APPENDIX G
Transportation Studies

VEHICLE MILES TRAVELLED (VMT) ANALYSIS
61 TOWNHOUSE UNITS
4320 WEST FIRST STREET
SANTA ANA, CALIFORNIA

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MARCH 3, 2026

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1. OVERVIEW OF THIS REPORT

The purpose of this report is to provide a vehicle miles travelled (VMT) analysis for a proposed 61 townhouse unit development within a 2.5 acre (110,000 square foot) site. The proposed project site is located at 4320 W 1st Street which is currently occupied by a food truck storage yard. The proposed project would consist of 61 townhouse units, located within nine, three-story buildings. Of the 61 total units, three units would be live/work units.[1]

The State of California Governor's Office of Planning and Research (OPR) issued proposed updates to the CEQA Guidelines in November 2017 that amends the Appendix G question for transportation impacts to delete reference to vehicle delay and level of service and instead refer to Section 15064.3, subdivision (b)(1) of the CEQA Guidelines asking if the project would result in a substantial increase in vehicle miles traveled (VMT). The California Natural Resources Agency certified and adopted the revisions to the CEQA Guidelines in December of 2018, and as of July 1, 2020, the provisions of the new section went into effect statewide.[2]

2. PROJECT LOCATION

The proposed project site is located in the western portion of the City of Santa Ana. Santa Ana is bounded by the Cities of Orange and Garden Grove on the north; the City of Tustin and unincorporated Orange County on the east; the Cities of Garden Grove and Fountain Valley on the west; and the Cities of Irvine and Costa Mesa on the south. Santa Ana is served by four freeways including the I-5 (the Santa Ana Freeway), the SR-22 (the Garden Grove Freeway), the SR-55 (the Costa Mesa Freeway), and the SR-57 (the Orange Freeway). The I-5 Freeway extends through the northeast portion of the City, the SR-22 Freeway extends along the City's northernmost portion, the SR-55 extends along the eastern boundary of the City, and the SR-57 Freeway terminates at the intersection of I-5 and SR-22 at the northernmost portion of the City. The project site's address is 4320 West 1st Street. The site's latitude/longitude is 33°44'41.1"N and 117°93'55.64"W.[3] The nearest arterial roadways are West 1st Street which is located along the project's north boundary and Harbor Boulevard which is located approximately 1,900 feet to the east of the site. Harbor Boulevard provides the most direct access (1.44 miles) to the nearest freeway which is the SR-22 (Garden Grove Freeway). Direct vehicular access to the site is provided by 1st Street. A regional location map is provided in Exhibit 1. The site's location in Santa Ana is shown in Exhibit 2. A local map is provided in Exhibit 3.

3. ENVIRONMENTAL SETTING

The proposed project site is located on three adjacent parcels. These parcel APN numbers are 188-021-10, -11, and -21. The existing food truck storage yard would be demolished in order to construct the new project. The project site is bounded by West 1st Street on the north, a water tower on the south, apartment units on the east, and South Mountain View Street on the west.[4] An aerial photograph of the site and the surrounding area is shown in Exhibit 4.

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[1] KTGY Architecture + Planning. *Conceptual Site Plan*. December 19, 2024
[2] Governor's Office of Planning and Research. *Proposed Updates to the CEQA Guidelines*. November 2017
[3] Google Maps. Website Accessed January 21, 2025
[4] Ibid.

