniform Delay [s] | 54.64 | 18.56 | 16.86 | 56.26 | 22.78 | 19.82 | 54.12 | 41.65 | 39.74 | 53.61 | 43.37 | 36.53 |
| k, delay calibration | 0.11 | 0.50 | 0.50 | 0.11 | 0.50 | 0.50 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 5.11 | 0.27 | 0.44 | 6.54 | 0.67 | 1.07 | 5.81 | 0.63 | 0.99 | 5.16 | 1.62 | 0.28 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | | | | | | |
|---------------------------------------|--------|--------|-------|-------|--------|--------|--------|--------|--------|--------|--------|-------|
| X, volume / capacity | 0.78 | 0.33 | 0.16 | 0.76 | 0.54 | 0.31 | 0.82 | 0.66 | 0.49 | 0.81 | 0.84 | 0.22 |
| d, Delay for Lane Group [s/veh] | 59.75 | 18.83 | 17.30 | 62.79 | 23.45 | 20.89 | 59.93 | 42.28 | 40.73 | 58.77 | 44.99 | 36.81 |
| Lane Group LOS | E | B | B | E | C | C | E | D | D | E | D | D |
| Critical Lane Group | Yes | No | No | No | Yes | No | Yes | No | No | No | Yes | No |
| 50th-Percentile Queue Length [veh/ln] | 3.14 | 4.72 | 2.02 | 2.15 | 8.77 | 4.19 | 3.79 | 7.10 | 4.73 | 4.00 | 9.82 | 2.00 |
| 50th-Percentile Queue Length [ft/ln] | 78.45 | 118.04 | 50.46 | 53.74 | 219.23 | 104.66 | 94.66 | 177.50 | 118.25 | 100.06 | 245.42 | 49.88 |
| 95th-Percentile Queue Length [veh/ln] | 5.65 | 8.29 | 3.63 | 3.87 | 13.63 | 7.54 | 6.82 | 11.47 | 8.30 | 7.20 | 14.96 | 3.59 |
| 95th-Percentile Queue Length [ft/ln] | 141.21 | 207.13 | 90.82 | 96.73 | 340.64 | 188.38 | 170.39 | 286.74 | 207.42 | 180.12 | 373.88 | 89.78 |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|---------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d_M, Delay for Movement [s/veh] | 59.75 | 18.83 | 17.30 | 62.79 | 23.45 | 20.89 | 59.93 | 42.28 | 40.73 | 58.77 | 44.99 | 36.81 |
| Movement LOS | E | B | B | E | C | C | E | D | D | E | D | D |
| d_A, Approach Delay [s/veh] | 24.37 | | | 25.67 | | | 45.55 | | | 47.07 | | |
| Approach LOS | C | | | C | | | D | | | D | | |
| d_I, Intersection Delay [s/veh] | 34.08 | | | | | | | | | | | |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.673 | | | | | | | | | | | |

Other Modes

| | | | | |
|--|-------|-------|-------|-------|
| g_Walk,mi, Effective Walk Time [s] | 11.0 | 11.0 | 11.0 | 11.0 |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| d_p, Pedestrian Delay [s] | 49.52 | 49.52 | 49.52 | 49.52 |
| I_p,int, Pedestrian LOS Score for Intersection | 3.411 | 3.405 | 3.151 | 3.124 |
| Crosswalk LOS | C | C | C | C |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | 2000 | 2000 | 2000 |
| c_b, Capacity of the bicycle lane [bicycles/h] | 683 | 633 | 750 | 783 |
| d_b, Bicycle Delay [s] | 26.02 | 28.03 | 23.45 | 22.22 |
| I_b,int, Bicycle LOS Score for Intersection | 2.152 | 2.424 | 2.223 | 2.311 |
| Bicycle LOS | B | B | B | B |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 1 | 2 | 3 | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | 5 | 6 | 7 | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



Intersection Level Of Service Report

Intersection 11: Hawthorne Boulevard at Village Lane/Fashion Way

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 9.9 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.404 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Village Lane | | | Fashion Way | | |
|------------------------------|---------------------|--------|--------|---------------------|--------|--------|--------------|--------|--------|-------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | No | | | No | | | No | | |
| Crosswalk | No | | | No | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Village Lane | | | Fashion Way | | |
|---|---------------------|--------|--------|---------------------|--------|--------|--------------|--------|--------|-------------|--------|--------|
| Base Volume Input [veh/h] | 60 | 1597 | 114 | 41 | 1774 | 75 | 41 | 0 | 27 | 57 | 33 | 34 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 60 | 1597 | 114 | 41 | 1774 | 75 | 41 | 0 | 27 | 57 | 33 | 34 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 15 | 399 | 29 | 10 | 444 | 19 | 10 | 0 | 7 | 14 | 8 | 9 |
| Total Analysis Volume [veh/h] | 60 | 1597 | 114 | 41 | 1774 | 75 | 41 | 0 | 27 | 57 | 33 | 34 |
| Presence of On-Street Parking | No | | No | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_di, Inbound Pedestrian Volume crossing in | 0 | | | 0 | | | 0 | | | 0 | | |
| v_co, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ci, Inbound Pedestrian Volume crossing mi | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ab, Corner Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 90 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Fully actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Split | Permiss | Overlap | Split | Split | Overlap |
|------------------------------|----------|---------|---------|----------|---------|---------|-------|---------|---------|-------|-------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 8 | 0 | 8 | 0 | 4 | 4 |
| Auxiliary Signal Groups | | | | | | | | | 1,8 | | | 4,5 |
| Lead / Lag | Lead | - | - | Lead | - | - | Lag | - | - | - | - | - |
| Minimum Green [s] | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 0 | 6 | 0 | 6 | 6 |
| Maximum Green [s] | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 0 | 30 | 0 | 30 | 30 |
| Amber [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 0.0 | 3.0 | 0.0 | 3.0 | 3.0 |
| All red [s] | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 0.0 | 1.0 | 0.0 | 1.0 | 1.0 |
| Split [s] | 10 | 55 | 0 | 10 | 55 | 0 | 12 | 0 | 12 | 0 | 13 | 13 |
| Vehicle Extension [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 0.0 | 3.0 | 0.0 | 3.0 | 3.0 |
| Walk [s] | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pedestrian Clearance [s] | 0 | 18 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Delayed Vehicle Green [s] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Rest In Walk | | No | | | No | | No | | | | No | |
| I1, Start-Up Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 0.0 | 2.0 | 0.0 | 2.0 | 2.0 |
| I2, Clearance Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 0.0 | 2.0 | 0.0 | 2.0 | 2.0 |
| Minimum Recall | No | No | | No | No | | No | | No | | No | No |
| Maximum Recall | No | No | | No | No | | No | | No | | No | No |
| Pedestrian Recall | No | No | | No | No | | No | | No | | No | No |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | L | C | R | L | C | R | L | R | L | C | R |
|---|-------|------|------|-------|------|------|-------|-------|-------|-------|-------|
| C, Cycle Length [s] | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 0.00 | 2.00 | 2.00 | 0.00 |
| g_i, Effective Green Time [s] | 5 | 59 | 59 | 4 | 58 | 58 | 5 | 14 | 6 | 6 | 23 |
| g / C, Green / Cycle | 0.05 | 0.66 | 0.66 | 0.04 | 0.65 | 0.65 | 0.06 | 0.16 | 0.06 | 0.06 | 0.25 |
| (v / s)_i Volume / Saturation Flow Rate | 0.02 | 0.24 | 0.07 | 0.01 | 0.26 | 0.05 | 0.03 | 0.02 | 0.03 | 0.02 | 0.02 |
| s, saturation flow rate [veh/h] | 3459 | 6792 | 1589 | 3459 | 6792 | 1589 | 1417 | 1589 | 1781 | 1845 | 1589 |
| c, Capacity [veh/h] | 184 | 4459 | 1044 | 153 | 4398 | 1029 | 131 | 246 | 115 | 119 | 405 |
| d1, Uniform Delay [s] | 41.14 | 6.95 | 5.73 | 41.69 | 7.58 | 5.88 | 43.15 | 32.78 | 40.46 | 40.44 | 25.59 |
| k, delay calibration | 0.11 | 0.50 | 0.50 | 0.11 | 0.50 | 0.50 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 1.03 | 0.23 | 0.21 | 0.93 | 0.28 | 0.14 | 1.35 | 0.20 | 2.12 | 1.98 | 0.09 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | | | | | |
|---------------------------------------|-------|--------|-------|-------|--------|-------|-------|-------|-------|-------|-------|
| X, volume / capacity | 0.33 | 0.36 | 0.11 | 0.27 | 0.40 | 0.07 | 0.31 | 0.11 | 0.39 | 0.38 | 0.08 |
| d, Delay for Lane Group [s/veh] | 42.17 | 7.18 | 5.94 | 42.63 | 7.86 | 6.01 | 44.50 | 32.98 | 42.58 | 42.42 | 25.68 |
| Lane Group LOS | D | A | A | D | A | A | D | C | D | D | C |
| Critical Lane Group | Yes | No | No | No | Yes | No | Yes | No | Yes | No | No |
| 50th-Percentile Queue Length [veh/ln] | 0.66 | 3.05 | 0.76 | 0.46 | 3.65 | 0.51 | 0.94 | 0.51 | 1.01 | 1.02 | 0.56 |
| 50th-Percentile Queue Length [ft/ln] | 16.55 | 76.30 | 19.07 | 11.41 | 91.23 | 12.67 | 23.62 | 12.87 | 25.20 | 25.52 | 13.94 |
| 95th-Percentile Queue Length [veh/ln] | 1.19 | 5.49 | 1.37 | 0.82 | 6.57 | 0.91 | 1.70 | 0.93 | 1.81 | 1.84 | 1.00 |
| 95th-Percentile Queue Length [ft/ln] | 29.79 | 137.33 | 34.33 | 20.54 | 164.21 | 22.80 | 42.51 | 23.17 | 45.36 | 45.93 | 25.09 |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|---------------------------------|-------|------|------|-------|------|------|-------|------|-------|-------|-------|-------|
| d_M, Delay for Movement [s/veh] | 42.17 | 7.18 | 5.94 | 42.63 | 7.86 | 6.01 | 44.50 | 0.00 | 32.98 | 42.54 | 42.42 | 25.68 |
| Movement LOS | D | A | A | D | A | A | D | | C | D | D | C |
| d_A, Approach Delay [s/veh] | 8.28 | | | 8.54 | | | 39.92 | | | 37.89 | | |
| Approach LOS | A | | | A | | | D | | | D | | |
| d_I, Intersection Delay [s/veh] | 9.92 | | | | | | | | | | | |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.404 | | | | | | | | | | | |

Other Modes

| | | | | | | | | | | | | |
|--|-------|--|--|-------|--|--|-------|--|--|-------|--|--|
| g_Walk,mi, Effective Walk Time [s] | 0.0 | | | 0.0 | | | 11.0 | | | 11.0 | | |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| d_p, Pedestrian Delay [s] | 0.00 | | | 0.00 | | | 34.72 | | | 34.72 | | |
| I_p,int, Pedestrian LOS Score for Intersection | 0.000 | | | 0.000 | | | 2.188 | | | 2.354 | | |
| Crosswalk LOS | F | | | F | | | B | | | B | | |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | | | 2000 | | | 2000 | | | 2000 | | |
| c_b, Capacity of the bicycle lane [bicycles/h] | 1132 | | | 1132 | | | 178 | | | 200 | | |
| d_b, Bicycle Delay [s] | 8.48 | | | 8.48 | | | 37.40 | | | 36.49 | | |
| I_b,int, Bicycle LOS Score for Intersection | 2.290 | | | 2.339 | | | 1.560 | | | 1.764 | | |
| Bicycle LOS | B | | | B | | | A | | | A | | |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 1 | 2 | 4 | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | 5 | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |