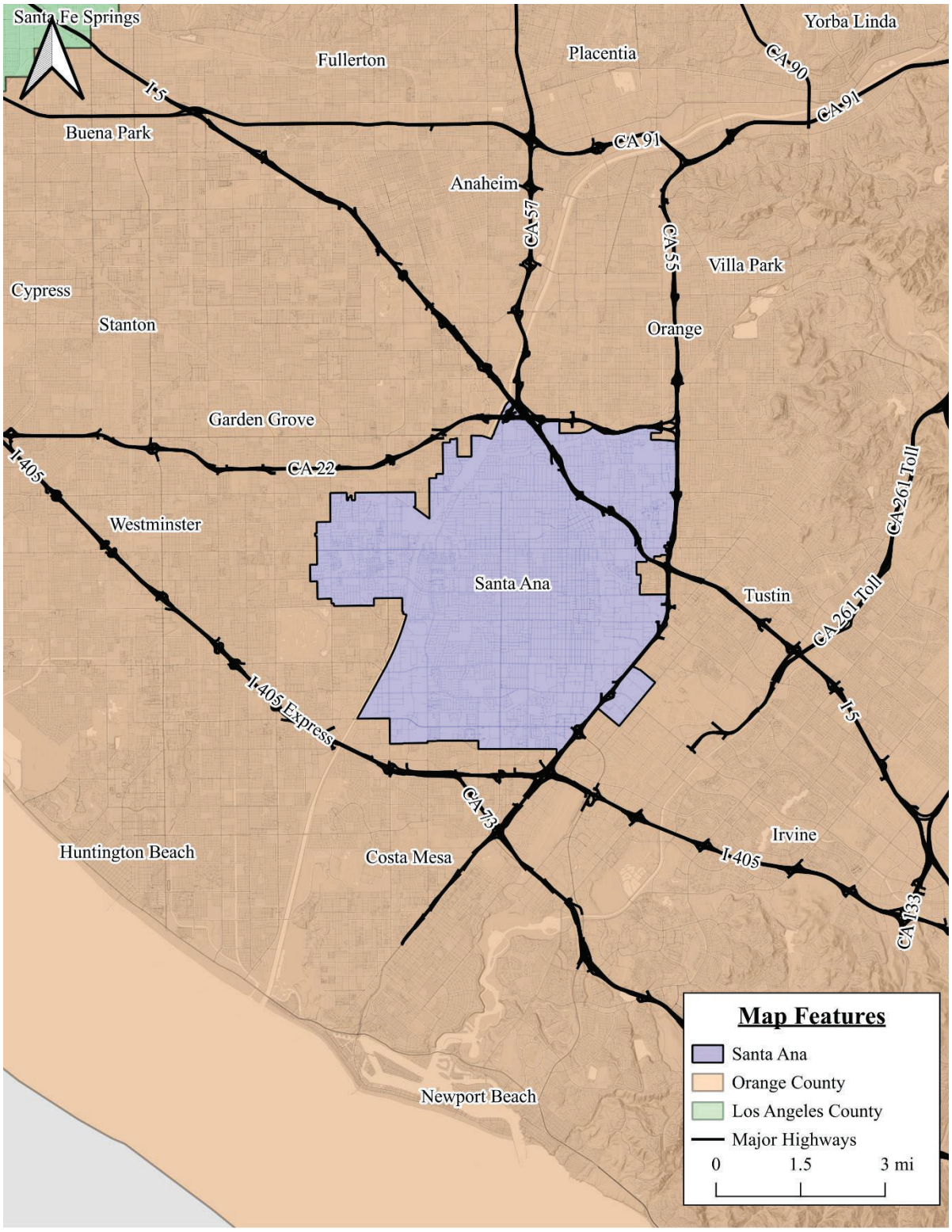

EXHIBIT 1 REGIONAL LOCATION MAP

SOURCE: QGIS

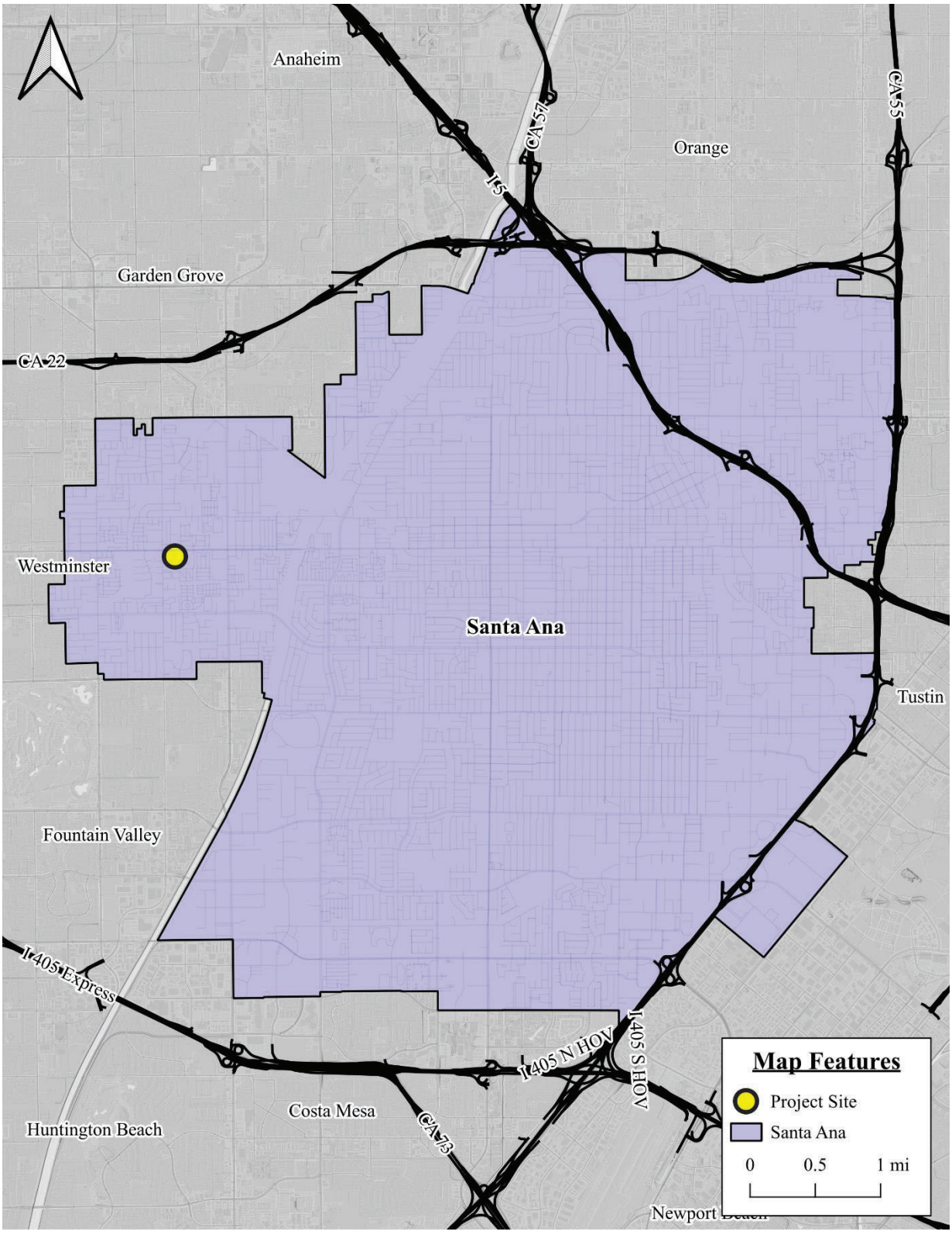

EXHIBIT 2 CITYWIDE MAP

SOURCE: QGIS