Intersection Level Of Service Report

Intersection 12: Hawthorne Boulevard at Del Amo Circle

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 7.0 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.384 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Del Amo Circle | | | Del Amo Circle | | |
|------------------------------|---|--------|--------|---|--------|--------|---|--------|--------|---|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration |  | | |  | | |  | | |  | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | No | | | No | | | No | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Del Amo Circle | | | Del Amo Circle | | |
|---|---------------------|--------|--------|---------------------|--------|--------|----------------|--------|--------|----------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 51 | 1515 | 11 | 10 | 1648 | 128 | 86 | 2 | 54 | 8 | 5 | 6 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 51 | 1515 | 11 | 10 | 1648 | 128 | 86 | 2 | 54 | 8 | 5 | 6 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 13 | 379 | 3 | 3 | 412 | 32 | 22 | 1 | 14 | 2 | 1 | 2 |
| Total Analysis Volume [veh/h] | 51 | 1515 | 11 | 10 | 1648 | 128 | 86 | 2 | 54 | 8 | 5 | 6 |
| Presence of On-Street Parking | No | | No | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_di, Inbound Pedestrian Volume crossing in | 0 | | | 0 | | | 0 | | | 0 | | |
| v_co, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ci, Inbound Pedestrian Volume crossing mi | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ab, Corner Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 90 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Fully actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 12.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss |
|------------------------------|----------|---------|---------|----------|---------|---------|---------|---------|---------|---------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 0 | 8 | 0 | 0 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | - | - | - | - | - | - |
| Minimum Green [s] | 6 | 6 | 0 | 6 | 6 | 0 | 0 | 6 | 0 | 0 | 6 | 0 |
| Maximum Green [s] | 30 | 30 | 0 | 30 | 30 | 0 | 0 | 30 | 0 | 0 | 30 | 0 |
| Amber [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 |
| All red [s] | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 1.0 | 0.0 |
| Split [s] | 10 | 31 | 0 | 10 | 31 | 0 | 0 | 49 | 0 | 0 | 49 | 0 |
| Vehicle Extension [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 |
| Pedestrian Clearance [s] | 0 | 18 | 0 | 0 | 18 | 0 | 0 | 31 | 0 | 0 | 38 | 0 |
| Delayed Vehicle Green [s] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Rest In Walk | | No | | | No | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 |
| Minimum Recall | No | No | | No | No | | | No | | | No | |
| Maximum Recall | No | No | | No | No | | | No | | | No | |
| Pedestrian Recall | No | No | | No | No | | | No | | | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | L | C | C | L | C | R | L | C | C | L | C | C |
|---|-------|------|------|-------|------|------|-------|-------|-------|-------|-------|-------|
| C, Cycle Length [s] | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.00 | 0.00 | 0.00 | 2.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | 4 | 67 | 67 | 1 | 64 | 64 | 10 | 10 | 10 | 10 | 10 | 10 |
| g / C, Green / Cycle | 0.05 | 0.74 | 0.74 | 0.01 | 0.71 | 0.71 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| (v / s)_i Volume / Saturation Flow Rate | 0.03 | 0.22 | 0.22 | 0.00 | 0.24 | 0.08 | 0.06 | 0.00 | 0.03 | 0.01 | 0.00 | 0.00 |
| s, saturation flow rate [veh/h] | 1781 | 5094 | 1861 | 3459 | 6792 | 1589 | 1403 | 1870 | 1589 | 1347 | 1870 | 1589 |
| c, Capacity [veh/h] | 86 | 3782 | 1382 | 52 | 4817 | 1127 | 194 | 204 | 173 | 152 | 204 | 173 |
| d1, Uniform Delay [s] | 41.96 | 3.82 | 3.82 | 43.79 | 5.02 | 4.14 | 40.48 | 35.76 | 36.98 | 40.59 | 35.82 | 35.86 |
| k, delay calibration | 0.11 | 0.50 | 0.50 | 0.11 | 0.50 | 0.50 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 6.35 | 0.20 | 0.55 | 1.76 | 0.19 | 0.20 | 1.59 | 0.02 | 1.01 | 0.14 | 0.05 | 0.08 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | | | | | | |
|---------------------------------------|-------|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|
| X, volume / capacity | 0.59 | 0.30 | 0.30 | 0.19 | 0.34 | 0.11 | 0.44 | 0.01 | 0.31 | 0.05 | 0.02 | 0.03 |
| d, Delay for Lane Group [s/veh] | 48.31 | 4.02 | 4.37 | 45.55 | 5.22 | 4.34 | 42.07 | 35.78 | 37.99 | 40.73 | 35.87 | 35.94 |
| Lane Group LOS | D | A | A | D | A | A | D | D | D | D | D | D |
| Critical Lane Group | Yes | No | No | No | Yes | No | Yes | No | No | No | No | No |
| 50th-Percentile Queue Length [veh/ln] | 1.25 | 1.77 | 2.08 | 0.12 | 2.46 | 0.68 | 1.92 | 0.04 | 1.13 | 0.17 | 0.10 | 0.12 |
| 50th-Percentile Queue Length [ft/ln] | 31.24 | 44.30 | 51.89 | 3.04 | 61.45 | 16.91 | 48.11 | 1.00 | 28.29 | 4.33 | 2.50 | 3.01 |
| 95th-Percentile Queue Length [veh/ln] | 2.25 | 3.19 | 3.74 | 0.22 | 4.42 | 1.22 | 3.46 | 0.07 | 2.04 | 0.31 | 0.18 | 0.22 |
| 95th-Percentile Queue Length [ft/ln] | 56.24 | 79.75 | 93.41 | 5.48 | 110.61 | 30.44 | 86.60 | 1.79 | 50.92 | 7.79 | 4.49 | 5.42 |

Movement, Approach, & Intersection Results

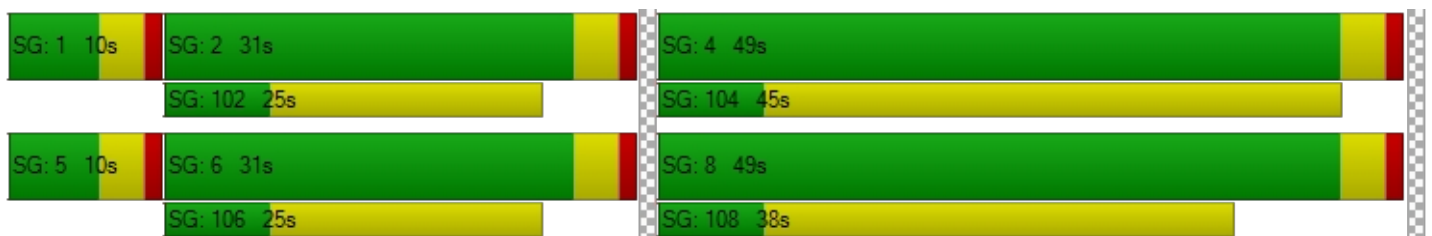
| | | | | | | | | | | | | |
|---------------------------------|-------|------|------|-------|------|------|-------|-------|-------|-------|-------|-------|
| d_M, Delay for Movement [s/veh] | 48.31 | 4.11 | 4.37 | 45.55 | 5.22 | 4.34 | 42.07 | 35.78 | 37.99 | 40.73 | 35.87 | 35.94 |
| Movement LOS | D | A | A | D | A | A | D | D | D | D | D | D |
| d_A, Approach Delay [s/veh] | 5.54 | | | 5.38 | | | 40.43 | | | 37.94 | | |
| Approach LOS | A | | | A | | | D | | | D | | |
| d_I, Intersection Delay [s/veh] | 7.04 | | | | | | | | | | | |
| Intersection LOS | A | | | | | | | | | | | |
| Intersection V/C | 0.384 | | | | | | | | | | | |

Other Modes

| | | | | | | | | | | | | |
|--|-------|--|--|-------|--|--|-------|--|--|-------|--|--|
| g_Walk,mi, Effective Walk Time [s] | 11.0 | | | 11.0 | | | 11.0 | | | 11.0 | | |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| d_p, Pedestrian Delay [s] | 34.68 | | | 34.68 | | | 34.68 | | | 34.68 | | |
| I_p,int, Pedestrian LOS Score for Intersection | 3.216 | | | 3.501 | | | 2.363 | | | 2.308 | | |
| Crosswalk LOS | C | | | D | | | B | | | B | | |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | | | 2000 | | | 2000 | | | 2000 | | |
| c_b, Capacity of the bicycle lane [bicycles/h] | 600 | | | 600 | | | 1000 | | | 1000 | | |
| d_b, Bicycle Delay [s] | 22.05 | | | 22.05 | | | 11.25 | | | 11.25 | | |
| I_b,int, Bicycle LOS Score for Intersection | 2.210 | | | 2.296 | | | 1.677 | | | 1.575 | | |
| Bicycle LOS | B | | | B | | | A | | | A | | |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 1 | 2 | - | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | 5 | 6 | - | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



Intersection Level Of Service Report
Intersection 13: Hawthorne Boulevard at Carson Street

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 24.2 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.583 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Carson Street | | | Carson Street | | |
|------------------------------|---------------------|--------|--------|---------------------|--------|--------|---------------|--------|--------|---------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | ↵ ↑ ↑ ↑↵ | | | ↵ ↑ ↑ ↑↵ | | | ↵ ↑ | | | ↵ ↑ ↑ ↑↵ | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | No | | | No | | | No | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Carson Street | | | Carson Street | | |
|---|---------------------|--------|--------|---------------------|--------|--------|---------------|--------|--------|---------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 116 | 1590 | 127 | 112 | 1475 | 68 | 71 | 405 | 74 | 222 | 554 | 132 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 116 | 1590 | 127 | 112 | 1475 | 68 | 71 | 405 | 74 | 222 | 554 | 132 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 29 | 398 | 32 | 28 | 369 | 17 | 18 | 101 | 19 | 56 | 139 | 33 |
| Total Analysis Volume [veh/h] | 116 | 1590 | 127 | 112 | 1475 | 68 | 71 | 405 | 74 | 222 | 554 | 132 |
| Presence of On-Street Parking | No | | No | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_di, Inbound Pedestrian Volume crossing in | 0 | | | 0 | | | 0 | | | 0 | | |
| v_co, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ci, Inbound Pedestrian Volume crossing mi | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ab, Corner Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 95 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Fully actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|------------------------------|----------|---------|---------|----------|---------|---------|----------|---------|---------|----------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |
| Minimum Green [s] | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 6 | 0 |
| Maximum Green [s] | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 |
| Amber [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| All red [s] | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 |
| Split [s] | 12 | 39 | 0 | 10 | 37 | 0 | 10 | 34 | 0 | 12 | 36 | 0 |
| Vehicle Extension [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 |
| Pedestrian Clearance [s] | 0 | 28 | 0 | 0 | 24 | 0 | 0 | 21 | 0 | 0 | 21 | 0 |
| Delayed Vehicle Green [s] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Rest In Walk | | No | | | No | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| Minimum Recall | No | No | | No | No | | No | No | | No | No | |
| Maximum Recall | No | No | | No | No | | No | No | | No | No | |
| Pedestrian Recall | No | No | | No | No | | No | No | | No | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | L | C | R | L | C | C | L | C | C | L | C | R |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| C, Cycle Length [s] | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | 8 | 50 | 50 | 6 | 48 | 48 | 5 | 15 | 15 | 8 | 18 | 18 |
| g / C, Green / Cycle | 0.08 | 0.53 | 0.53 | 0.06 | 0.51 | 0.51 | 0.05 | 0.16 | 0.16 | 0.08 | 0.19 | 0.19 |
| (v / s)_i Volume / Saturation Flow Rate | 0.07 | 0.23 | 0.08 | 0.03 | 0.22 | 0.22 | 0.04 | 0.13 | 0.13 | 0.06 | 0.11 | 0.08 |
| s, saturation flow rate [veh/h] | 1781 | 6792 | 1589 | 3459 | 5094 | 1816 | 1781 | 1870 | 1771 | 3459 | 5094 | 1589 |
| c, Capacity [veh/h] | 146 | 3571 | 836 | 211 | 2569 | 916 | 97 | 300 | 285 | 293 | 971 | 303 |
| d1, Uniform Delay [s] | 42.87 | 13.97 | 11.63 | 43.37 | 15.05 | 15.05 | 44.29 | 38.57 | 38.63 | 42.60 | 34.97 | 33.99 |
| k, delay calibration | 0.11 | 0.50 | 0.50 | 0.11 | 0.50 | 0.50 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 9.21 | 0.40 | 0.39 | 2.08 | 0.56 | 1.55 | 10.00 | 5.36 | 5.92 | 4.02 | 0.53 | 0.99 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | | | | | | |
|---------------------------------------|--------|--------|-------|-------|--------|--------|-------|--------|--------|--------|--------|--------|
| X, volume / capacity | 0.79 | 0.45 | 0.15 | 0.53 | 0.44 | 0.44 | 0.73 | 0.81 | 0.82 | 0.76 | 0.57 | 0.44 |
| d, Delay for Lane Group [s/veh] | 52.08 | 14.38 | 12.02 | 45.45 | 15.60 | 16.60 | 54.29 | 43.93 | 44.55 | 46.62 | 35.50 | 34.97 |
| Lane Group LOS | D | B | B | D | B | B | D | D | D | D | D | C |
| Critical Lane Group | Yes | No | No | No | No | Yes | No | No | Yes | Yes | No | No |
| 50th-Percentile Queue Length [veh/ln] | 3.03 | 5.09 | 1.42 | 1.33 | 5.10 | 5.71 | 1.90 | 5.88 | 5.68 | 2.69 | 3.88 | 2.75 |
| 50th-Percentile Queue Length [ft/ln] | 75.66 | 127.19 | 35.40 | 33.25 | 127.42 | 142.75 | 47.61 | 147.05 | 141.90 | 67.26 | 97.02 | 68.65 |
| 95th-Percentile Queue Length [veh/ln] | 5.45 | 8.79 | 2.55 | 2.39 | 8.80 | 9.63 | 3.43 | 9.86 | 9.58 | 4.84 | 6.99 | 4.94 |
| 95th-Percentile Queue Length [ft/ln] | 136.18 | 219.67 | 63.72 | 59.85 | 219.98 | 240.73 | 85.69 | 246.49 | 239.58 | 121.06 | 174.64 | 123.58 |

Movement, Approach, & Intersection Results

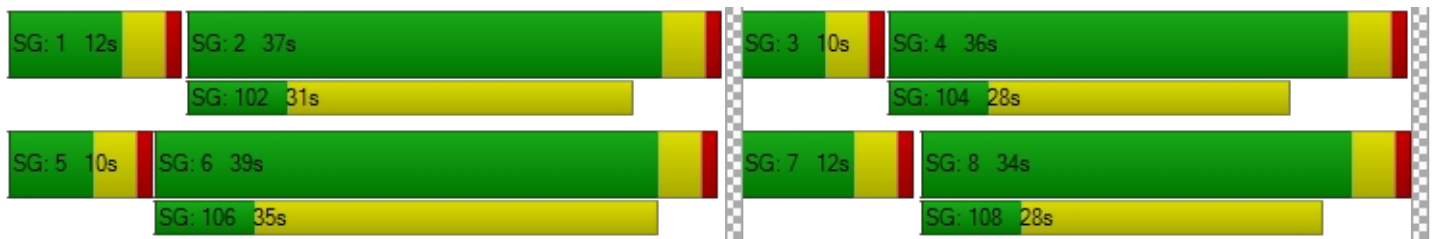
| | | | | | | | | | | | | |
|---------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d_M, Delay for Movement [s/veh] | 52.08 | 14.38 | 12.02 | 45.45 | 15.83 | 16.60 | 54.29 | 44.18 | 44.55 | 46.62 | 35.50 | 34.97 |
| Movement LOS | D | B | B | D | B | B | D | D | D | D | D | C |
| d_A, Approach Delay [s/veh] | 16.60 | | | 17.87 | | | 45.53 | | | 38.14 | | |
| Approach LOS | B | | | B | | | D | | | D | | |
| d_I, Intersection Delay [s/veh] | 24.20 | | | | | | | | | | | |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.583 | | | | | | | | | | | |

Other Modes

| | | | | | | | | | | | | |
|--|-------|--|--|-------|--|--|-------|--|--|-------|--|--|
| g_Walk,mi, Effective Walk Time [s] | 11.0 | | | 11.0 | | | 11.0 | | | 11.0 | | |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| d_p, Pedestrian Delay [s] | 37.18 | | | 37.18 | | | 37.18 | | | 37.18 | | |
| I_p,int, Pedestrian LOS Score for Intersection | 3.320 | | | 3.305 | | | 2.664 | | | 2.917 | | |
| Crosswalk LOS | C | | | C | | | B | | | C | | |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | | | 2000 | | | 2000 | | | 2000 | | |
| c_b, Capacity of the bicycle lane [bicycles/h] | 736 | | | 694 | | | 631 | | | 673 | | |
| d_b, Bicycle Delay [s] | 18.98 | | | 20.27 | | | 22.27 | | | 20.92 | | |
| I_b,int, Bicycle LOS Score for Intersection | 2.316 | | | 2.242 | | | 2.013 | | | 2.059 | | |
| Bicycle LOS | B | | | B | | | B | | | B | | |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 1 | 2 | 3 | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | 5 | 6 | 7 | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



Intersection Level Of Service Report

Intersection 14: Hawthorne Boulevard at Sepulveda Boulevard

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 42.0 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | D |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.670 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Sepulveda Boulevard | | | Sepulveda Boulevard | | |
|------------------------------|---------------------|--------|--------|---------------------|--------|--------|---------------------|--------|--------|---------------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | [Diagram] | | | [Diagram] | | | [Diagram] | | | [Diagram] | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | No | | | No | | | No | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Sepulveda Boulevard | | | Sepulveda Boulevard | | |
|---|---------------------|--------|--------|---------------------|--------|--------|---------------------|--------|--------|---------------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 101 | 1151 | 330 | 154 | 1346 | 206 | 239 | 895 | 96 | 580 | 981 | 210 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 101 | 1151 | 330 | 154 | 1346 | 206 | 239 | 895 | 96 | 580 | 981 | 210 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 25 | 288 | 83 | 39 | 337 | 52 | 60 | 224 | 24 | 145 | 245 | 53 |
| Total Analysis Volume [veh/h] | 101 | 1151 | 330 | 154 | 1346 | 206 | 239 | 895 | 96 | 580 | 981 | 210 |
| Presence of On-Street Parking | No | | No | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_di, Inbound Pedestrian Volume crossing in | 0 | | | 0 | | | 0 | | | 0 | | |
| v_co, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ci, Inbound Pedestrian Volume crossing mi | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ab, Corner Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 120 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Fully actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Unsigna | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|------------------------------|----------|---------|---------|----------|---------|---------|----------|---------|---------|----------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |
| Minimum Green [s] | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 6 | 0 |
| Maximum Green [s] | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 |
| Amber [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| All red [s] | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 |
| Split [s] | 11 | 42 | 0 | 10 | 41 | 0 | 14 | 46 | 0 | 22 | 54 | 0 |
| Vehicle Extension [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 |
| Pedestrian Clearance [s] | 0 | 31 | 0 | 0 | 28 | 0 | 0 | 35 | 0 | 0 | 35 | 0 |
| Delayed Vehicle Green [s] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Rest In Walk | | No | | | No | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| Minimum Recall | No | No | | No | No | | No | No | | No | No | |
| Maximum Recall | No | No | | No | No | | No | No | | No | No | |
| Pedestrian Recall | No | No | | No | No | | No | No | | No | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | L | C | L | C | R | L | C | C | L | C | R |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| C, Cycle Length [s] | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | 6 | 54 | 6 | 54 | 54 | 10 | 26 | 26 | 18 | 34 | 34 |
| g / C, Green / Cycle | 0.05 | 0.45 | 0.05 | 0.45 | 0.45 | 0.08 | 0.22 | 0.22 | 0.15 | 0.28 | 0.28 |
| (v / s)_i Volume / Saturation Flow Rate | 0.03 | 0.17 | 0.04 | 0.20 | 0.13 | 0.07 | 0.19 | 0.19 | 0.17 | 0.19 | 0.13 |
| s, saturation flow rate [veh/h] | 3459 | 6792 | 3459 | 6792 | 1589 | 3459 | 3560 | 1779 | 3459 | 5094 | 1589 |
| c, Capacity [veh/h] | 170 | 3054 | 176 | 3066 | 717 | 290 | 769 | 384 | 520 | 1438 | 449 |
| d1, Uniform Delay [s] | 55.92 | 21.89 | 56.61 | 22.53 | 20.76 | 54.12 | 45.31 | 45.32 | 51.01 | 38.29 | 35.62 |
| k, delay calibration | 0.11 | 0.50 | 0.11 | 0.50 | 0.50 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 3.31 | 0.36 | 12.85 | 0.46 | 1.01 | 5.81 | 2.95 | 6.01 | 58.48 | 0.58 | 0.76 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | | | | | |
|---------------------------------------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| X, volume / capacity | 0.60 | 0.38 | 0.88 | 0.44 | 0.29 | 0.82 | 0.86 | 0.86 | 1.12 | 0.68 | 0.47 |
| d, Delay for Lane Group [s/veh] | 59.23 | 22.25 | 69.46 | 22.99 | 21.77 | 59.93 | 48.25 | 51.33 | 109.48 | 38.87 | 36.38 |
| Lane Group LOS | E | C | E | C | C | E | D | D | F | D | D |
| Critical Lane Group | Yes | No | No | Yes | No | No | No | Yes | Yes | No | No |
| 50th-Percentile Queue Length [veh/ln] | 1.58 | 5.43 | 2.63 | 6.55 | 3.84 | 3.79 | 9.75 | 10.08 | 12.01 | 8.60 | 5.19 |
| 50th-Percentile Queue Length [ft/ln] | 39.45 | 135.65 | 65.81 | 163.87 | 96.06 | 94.66 | 243.69 | 252.02 | 300.20 | 214.99 | 129.66 |
| 95th-Percentile Queue Length [veh/ln] | 2.84 | 9.25 | 4.74 | 10.75 | 6.92 | 6.82 | 14.87 | 15.29 | 18.59 | 13.41 | 8.92 |
| 95th-Percentile Queue Length [ft/ln] | 71.01 | 231.15 | 118.46 | 268.84 | 172.90 | 170.39 | 371.70 | 382.19 | 464.68 | 335.22 | 223.04 |