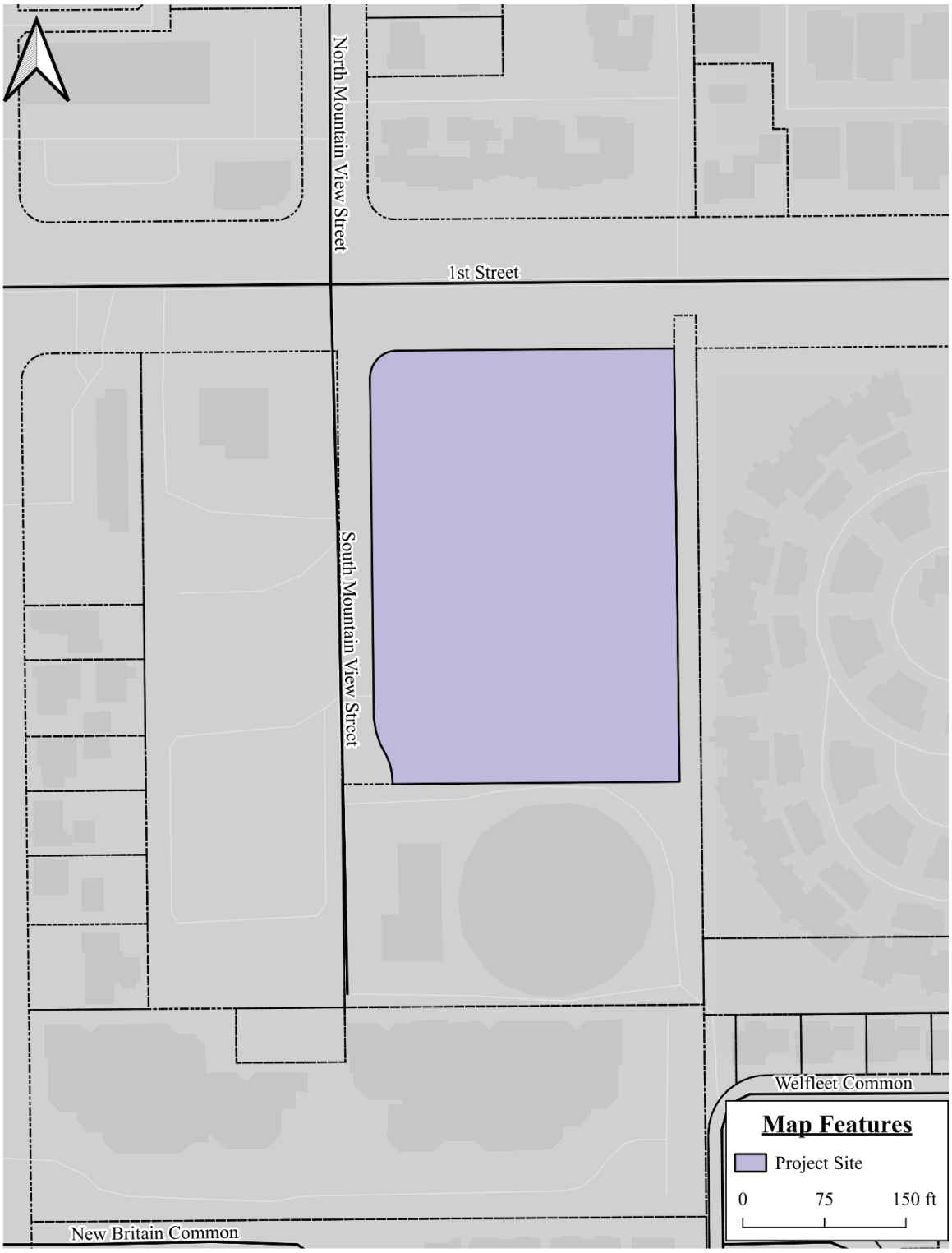

EXHIBIT 3 VICINITY MAP

SOURCE: QGIS

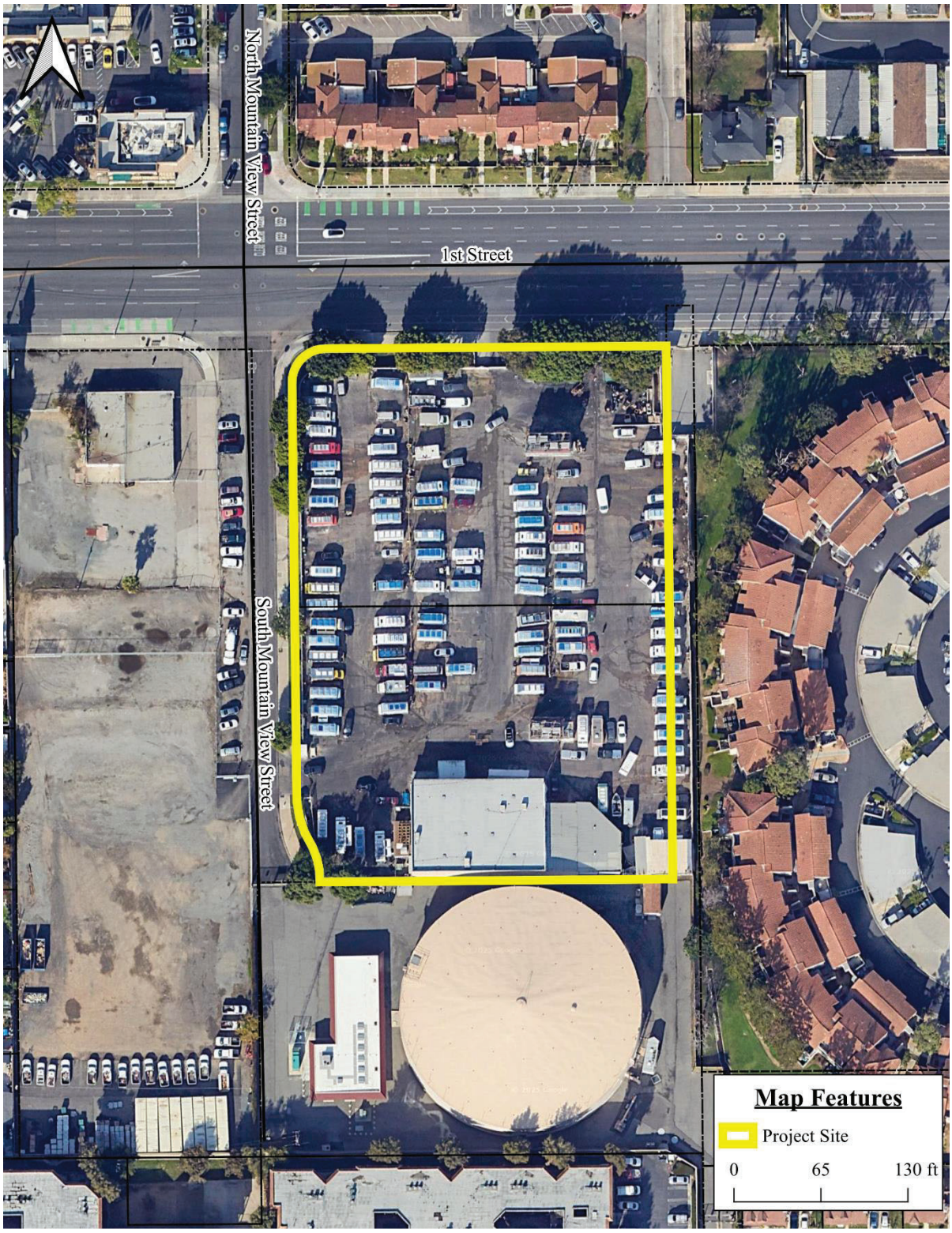

EXHIBIT 4 AERIAL PHOTOGRAPH

SOURCE: QGIS

4. PROJECT DESCRIPTION

The proposed project would consist of 61 townhouse units including 3 live/work units within a 2.5 acre (110,000 sq. ft.) site. The proposed project site is located at 4320 West 1st Street. The proposed site plan is shown in Exhibit 5. Key elements of the proposed project are summarized below:[5]