Movement, Approach, & Intersection Results

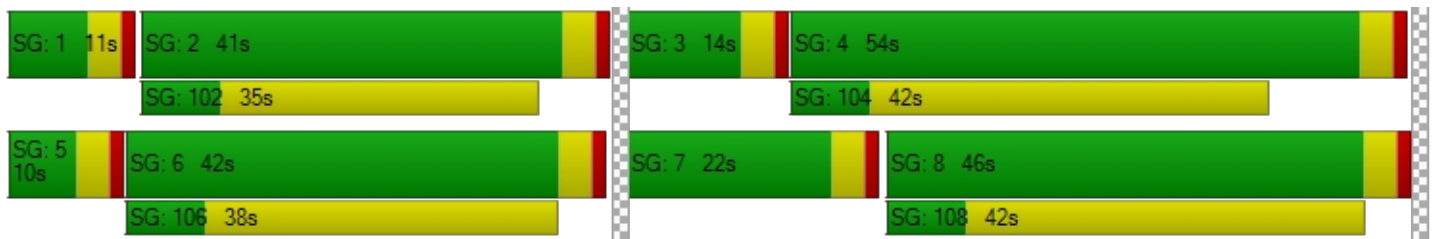
| | | | | | | | | | | | | |
|---------------------------------|-------|-------|------|-------|-------|-------|-------|-------|-------|--------|-------|-------|
| d_M, Delay for Movement [s/veh] | 59.23 | 22.25 | 0.00 | 69.46 | 22.99 | 21.77 | 59.93 | 49.06 | 51.33 | 109.48 | 38.87 | 36.38 |
| Movement LOS | E | C | | E | C | C | E | D | D | F | D | D |
| d_A, Approach Delay [s/veh] | 25.23 | | | 27.04 | | | 51.35 | | | 61.70 | | |
| Approach LOS | C | | | C | | | D | | | E | | |
| d_I, Intersection Delay [s/veh] | 41.98 | | | | | | | | | | | |
| Intersection LOS | D | | | | | | | | | | | |
| Intersection V/C | 0.670 | | | | | | | | | | | |

Other Modes

| | | | | |
|--|-------|-------|-------|-------|
| g_Walk,mi, Effective Walk Time [s] | 11.0 | 11.0 | 11.0 | 11.0 |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| d_p, Pedestrian Delay [s] | 49.52 | 49.52 | 49.52 | 49.52 |
| I_p,int, Pedestrian LOS Score for Intersection | 3.382 | 3.385 | 3.046 | 3.169 |
| Crosswalk LOS | C | C | C | C |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | 2000 | 2000 | 2000 |
| c_b, Capacity of the bicycle lane [bicycles/h] | 633 | 617 | 700 | 833 |
| d_b, Bicycle Delay [s] | 28.03 | 28.72 | 25.36 | 20.43 |
| I_b,int, Bicycle LOS Score for Intersection | 2.076 | 2.263 | 2.236 | 2.534 |
| Bicycle LOS | B | B | B | B |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 1 | 2 | 3 | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | 5 | 6 | 7 | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



Intersection Level Of Service Report

Intersection 10: Hawthorne Boulevard at Torrance Boulevard

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 35.9 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | D |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.677 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Torrance Boulevard | | | Torrance Boulevard | | |
|------------------------------|---------------------|--------|--------|---------------------|--------|--------|--------------------|--------|--------|--------------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | No | | | No | | | No | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Torrance Boulevard | | | Torrance Boulevard | | |
|---|---------------------|--------|--------|---------------------|--------|--------|--------------------|--------|--------|--------------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 264 | 1595 | 229 | 253 | 1661 | 156 | 259 | 927 | 276 | 290 | 824 | 145 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 264 | 1595 | 229 | 253 | 1661 | 156 | 259 | 927 | 276 | 290 | 824 | 145 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 66 | 399 | 57 | 63 | 415 | 39 | 65 | 232 | 69 | 73 | 206 | 36 |
| Total Analysis Volume [veh/h] | 264 | 1595 | 229 | 253 | 1661 | 156 | 259 | 927 | 276 | 290 | 824 | 145 |
| Presence of On-Street Parking | No | | No | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_di, Inbound Pedestrian Volume crossing in | 0 | | | 0 | | | 0 | | | 0 | | |
| v_co, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ci, Inbound Pedestrian Volume crossing mi | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ab, Corner Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 120 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Fully actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|------------------------------|----------|---------|---------|----------|---------|---------|----------|---------|---------|----------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |
| Minimum Green [s] | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 6 | 0 |
| Maximum Green [s] | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 |
| Amber [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| All red [s] | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 |
| Split [s] | 14 | 42 | 0 | 14 | 42 | 0 | 15 | 49 | 0 | 15 | 49 | 0 |
| Vehicle Extension [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 |
| Pedestrian Clearance [s] | 0 | 31 | 0 | 0 | 31 | 0 | 0 | 38 | 0 | 0 | 38 | 0 |
| Delayed Vehicle Green [s] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Rest In Walk | | No | | | No | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| Minimum Recall | No | No | | No | No | | No | No | | No | No | |
| Maximum Recall | No | No | | No | No | | No | No | | No | No | |
| Pedestrian Recall | No | No | | No | No | | No | No | | No | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | L | C | R | L | C | R | L | C | R | L | C | R |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| C, Cycle Length [s] | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | 10 | 56 | 56 | 10 | 56 | 56 | 11 | 27 | 27 | 11 | 27 | 27 |
| g / C, Green / Cycle | 0.08 | 0.47 | 0.47 | 0.08 | 0.47 | 0.47 | 0.09 | 0.22 | 0.22 | 0.09 | 0.22 | 0.22 |
| (v / s)_i Volume / Saturation Flow Rate | 0.08 | 0.23 | 0.14 | 0.07 | 0.24 | 0.10 | 0.07 | 0.18 | 0.17 | 0.08 | 0.16 | 0.09 |
| s, saturation flow rate [veh/h] | 3459 | 6792 | 1589 | 3459 | 6792 | 1589 | 3459 | 5094 | 1589 | 3459 | 5094 | 1589 |
| c, Capacity [veh/h] | 290 | 3178 | 744 | 290 | 3178 | 744 | 314 | 1134 | 354 | 319 | 1141 | 356 |
| d1, Uniform Delay [s] | 54.54 | 22.21 | 19.85 | 54.35 | 22.49 | 18.84 | 53.63 | 44.35 | 43.90 | 54.00 | 43.14 | 39.79 |
| k, delay calibration | 0.11 | 0.50 | 0.50 | 0.11 | 0.50 | 0.50 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 10.66 | 0.57 | 1.07 | 7.98 | 0.62 | 0.64 | 5.40 | 1.51 | 3.76 | 9.83 | 0.88 | 0.75 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | | | | | | |
|---------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| X, volume / capacity | 0.91 | 0.50 | 0.31 | 0.87 | 0.52 | 0.21 | 0.82 | 0.82 | 0.78 | 0.91 | 0.72 | 0.41 |
| d, Delay for Lane Group [s/veh] | 65.19 | 22.78 | 20.93 | 62.33 | 23.11 | 19.48 | 59.03 | 45.86 | 47.66 | 63.82 | 44.02 | 40.54 |
| Lane Group LOS | E | C | C | E | C | B | E | D | D | E | D | D |
| Critical Lane Group | Yes | No | No | No | Yes | No | No | Yes | No | Yes | No | No |
| 50th-Percentile Queue Length [veh/ln] | 4.38 | 7.86 | 4.19 | 4.10 | 8.29 | 2.70 | 4.08 | 8.86 | 8.06 | 4.77 | 7.63 | 3.74 |
| 50th-Percentile Queue Length [ft/ln] | 109.60 | 196.39 | 104.76 | 102.46 | 207.25 | 67.46 | 101.91 | 221.53 | 201.60 | 119.27 | 190.71 | 93.58 |
| 95th-Percentile Queue Length [veh/ln] | 7.82 | 12.45 | 7.54 | 7.38 | 13.01 | 4.86 | 7.34 | 13.74 | 12.72 | 8.35 | 12.16 | 6.74 |
| 95th-Percentile Queue Length [ft/ln] | 195.44 | 311.31 | 188.56 | 184.42 | 325.30 | 121.42 | 183.44 | 343.58 | 318.03 | 208.82 | 303.95 | 168.45 |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|---------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d_M, Delay for Movement [s/veh] | 65.19 | 22.78 | 20.93 | 62.33 | 23.11 | 19.48 | 59.03 | 45.86 | 47.66 | 63.82 | 44.02 | 40.54 |
| Movement LOS | E | C | C | E | C | B | E | D | D | E | D | D |
| d_A, Approach Delay [s/veh] | 27.94 | | | 27.63 | | | 48.53 | | | 48.18 | | |
| Approach LOS | C | | | C | | | D | | | D | | |
| d_I, Intersection Delay [s/veh] | 35.93 | | | | | | | | | | | |
| Intersection LOS | D | | | | | | | | | | | |
| Intersection V/C | 0.677 | | | | | | | | | | | |

Other Modes

| | | | | |
|--|-------|-------|-------|-------|
| g_Walk,mi, Effective Walk Time [s] | 11.0 | 11.0 | 11.0 | 11.0 |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| d_p, Pedestrian Delay [s] | 49.52 | 49.52 | 49.52 | 49.52 |
| I_p,int, Pedestrian LOS Score for Intersection | 3.474 | 3.453 | 3.156 | 3.152 |
| Crosswalk LOS | C | C | C | C |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | 2000 | 2000 | 2000 |
| c_b, Capacity of the bicycle lane [bicycles/h] | 633 | 633 | 750 | 750 |
| d_b, Bicycle Delay [s] | 28.03 | 28.03 | 23.45 | 23.45 |
| I_b,int, Bicycle LOS Score for Intersection | 2.421 | 2.413 | 2.364 | 2.252 |
| Bicycle LOS | B | B | B | B |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 1 | 2 | 3 | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | 5 | 6 | 7 | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |







Intersection Level Of Service Report

Intersection 11: Hawthorne Boulevard at Village Lane/Fashion Way

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 17.7 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | B |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.586 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Village Lane | | | Fashion Way | | |
|------------------------------|---|--------|--------|---|--------|--------|---|--------|--------|---|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration |  | | |  | | |  | | |  | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | No | | | No | | | No | | |
| Crosswalk | No | | | No | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Village Lane | | | Fashion Way | | |
|---|---------------------|--------|--------|---------------------|--------|--------|--------------|--------|--------|-------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 70 | 1960 | 135 | 173 | 1961 | 47 | 86 | 0 | 113 | 142 | 23 | 166 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 70 | 1960 | 135 | 173 | 1961 | 47 | 86 | 0 | 113 | 142 | 23 | 166 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 18 | 490 | 34 | 43 | 490 | 12 | 22 | 0 | 28 | 36 | 6 | 42 |
| Total Analysis Volume [veh/h] | 70 | 1960 | 135 | 173 | 1961 | 47 | 86 | 0 | 113 | 142 | 23 | 166 |
| Presence of On-Street Parking | No | | No | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_di, Inbound Pedestrian Volume crossing in | 0 | | | 0 | | | 0 | | | 0 | | |
| v_co, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ci, Inbound Pedestrian Volume crossing mi | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ab, Corner Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 105 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Fully actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Split | Permiss | Overlap | Split | Split | Overlap |
|------------------------------|----------|---------|---------|----------|---------|---------|-------|---------|---------|-------|-------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 8 | 0 | 8 | 0 | 4 | 4 |
| Auxiliary Signal Groups | | | | | | | | | 1,8 | | | 4,5 |
| Lead / Lag | Lead | - | - | Lead | - | - | Lag | - | - | - | - | - |
| Minimum Green [s] | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 0 | 6 | 0 | 6 | 6 |
| Maximum Green [s] | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 0 | 30 | 0 | 30 | 30 |
| Amber [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 0.0 | 3.0 | 0.0 | 3.0 | 3.0 |
| All red [s] | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 0.0 | 1.0 | 0.0 | 1.0 | 1.0 |
| Split [s] | 10 | 61 | 0 | 16 | 67 | 0 | 14 | 0 | 14 | 0 | 14 | 14 |
| Vehicle Extension [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 0.0 | 3.0 | 0.0 | 3.0 | 3.0 |
| Walk [s] | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pedestrian Clearance [s] | 0 | 18 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Delayed Vehicle Green [s] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Rest In Walk | | No | | | No | | No | | | | No | |
| I1, Start-Up Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 0.0 | 2.0 | 0.0 | 2.0 | 2.0 |
| I2, Clearance Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 0.0 | 2.0 | 0.0 | 2.0 | 2.0 |
| Minimum Recall | No | No | | No | No | | No | | No | | No | No |
| Maximum Recall | No | No | | No | No | | No | | No | | No | No |
| Pedestrian Recall | No | No | | No | No | | No | | No | | No | No |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | L | C | R | L | C | R | L | R | L | C | R |
|---|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|
| C, Cycle Length [s] | 105 | 105 | 105 | 105 | 105 | 105 | 105 | 105 | 105 | 105 | 105 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 0.00 | 2.00 | 2.00 | 0.00 |
| g_i, Effective Green Time [s] | 6 | 59 | 59 | 10 | 63 | 63 | 10 | 20 | 10 | 10 | 38 |
| g / C, Green / Cycle | 0.06 | 0.56 | 0.56 | 0.10 | 0.60 | 0.60 | 0.10 | 0.19 | 0.09 | 0.09 | 0.36 |
| (v / s)_i Volume / Saturation Flow Rate | 0.02 | 0.29 | 0.08 | 0.05 | 0.29 | 0.03 | 0.06 | 0.07 | 0.05 | 0.05 | 0.10 |
| s, saturation flow rate [veh/h] | 3459 | 6792 | 1589 | 3459 | 6792 | 1589 | 1417 | 1589 | 1781 | 1805 | 1589 |
| c, Capacity [veh/h] | 198 | 3825 | 895 | 331 | 4086 | 956 | 173 | 302 | 168 | 170 | 573 |
| d1, Uniform Delay [s] | 47.63 | 14.08 | 10.95 | 45.21 | 11.72 | 8.59 | 48.01 | 37.10 | 45.16 | 45.16 | 23.98 |
| k, delay calibration | 0.11 | 0.50 | 0.50 | 0.11 | 0.50 | 0.50 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 1.07 | 0.49 | 0.36 | 1.28 | 0.41 | 0.10 | 2.22 | 0.77 | 2.19 | 2.16 | 0.28 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | | | | | |
|---------------------------------------|-------|--------|-------|-------|--------|-------|--------|--------|-------|-------|--------|
| X, volume / capacity | 0.35 | 0.51 | 0.15 | 0.52 | 0.48 | 0.05 | 0.50 | 0.37 | 0.49 | 0.49 | 0.29 |
| d, Delay for Lane Group [s/veh] | 48.69 | 14.57 | 11.30 | 46.49 | 12.13 | 8.69 | 50.23 | 37.87 | 47.36 | 47.32 | 24.25 |
| Lane Group LOS | D | B | B | D | B | A | D | D | D | D | C |
| Critical Lane Group | No | Yes | No | Yes | No | No | No | Yes | No | No | Yes |
| 50th-Percentile Queue Length [veh/ln] | 0.91 | 6.93 | 1.54 | 2.20 | 6.15 | 0.45 | 2.31 | 2.59 | 2.13 | 2.15 | 2.96 |
| 50th-Percentile Queue Length [ft/ln] | 22.72 | 173.21 | 38.62 | 54.97 | 153.73 | 11.25 | 57.87 | 64.64 | 53.16 | 53.76 | 74.11 |
| 95th-Percentile Queue Length [veh/ln] | 1.64 | 11.25 | 2.78 | 3.96 | 10.22 | 0.81 | 4.17 | 4.65 | 3.83 | 3.87 | 5.34 |
| 95th-Percentile Queue Length [ft/ln] | 40.89 | 281.13 | 69.51 | 98.95 | 255.40 | 20.24 | 104.17 | 116.35 | 95.68 | 96.76 | 133.40 |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|---------------------------------|-------|-------|-------|-------|-------|------|-------|------|-------|-------|-------|-------|
| d_M, Delay for Movement [s/veh] | 48.69 | 14.57 | 11.30 | 46.49 | 12.13 | 8.69 | 50.23 | 0.00 | 37.87 | 47.34 | 47.32 | 24.25 |
| Movement LOS | D | B | B | D | B | A | D | | D | D | D | C |
| d_A, Approach Delay [s/veh] | 15.47 | | | 14.78 | | | 43.21 | | | 35.76 | | |
| Approach LOS | B | | | B | | | D | | | D | | |
| d_I, Intersection Delay [s/veh] | 17.67 | | | | | | | | | | | |
| Intersection LOS | B | | | | | | | | | | | |
| Intersection V/C | 0.586 | | | | | | | | | | | |

Other Modes

| | | | | | | | | | | | | |
|--|-------|--|--|-------|--|--|-------|--|--|-------|--|--|
| g_Walk,mi, Effective Walk Time [s] | 0.0 | | | 0.0 | | | 11.0 | | | 11.0 | | |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| d_p, Pedestrian Delay [s] | 0.00 | | | 0.00 | | | 42.08 | | | 42.08 | | |
| I_p,int, Pedestrian LOS Score for Intersection | 0.000 | | | 0.000 | | | 2.221 | | | 2.432 | | |
| Crosswalk LOS | F | | | F | | | B | | | B | | |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | | | 2000 | | | 2000 | | | 2000 | | |
| c_b, Capacity of the bicycle lane [bicycles/h] | 1086 | | | 1200 | | | 190 | | | 190 | | |
| d_b, Bicycle Delay [s] | 10.98 | | | 8.40 | | | 42.98 | | | 42.98 | | |
| I_b,int, Bicycle LOS Score for Intersection | 2.453 | | | 2.459 | | | 1.560 | | | 2.106 | | |
| Bicycle LOS | B | | | B | | | A | | | B | | |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 1 | 2 | 4 | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | 5 | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



Intersection Level Of Service Report

Intersection 12: Hawthorne Boulevard at Del Amo Circle

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 14.3 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | B |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.521 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Del Amo Circle | | | Del Amo Circle | | |
|------------------------------|---------------------|--------|--------|---------------------|--------|--------|----------------|--------|--------|----------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | | | | | | | | | | | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | No | | | No | | | No | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Del Amo Circle | | | Del Amo Circle | | |
|---|---------------------|--------|--------|---------------------|--------|--------|----------------|--------|--------|----------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 94 | 1820 | 51 | 81 | 1978 | 174 | 139 | 14 | 127 | 70 | 21 | 80 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 94 | 1820 | 51 | 81 | 1978 | 174 | 139 | 14 | 127 | 70 | 21 | 80 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 24 | 455 | 13 | 20 | 495 | 44 | 35 | 4 | 32 | 18 | 5 | 20 |
| Total Analysis Volume [veh/h] | 94 | 1820 | 51 | 81 | 1978 | 174 | 139 | 14 | 127 | 70 | 21 | 80 |
| Presence of On-Street Parking | No | | No | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_di, Inbound Pedestrian Volume crossing in | 0 | | | 0 | | | 0 | | | 0 | | |
| v_co, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ci, Inbound Pedestrian Volume crossing mi | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ab, Corner Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 90 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Fully actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 12.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss | Permiss |
|------------------------------|----------|---------|---------|----------|---------|---------|---------|---------|---------|---------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 0 | 8 | 0 | 0 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | - | - | - | - | - | - |
| Minimum Green [s] | 6 | 6 | 0 | 6 | 6 | 0 | 0 | 6 | 0 | 0 | 6 | 0 |
| Maximum Green [s] | 30 | 30 | 0 | 30 | 30 | 0 | 0 | 30 | 0 | 0 | 30 | 0 |
| Amber [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 |
| All red [s] | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 1.0 | 0.0 |
| Split [s] | 12 | 31 | 0 | 10 | 29 | 0 | 0 | 49 | 0 | 0 | 49 | 0 |
| Vehicle Extension [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 | 0.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 |
| Pedestrian Clearance [s] | 0 | 18 | 0 | 0 | 18 | 0 | 0 | 31 | 0 | 0 | 38 | 0 |
| Delayed Vehicle Green [s] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Rest In Walk | | No | | | No | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 | 0.0 | 2.0 | 0.0 |
| Minimum Recall | No | No | | No | No | | | No | | | No | |
| Maximum Recall | No | No | | No | No | | | No | | | No | |
| Pedestrian Recall | No | No | | No | No | | | No | | | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | L | C | C | L | C | R | L | C | C | L | C | C |
|---|-------|------|------|-------|-------|------|-------|-------|-------|-------|-------|-------|
| C, Cycle Length [s] | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.00 | 0.00 | 0.00 | 2.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | 6 | 54 | 54 | 5 | 54 | 54 | 18 | 18 | 18 | 18 | 18 | 18 |
| g / C, Green / Cycle | 0.07 | 0.60 | 0.60 | 0.06 | 0.60 | 0.60 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| (v / s)_i Volume / Saturation Flow Rate | 0.05 | 0.27 | 0.27 | 0.02 | 0.29 | 0.11 | 0.11 | 0.01 | 0.08 | 0.06 | 0.01 | 0.05 |
| s, saturation flow rate [veh/h] | 1781 | 5094 | 1837 | 3459 | 6792 | 1589 | 1293 | 1870 | 1589 | 1247 | 1870 | 1589 |
| c, Capacity [veh/h] | 121 | 3073 | 1108 | 202 | 4034 | 944 | 256 | 383 | 326 | 215 | 383 | 326 |
| d1, Uniform Delay [s] | 41.30 | 9.70 | 9.70 | 40.86 | 10.47 | 8.33 | 37.67 | 28.66 | 30.92 | 37.90 | 28.77 | 29.96 |
| k, delay calibration | 0.11 | 0.50 | 0.50 | 0.11 | 0.50 | 0.50 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 10.30 | 0.47 | 1.31 | 1.28 | 0.43 | 0.43 | 1.80 | 0.04 | 0.76 | 0.87 | 0.06 | 0.39 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | | | | | | |
|---------------------------------------|--------|--------|--------|-------|--------|-------|--------|-------|--------|-------|-------|-------|
| X, volume / capacity | 0.78 | 0.45 | 0.45 | 0.40 | 0.49 | 0.18 | 0.54 | 0.04 | 0.39 | 0.33 | 0.05 | 0.25 |
| d, Delay for Lane Group [s/veh] | 51.60 | 10.18 | 11.01 | 42.14 | 10.90 | 8.76 | 39.47 | 28.70 | 31.68 | 38.77 | 28.83 | 30.35 |
| Lane Group LOS | D | B | B | D | B | A | D | C | C | D | C | C |
| Critical Lane Group | Yes | No | No | No | Yes | No | Yes | No | No | No | No | No |
| 50th-Percentile Queue Length [veh/ln] | 2.37 | 4.53 | 5.16 | 0.89 | 5.17 | 1.53 | 3.05 | 0.24 | 2.42 | 1.49 | 0.37 | 1.47 |
| 50th-Percentile Queue Length [ft/ln] | 59.32 | 113.37 | 129.06 | 22.32 | 129.32 | 38.20 | 76.18 | 6.10 | 60.43 | 37.31 | 9.19 | 36.71 |
| 95th-Percentile Queue Length [veh/ln] | 4.27 | 8.03 | 8.89 | 1.61 | 8.90 | 2.75 | 5.49 | 0.44 | 4.35 | 2.69 | 0.66 | 2.64 |
| 95th-Percentile Queue Length [ft/ln] | 106.77 | 200.68 | 222.22 | 40.18 | 222.57 | 68.75 | 137.13 | 10.98 | 108.78 | 67.17 | 16.54 | 66.08 |