- *Site Plan*. The proposed project would involve the development of a 2.5 acre site. The project would consist of 9 three-story buildings for the 61 townhouse units located along an internal drive aisle connected to the driveway connection.
- *Plan 1X*. Plan 1X would consist of six units each with a floor area of 1,315 square feet, three bedrooms, and a two-car garage. The six units would be in two buildings located in the central portion of the site.
- *Plan 1Y*. Plan 1Y would consist of six units each with a floor area of 1,471 square feet, two bedrooms, and a two-car garage. The six units would be in two buildings located in the central portion of the site.
- *Plan 2 (AU)*. Plan 2 Accessible Units (AU) would consist of two units each with a floor area of 1,450 square feet, three bedrooms, and a two-car garage. The two units would be in two buildings located in the central portion of the site.
- *Plan 2*. Plan 2 would consist of six units each with a floor area of 1,450 square feet, three bedrooms, and a two-car garage. The six units would be in six buildings located in the central and southern portions of the site.
- *Plan 3*. Plan 3 would consist of eight units each with a floor area of 1,452 square feet, three bedrooms, and a two-car garage. The eight units would be in six buildings located in the central portion of the site.
- *Plan 4*. Plan 4 would consist of five units each with a floor area of 1,894 square feet, four bedrooms, and a two-car garage. The five units would be located along the borders of the site.
- *Plan 4 (AU)*. Plan 4 (AU) would consist of five units each with a floor area of 1,913 square feet, four bedrooms, and a two-car garage. The five units would be located along the borders of the site.
- *Plan 4X*. Plan 4X would consist of 20 units each with a floor area of 1,917 square feet, four bedrooms, and a two-car garage. The 20 units would be located along the borders of the site.
- *Plan 5*. Plan 5 would consist of two live/work units each with a floor area of 2,148 square feet including 239 square feet of commercial space and 1,992 square feet for residential space, three bedrooms, and a two-car garage. The two units would be located within one building located in the northwest corner of the site.
- *Plan 5X*. Plan 5X would consist of one live/work unit with a floor area of 2,154 square feet including 239 square feet of commercial space and 1,992 square feet for residential space, three bedrooms, and a two-car garage. The unit would be located within one building located in the northwest corner of the site.