Movement, Approach, & Intersection Results

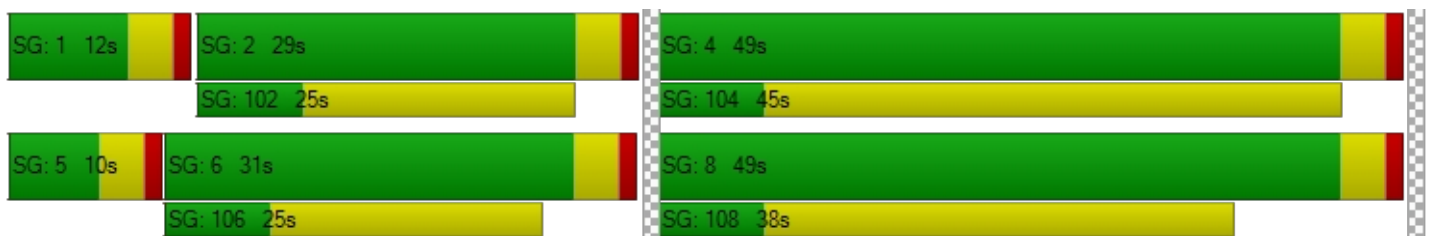
| | | | | | | | | | | | | |
|---------------------------------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|
| d_M, Delay for Movement [s/veh] | 51.60 | 10.38 | 11.01 | 42.14 | 10.90 | 8.76 | 39.47 | 28.70 | 31.68 | 38.77 | 28.83 | 30.35 |
| Movement LOS | D | B | B | D | B | A | D | C | C | D | C | C |
| d_A, Approach Delay [s/veh] | 12.37 | | | 11.87 | | | 35.40 | | | 33.61 | | |
| Approach LOS | B | | | B | | | D | | | C | | |
| d_I, Intersection Delay [s/veh] | 14.30 | | | | | | | | | | | |
| Intersection LOS | B | | | | | | | | | | | |
| Intersection V/C | 0.521 | | | | | | | | | | | |

Other Modes

| | | | | | | | | | | | | |
|--|-------|--|--|-------|--|--|-------|--|--|-------|--|--|
| g_Walk,mi, Effective Walk Time [s] | 11.0 | | | 11.0 | | | 11.0 | | | 11.0 | | |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| d_p, Pedestrian Delay [s] | 34.68 | | | 34.68 | | | 34.68 | | | 34.68 | | |
| I_p,int, Pedestrian LOS Score for Intersection | 3.397 | | | 3.654 | | | 2.410 | | | 2.361 | | |
| Crosswalk LOS | C | | | D | | | B | | | B | | |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | | | 2000 | | | 2000 | | | 2000 | | |
| c_b, Capacity of the bicycle lane [bicycles/h] | 600 | | | 555 | | | 1000 | | | 1000 | | |
| d_b, Bicycle Delay [s] | 22.06 | | | 23.48 | | | 11.25 | | | 11.25 | | |
| I_b,int, Bicycle LOS Score for Intersection | 2.370 | | | 2.481 | | | 1.791 | | | 1.701 | | |
| Bicycle LOS | B | | | B | | | A | | | A | | |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 1 | 2 | - | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | 5 | 6 | - | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



Intersection Level Of Service Report
Intersection 13: Hawthorne Boulevard at Carson Street

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 27.7 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.650 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Carson Street | | | Carson Street | | |
|------------------------------|---------------------|--------|--------|---------------------|--------|--------|---------------|--------|--------|---------------|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration | ↵ ↑ ↑ ↑↵ | | | ↵ ↑ ↑ ↑↵ | | | ↵ ↑ | | | ↵ ↑ ↑ ↑↵ | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | No | | | No | | | No | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Carson Street | | | Carson Street | | |
|---|---------------------|--------|--------|---------------------|--------|--------|---------------|--------|--------|---------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 127 | 1649 | 232 | 326 | 1737 | 64 | 105 | 452 | 98 | 198 | 460 | 187 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 127 | 1649 | 232 | 326 | 1737 | 64 | 105 | 452 | 98 | 198 | 460 | 187 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 32 | 412 | 58 | 82 | 434 | 16 | 26 | 113 | 25 | 50 | 115 | 47 |
| Total Analysis Volume [veh/h] | 127 | 1649 | 232 | 326 | 1737 | 64 | 105 | 452 | 98 | 198 | 460 | 187 |
| Presence of On-Street Parking | No | | No | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_di, Inbound Pedestrian Volume crossing in | 0 | | | 0 | | | 0 | | | 0 | | |
| v_co, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ci, Inbound Pedestrian Volume crossing mi | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ab, Corner Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 100 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Fully actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|------------------------------|----------|---------|---------|----------|---------|---------|----------|---------|---------|----------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |
| Minimum Green [s] | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 6 | 0 |
| Maximum Green [s] | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 |
| Amber [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| All red [s] | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 |
| Split [s] | 13 | 39 | 0 | 16 | 42 | 0 | 12 | 34 | 0 | 11 | 33 | 0 |
| Vehicle Extension [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 |
| Pedestrian Clearance [s] | 0 | 28 | 0 | 0 | 24 | 0 | 0 | 21 | 0 | 0 | 21 | 0 |
| Delayed Vehicle Green [s] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Rest In Walk | | No | | | No | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| Minimum Recall | No | No | | No | No | | No | No | | No | No | |
| Maximum Recall | No | No | | No | No | | No | No | | No | No | |
| Pedestrian Recall | No | No | | No | No | | No | No | | No | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | L | C | R | L | C | C | L | C | C | L | C | R |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| C, Cycle Length [s] | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | 9 | 48 | 48 | 11 | 50 | 50 | 7 | 18 | 18 | 7 | 18 | 18 |
| g / C, Green / Cycle | 0.09 | 0.48 | 0.48 | 0.11 | 0.50 | 0.50 | 0.07 | 0.18 | 0.18 | 0.07 | 0.18 | 0.18 |
| (v / s)_i Volume / Saturation Flow Rate | 0.07 | 0.24 | 0.15 | 0.09 | 0.26 | 0.26 | 0.06 | 0.15 | 0.15 | 0.06 | 0.09 | 0.12 |
| s, saturation flow rate [veh/h] | 1781 | 6792 | 1589 | 3459 | 5094 | 1827 | 1781 | 1870 | 1756 | 3459 | 5094 | 1589 |
| c, Capacity [veh/h] | 157 | 3232 | 757 | 394 | 2555 | 916 | 133 | 336 | 315 | 245 | 893 | 279 |
| d1, Uniform Delay [s] | 44.80 | 18.16 | 16.10 | 43.39 | 16.81 | 16.82 | 45.54 | 39.72 | 39.77 | 45.86 | 37.43 | 38.59 |
| k, delay calibration | 0.11 | 0.50 | 0.50 | 0.11 | 0.50 | 0.50 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 9.30 | 0.58 | 1.05 | 4.44 | 0.76 | 2.10 | 9.79 | 5.74 | 6.31 | 6.26 | 0.46 | 2.79 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | | | | | | |
|---------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| X, volume / capacity | 0.81 | 0.51 | 0.31 | 0.83 | 0.52 | 0.52 | 0.79 | 0.84 | 0.85 | 0.81 | 0.52 | 0.67 |
| d, Delay for Lane Group [s/veh] | 54.11 | 18.74 | 17.15 | 47.83 | 17.57 | 18.91 | 55.33 | 45.46 | 46.07 | 52.11 | 37.89 | 41.38 |
| Lane Group LOS | D | B | B | D | B | B | E | D | D | D | D | D |
| Critical Lane Group | No | Yes | No | Yes | No | No | No | No | Yes | Yes | No | No |
| 50th-Percentile Queue Length [veh/ln] | 3.48 | 6.48 | 3.39 | 4.16 | 6.71 | 7.57 | 2.91 | 7.17 | 6.84 | 2.62 | 3.42 | 4.46 |
| 50th-Percentile Queue Length [ft/ln] | 86.99 | 161.89 | 84.66 | 103.96 | 167.86 | 189.16 | 72.79 | 179.36 | 170.91 | 65.59 | 85.42 | 111.60 |
| 95th-Percentile Queue Length [veh/ln] | 6.26 | 10.65 | 6.10 | 7.49 | 10.96 | 12.08 | 5.24 | 11.57 | 11.12 | 4.72 | 6.15 | 7.93 |
| 95th-Percentile Queue Length [ft/ln] | 156.58 | 266.22 | 152.40 | 187.13 | 274.10 | 301.94 | 131.03 | 289.18 | 278.10 | 118.05 | 153.75 | 198.23 |

Movement, Approach, & Intersection Results

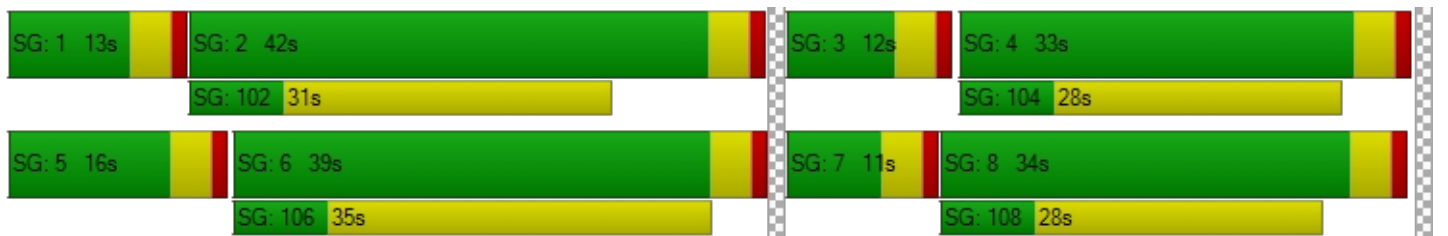
| | | | | | | | | | | | | |
|---------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d_M, Delay for Movement [s/veh] | 54.11 | 18.74 | 17.15 | 47.83 | 17.89 | 18.91 | 55.33 | 45.69 | 46.07 | 52.11 | 37.89 | 41.38 |
| Movement LOS | D | B | B | D | B | B | E | D | D | D | D | D |
| d_A, Approach Delay [s/veh] | 20.79 | | | 22.51 | | | 47.29 | | | 42.00 | | |
| Approach LOS | C | | | C | | | D | | | D | | |
| d_I, Intersection Delay [s/veh] | 27.70 | | | | | | | | | | | |
| Intersection LOS | C | | | | | | | | | | | |
| Intersection V/C | 0.650 | | | | | | | | | | | |

Other Modes

| | | | | | | | | | | | | |
|--|-------|--|--|-------|--|--|-------|--|--|-------|--|--|
| g_Walk,mi, Effective Walk Time [s] | 11.0 | | | 11.0 | | | 11.0 | | | 11.0 | | |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| d_p, Pedestrian Delay [s] | 39.64 | | | 39.64 | | | 39.64 | | | 39.64 | | |
| I_p,int, Pedestrian LOS Score for Intersection | 3.365 | | | 3.368 | | | 2.670 | | | 2.956 | | |
| Crosswalk LOS | C | | | C | | | B | | | C | | |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | | | 2000 | | | 2000 | | | 2000 | | |
| c_b, Capacity of the bicycle lane [bicycles/h] | 700 | | | 759 | | | 600 | | | 580 | | |
| d_b, Bicycle Delay [s] | 21.16 | | | 19.25 | | | 24.53 | | | 25.24 | | |
| I_b,int, Bicycle LOS Score for Intersection | 2.388 | | | 2.437 | | | 2.100 | | | 2.024 | | |
| Bicycle LOS | B | | | B | | | B | | | B | | |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 1 | 2 | 3 | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | 5 | 6 | 7 | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |







Intersection Level Of Service Report

Intersection 14: Hawthorne Boulevard at Sepulveda Boulevard

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Signalized | Delay (sec / veh): | 41.5 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | D |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.740 |

Intersection Setup

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Sepulveda Boulevard | | | Sepulveda Boulevard | | |
|------------------------------|---|--------|--------|---|--------|--------|---|--------|--------|---|--------|--------|
| Approach | Northbound | | | Southbound | | | Eastbound | | | Westbound | | |
| Lane Configuration |  | | |  | | |  | | |  | | |
| Turning Movement | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | | 30.00 | | | 30.00 | | | 30.00 | | |
| Grade [%] | 0.00 | | | 0.00 | | | 0.00 | | | 0.00 | | |
| Curb Present | No | | | No | | | No | | | No | | |
| Crosswalk | Yes | | | Yes | | | Yes | | | Yes | | |

Volumes

| Name | Hawthorne Boulevard | | | Hawthorne Boulevard | | | Sepulveda Boulevard | | | Sepulveda Boulevard | | |
|---|---------------------|--------|--------|---------------------|--------|--------|---------------------|--------|--------|---------------------|--------|--------|
| | | | | | | | | | | | | |
| Base Volume Input [veh/h] | 223 | 1599 | 586 | 293 | 1400 | 213 | 231 | 933 | 94 | 446 | 835 | 220 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Right Turn on Red Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 223 | 1599 | 586 | 293 | 1400 | 213 | 231 | 933 | 94 | 446 | 835 | 220 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 56 | 400 | 147 | 73 | 350 | 53 | 58 | 233 | 24 | 112 | 209 | 55 |
| Total Analysis Volume [veh/h] | 223 | 1599 | 586 | 293 | 1400 | 213 | 231 | 933 | 94 | 446 | 835 | 220 |
| Presence of On-Street Parking | No | | No | No | | No | No | | No | No | | No |
| On-Street Parking Maneuver Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local Bus Stopping Rate [/h] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| v_do, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_di, Inbound Pedestrian Volume crossing in | 0 | | | 0 | | | 0 | | | 0 | | |
| v_co, Outbound Pedestrian Volume crossing | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ci, Inbound Pedestrian Volume crossing mi | 0 | | | 0 | | | 0 | | | 0 | | |
| v_ab, Corner Pedestrian Volume [ped/h] | 0 | | | 0 | | | 0 | | | 0 | | |
| Bicycle Volume [bicycles/h] | 0 | | | 0 | | | 0 | | | 0 | | |

Intersection Settings

| | |
|---------------------------|---------------------------------------|
| Located in CBD | No |
| Signal Coordination Group | - |
| Cycle Length [s] | 120 |
| Coordination Type | Time of Day Pattern Coordinated |
| Actuation Type | Fully actuated |
| Offset [s] | 0.0 |
| Offset Reference | Lead Green - Beginning of First Green |
| Permissive Mode | SingleBand |
| Lost time [s] | 16.00 |

Phasing & Timing

| Control Type | Protecte | Permiss | Unsigna | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss | Protecte | Permiss | Permiss |
|------------------------------|----------|---------|---------|----------|---------|---------|----------|---------|---------|----------|---------|---------|
| Signal Group | 1 | 6 | 0 | 5 | 2 | 0 | 3 | 8 | 0 | 7 | 4 | 0 |
| Auxiliary Signal Groups | | | | | | | | | | | | |
| Lead / Lag | Lead | - | - | Lead | - | - | Lead | - | - | Lead | - | - |
| Minimum Green [s] | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 6 | 0 | 6 | 6 | 0 |
| Maximum Green [s] | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 | 30 | 30 | 0 |
| Amber [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| All red [s] | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 | 1.0 | 1.0 | 0.0 |
| Split [s] | 13 | 42 | 0 | 14 | 43 | 0 | 14 | 46 | 0 | 18 | 50 | 0 |
| Vehicle Extension [s] | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 | 3.0 | 3.0 | 0.0 |
| Walk [s] | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 7 | 0 |
| Pedestrian Clearance [s] | 0 | 31 | 0 | 0 | 28 | 0 | 0 | 35 | 0 | 0 | 35 | 0 |
| Delayed Vehicle Green [s] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Rest In Walk | | No | | | No | | | No | | | No | |
| I1, Start-Up Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| I2, Clearance Lost Time [s] | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 | 2.0 | 2.0 | 0.0 |
| Minimum Recall | No | No | | No | No | | No | No | | No | No | |
| Maximum Recall | No | No | | No | No | | No | No | | No | No | |
| Pedestrian Recall | No | No | | No | No | | No | No | | No | No | |
| Detector Location [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector Length [ft] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Exclusive Pedestrian Phase

| | |
|--------------------------|---|
| Pedestrian Signal Group | 0 |
| Pedestrian Walk [s] | 0 |
| Pedestrian Clearance [s] | 0 |

Lane Group Calculations

| Lane Group | L | C | L | C | R | L | C | C | L | C | R |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| C, Cycle Length [s] | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 |
| L, Total Lost Time per Cycle [s] | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| l1_p, Permitted Start-Up Lost Time [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| l2, Clearance Lost Time [s] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| g_i, Effective Green Time [s] | 9 | 53 | 10 | 54 | 54 | 10 | 27 | 27 | 14 | 31 | 31 |
| g / C, Green / Cycle | 0.08 | 0.44 | 0.08 | 0.45 | 0.45 | 0.08 | 0.22 | 0.22 | 0.12 | 0.26 | 0.26 |
| (v / s)_i Volume / Saturation Flow Rate | 0.06 | 0.24 | 0.08 | 0.21 | 0.13 | 0.07 | 0.19 | 0.19 | 0.13 | 0.16 | 0.14 |
| s, saturation flow rate [veh/h] | 3459 | 6792 | 3459 | 6792 | 1589 | 3459 | 3560 | 1784 | 3459 | 5094 | 1589 |
| c, Capacity [veh/h] | 262 | 3007 | 290 | 3063 | 717 | 287 | 794 | 398 | 405 | 1310 | 409 |
| d1, Uniform Delay [s] | 54.83 | 24.38 | 54.99 | 22.79 | 20.89 | 54.10 | 44.87 | 44.88 | 53.00 | 39.63 | 38.45 |
| k, delay calibration | 0.11 | 0.50 | 0.11 | 0.50 | 0.50 | 0.11 | 0.11 | 0.13 | 0.11 | 0.11 | 0.11 |
| l, Upstream Filtering Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| d2, Incremental Delay [s] | 7.69 | 0.68 | 26.83 | 0.49 | 1.06 | 5.29 | 2.92 | 6.60 | 54.22 | 0.52 | 1.10 |
| d3, Initial Queue Delay [s] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rp, platoon ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF, progression factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

Lane Group Results

| | | | | | | | | | | | |
|---------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| X, volume / capacity | 0.85 | 0.53 | 1.01 | 0.46 | 0.30 | 0.81 | 0.86 | 0.86 | 1.10 | 0.64 | 0.54 |
| d, Delay for Lane Group [s/veh] | 62.52 | 25.06 | 81.83 | 23.28 | 21.95 | 59.39 | 47.79 | 51.48 | 107.22 | 40.15 | 39.56 |
| Lane Group LOS | E | C | F | C | C | E | D | D | F | D | D |
| Critical Lane Group | No | Yes | Yes | No | No | No | No | Yes | Yes | No | No |
| 50th-Percentile Queue Length [veh/ln] | 3.61 | 8.34 | 5.47 | 6.89 | 4.00 | 3.64 | 10.07 | 10.51 | 9.14 | 7.35 | 5.71 |
| 50th-Percentile Queue Length [ft/ln] | 90.26 | 208.42 | 136.66 | 172.34 | 99.94 | 90.98 | 251.78 | 262.71 | 228.59 | 183.74 | 142.85 |
| 95th-Percentile Queue Length [veh/ln] | 6.50 | 13.07 | 9.33 | 11.20 | 7.20 | 6.55 | 15.28 | 15.82 | 14.66 | 11.80 | 9.63 |
| 95th-Percentile Queue Length [ft/ln] | 162.46 | 326.80 | 233.27 | 279.98 | 179.90 | 163.77 | 381.89 | 395.62 | 366.48 | 294.90 | 240.86 |

Movement, Approach, & Intersection Results

| | | | | | | | | | | | | |
|---------------------------------|-------|-------|------|-------|-------|-------|-------|-------|-------|--------|-------|-------|
| d_M, Delay for Movement [s/veh] | 62.52 | 25.06 | 0.00 | 81.83 | 23.28 | 21.95 | 59.39 | 48.78 | 51.48 | 107.22 | 40.15 | 39.56 |
| Movement LOS | E | C | | F | C | C | E | D | D | F | D | D |
| d_A, Approach Delay [s/veh] | 29.64 | | | 32.13 | | | 50.93 | | | 59.99 | | |
| Approach LOS | C | | | C | | | D | | | E | | |
| d_I, Intersection Delay [s/veh] | 41.52 | | | | | | | | | | | |
| Intersection LOS | D | | | | | | | | | | | |
| Intersection V/C | 0.740 | | | | | | | | | | | |

Other Modes

| | | | | |
|--|-------|-------|-------|-------|
| g_Walk,mi, Effective Walk Time [s] | 11.0 | 11.0 | 11.0 | 11.0 |
| M_corner, Corner Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| M_CW, Crosswalk Circulation Area [ft ² /ped] | 0.00 | 0.00 | 0.00 | 0.00 |
| d_p, Pedestrian Delay [s] | 49.52 | 49.52 | 49.52 | 49.52 |
| I_p,int, Pedestrian LOS Score for Intersection | 3.425 | 3.443 | 3.047 | 3.158 |
| Crosswalk LOS | C | C | C | C |
| s_b, Saturation Flow Rate of the bicycle lane | 2000 | 2000 | 2000 | 2000 |
| c_b, Capacity of the bicycle lane [bicycles/h] | 633 | 650 | 700 | 766 |
| d_b, Bicycle Delay [s] | 28.03 | 27.35 | 25.36 | 22.83 |
| I_b,int, Bicycle LOS Score for Intersection | 2.311 | 2.346 | 2.252 | 2.385 |
| Bicycle LOS | B | B | B | B |

Sequence

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ring 1 | 1 | 2 | 3 | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 2 | 5 | 6 | 7 | 8 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ring 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |



APPENDIX E

PROJECT DRIVEWAY LEVEL OF SERVICE CALCULATION WORKSHEETS

Intersection Level Of Service Report
Intersection 17: Del Amo Circle W at Project Driveway 1

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | All-way stop | Delay (sec / veh): | 8.2 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.152 |

Intersection Setup

| Name | Del Amo Circle W | | Del Amo Circle W | | Project Driveway 1 | |
|------------------------------|------------------|--------|------------------|--------|--------------------|--------|
| Approach | Northbound | | Southbound | | Westbound | |
| Lane Configuration | | | | | | |
| Turning Movement | Thru | Right | Left | Thru | Left | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 1 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | No | | No | | Yes | |

Volumes

| Name | Del Amo Circle W | | Del Amo Circle W | | Project Driveway 1 | |
|---|------------------|--------|------------------|--------|--------------------|--------|
| Base Volume Input [veh/h] | 110 | 115 | 38 | 67 | 41 | 29 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 110 | 115 | 38 | 67 | 41 | 29 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 28 | 29 | 10 | 17 | 10 | 7 |
| Total Analysis Volume [veh/h] | 110 | 115 | 38 | 67 | 41 | 29 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

Lanes

| | | | | | | |
|---------------------------------|------|------|------|------|------|------|
| Capacity per Entry Lane [veh/h] | 725 | 844 | 666 | 734 | 734 | 706 |
| Degree of Utilization, x | 0.15 | 0.14 | 0.06 | 0.05 | 0.05 | 0.10 |




Movement, Approach, & Intersection Results

| | | | | | | |
|------------------------------------|-------|-------|------|------|------|------|
| 95th-Percentile Queue Length [veh] | 0.53 | 0.47 | 0.18 | 0.14 | 0.14 | 0.33 |
| 95th-Percentile Queue Length [ft] | 13.33 | 11.77 | 4.53 | 3.58 | 3.58 | 8.22 |
| Approach Delay [s/veh] | 8.09 | | 8.06 | | | 8.66 |
| Approach LOS | A | | A | | | A |
| Intersection Delay [s/veh] | 8.18 | | | | | |
| Intersection LOS | A | | | | | |

Intersection Level Of Service Report
Intersection 18: Project Driveway 2 at Carson Street

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 16.2 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.033 |

Intersection Setup

| Name | Project Driveway 2 | | Carson Street | | Carson Street | |
|------------------------------|---|--------|---|--------|---|--------|
| Approach | Southbound | | Eastbound | | Westbound | |
| Lane Configuration |  | |  | |  | |
| Turning Movement | Left | Right | Left | Thru | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 1 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 35.00 | | 35.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | Yes | | No | | No | |

Volumes

| Name | Project Driveway 2 | | Carson Street | | Carson Street | |
|---|--------------------|--------|---------------|--------|---------------|--------|
| Base Volume Input [veh/h] | 11 | 13 | 5 | 520 | 686 | 36 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 11 | 13 | 5 | 520 | 686 | 36 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 3 | 3 | 1 | 130 | 172 | 9 |
| Total Analysis Volume [veh/h] | 11 | 13 | 5 | 520 | 686 | 36 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| | | | |
|------------------------------------|------|------|------|
| Priority Scheme | Stop | Free | Free |
| Flared Lane | No | | |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | No | | |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|-------|-------|-------|------|------|------|
| V/C, Movement V/C Ratio | 0.03 | 0.02 | 0.01 | 0.01 | 0.01 | 0.00 |
| d_M, Delay for Movement [s/veh] | 16.21 | 12.14 | 11.83 | 0.00 | 0.00 | 0.00 |
| Movement LOS | C | B | B | A | A | A |
| 95th-Percentile Queue Length [veh/ln] | 0.18 | 0.18 | 0.03 | 0.00 | 0.00 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 4.49 | 4.49 | 0.71 | 0.00 | 0.00 | 0.00 |
| d_A, Approach Delay [s/veh] | 14.01 | | 0.11 | | 0.00 | |
| Approach LOS | B | | A | | A | |
| d_I, Intersection Delay [s/veh] | 0.31 | | | | | |
| Intersection LOS | C | | | | | |

Intersection Level Of Service Report
Intersection 17: Del Amo Circle W at Project Driveway 1

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | All-way stop | Delay (sec / veh): | 8.7 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | A |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.226 |

Intersection Setup

| Name | Del Amo Circle W | | Del Amo Circle W | | Project Driveway 1 | |
|------------------------------|------------------|--------|------------------|--------|--------------------|--------|
| Approach | Northbound | | Southbound | | Westbound | |
| Lane Configuration | | | | | | |
| Turning Movement | Thru | Right | Left | Thru | Left | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 1 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 30.00 | | 30.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | No | | No | | Yes | |

Volumes

| Name | Del Amo Circle W | | Del Amo Circle W | | Project Driveway 1 | |
|---|------------------|--------|------------------|--------|--------------------|--------|
| Base Volume Input [veh/h] | 94 | 51 | 22 | 100 | 87 | 77 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 94 | 51 | 22 | 100 | 87 | 77 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 24 | 13 | 6 | 25 | 22 | 19 |
| Total Analysis Volume [veh/h] | 94 | 51 | 22 | 100 | 87 | 77 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings**Lanes**

| | | | | | | |
|---------------------------------|------|------|------|------|------|------|
| Capacity per Entry Lane [veh/h] | 679 | 750 | 640 | 702 | 702 | 725 |
| Degree of Utilization, x | 0.11 | 0.10 | 0.03 | 0.07 | 0.07 | 0.23 |




Movement, Approach, & Intersection Results

| | | | | | | |
|------------------------------------|------|------|------|------|------|-------|
| 95th-Percentile Queue Length [veh] | 0.36 | 0.32 | 0.11 | 0.23 | 0.23 | 0.87 |
| 95th-Percentile Queue Length [ft] | 8.92 | 8.00 | 2.67 | 5.73 | 5.73 | 21.66 |
| Approach Delay [s/veh] | 8.33 | | 8.27 | | | 9.41 |
| Approach LOS | A | | A | | | A |
| Intersection Delay [s/veh] | 8.72 | | | | | |
| Intersection LOS | A | | | | | |

Intersection Level Of Service Report
Intersection 18: Project Driveway 2 at Carson Street

| | | | |
|------------------|-----------------|---------------------------|-------|
| Control Type: | Two-way stop | Delay (sec / veh): | 16.9 |
| Analysis Method: | HCM 6th Edition | Level Of Service: | C |
| Analysis Period: | 15 minutes | Volume to Capacity (v/c): | 0.098 |

Intersection Setup

| Name | Project Driveway 2 | | Carson Street | | Carson Street | |
|------------------------------|---|--------|---|--------|---|--------|
| Approach | Southbound | | Eastbound | | Westbound | |
| Lane Configuration |  | |  | |  | |
| Turning Movement | Left | Right | Left | Thru | Thru | Right |
| Lane Width [ft] | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| No. of Lanes in Entry Pocket | 0 | 0 | 1 | 0 | 0 | 0 |
| Entry Pocket Length [ft] | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| No. of Lanes in Exit Pocket | 0 | 0 | 0 | 0 | 0 | 0 |
| Exit Pocket Length [ft] | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Speed [mph] | 30.00 | | 35.00 | | 35.00 | |
| Grade [%] | 0.00 | | 0.00 | | 0.00 | |
| Crosswalk | Yes | | No | | No | |

Volumes

| Name | Project Driveway 2 | | Carson Street | | Carson Street | |
|---|--------------------|--------|---------------|--------|---------------|--------|
| Base Volume Input [veh/h] | 34 | 29 | 14 | 543 | 620 | 41 |
| Base Volume Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Heavy Vehicles Percentage [%] | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Growth Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| In-Process Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Site-Generated Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diverted Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Pass-by Trips [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Existing Site Adjustment Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Volume [veh/h] | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Hourly Volume [veh/h] | 34 | 29 | 14 | 543 | 620 | 41 |
| Peak Hour Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Other Adjustment Factor | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Total 15-Minute Volume [veh/h] | 9 | 7 | 4 | 136 | 155 | 10 |
| Total Analysis Volume [veh/h] | 34 | 29 | 14 | 543 | 620 | 41 |
| Pedestrian Volume [ped/h] | 0 | | 0 | | 0 | |

Intersection Settings

| | | | |
|------------------------------------|------|------|------|
| Priority Scheme | Stop | Free | Free |
| Flared Lane | No | | |
| Storage Area [veh] | 0 | 0 | 0 |
| Two-Stage Gap Acceptance | No | | |
| Number of Storage Spaces in Median | 0 | 0 | 0 |

Movement, Approach, & Intersection Results

| | | | | | | |
|---------------------------------------|-------|-------|-------|------|------|------|
| V/C, Movement V/C Ratio | 0.10 | 0.05 | 0.02 | 0.01 | 0.01 | 0.00 |
| d_M, Delay for Movement [s/veh] | 16.92 | 12.84 | 11.49 | 0.00 | 0.00 | 0.00 |
| Movement LOS | C | B | B | A | A | A |
| 95th-Percentile Queue Length [veh/ln] | 0.52 | 0.52 | 0.08 | 0.00 | 0.00 | 0.00 |
| 95th-Percentile Queue Length [ft/ln] | 13.03 | 13.03 | 1.89 | 0.00 | 0.00 | 0.00 |
| d_A, Approach Delay [s/veh] | 15.04 | | 0.29 | | 0.00 | |
| Approach LOS | C | | A | | A | |
| d_I, Intersection Delay [s/veh] | 0.87 | | | | | |
| Intersection LOS | C | | | | | |