[5] KTGY Architecture + Planning. *Conceptual Site Plan*. December 19, 2024

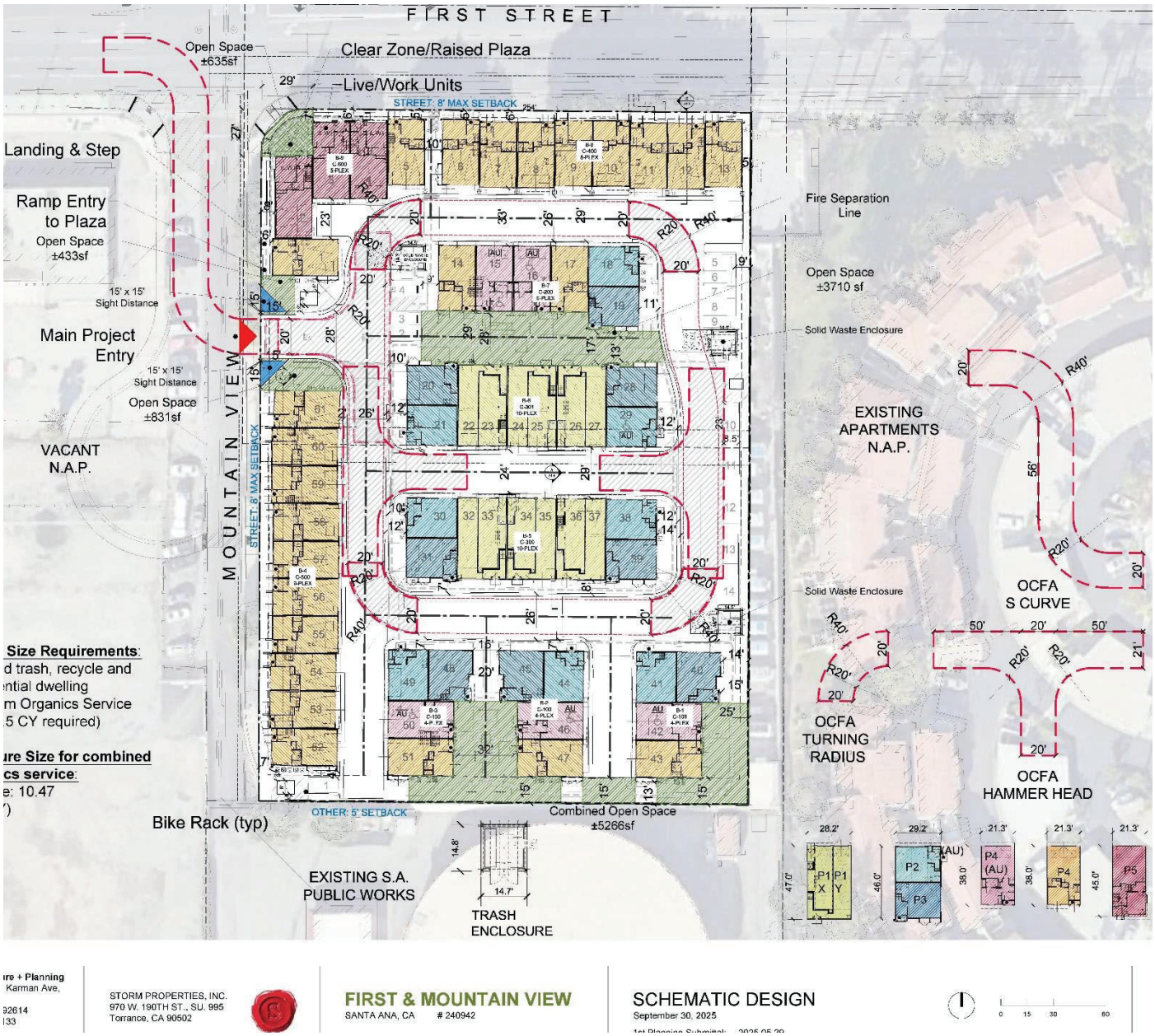

EXHIBIT 5 SITE PLAN

SOURCE: KTGY Architecture + Planning

- *Common and Private Open Space*. Common open space would total 10,876 square feet and includes common open spaces distributed throughout the project site. Each townhouse unit would contain approximately 101 square feet of private open space for a total of 5,040 square feet of private open space.
- *Parking*. The project would include a total of 136 parking spaces: 116 garage parking spaces (two spaces per unit), six additional spaces for live/work units, 9 standard guest parking spaces, and five parallel guest parking spaces. In addition, 12 bicycle parking racks would be provided onsite.
- *Site Access*. Access to the proposed project site would be provided by one driveway connection. A 20-foot-wide driveway is located on the northwest portion of the project site and connects South Mountain View Street to an internal driveway.

5. TRIP GENERATION

The proposed project would involve the construction of 61 townhouse units. For purposes of calculating the potential traffic impacts, the ITE Land Use Code 220 was used for the proposed townhome units. Additionally, no specific ITE generation rates exist for live/work units. This analysis assumes the conservative estimate of live/work units and residential units having the same trip generation rates. This is because the workspaces of these units are assumed to be used by the residents of the units as their primary location for employment and would therefore not have to commute from their homes to workplaces elsewhere. As a result, it is more likely that the three live/work units would have lower trip generation rates compared to the 58 residential-only units. The future trip generation is shown in Table 1.

Table 1 Project Trip Generation

Land Use Trip Type	Unit	Daily	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
Multifamily (Low-Rise) (ITE Code 220)	61 Units	6.21	0.41	24%	76%	0.52	62%	38%
		379	25	6	19	32	20	12
Traffic Generation		**379**	**25**	**6**	**19**	**32**	**20**	**12**

Source: Institute of Transportation Engineers, 12th Edition

The project is expected result in 379 daily trips with 25 trips during the morning peak hour and 32 trips during the evening peak hour.

6. VMT ANALYSIS

The City's TIA Guidelines include VMT screening criteria, guidelines, and thresholds for analyzing transportation impacts under CEQA. The Guidelines state that a project needs to satisfy only one of the criteria below to be exempt from further VMT analysis.

1. The project is located within a Transit Priority Area (TPA) and is consistent with the Regional Transportation Plan (RTP)/Sustainable Communities Strategies (SCS) assumptions.
2. The project is located in a low VMT generating area, consistent with the existing land use that is generating low VMT/SP, and consistent with the RTP/SCS assumptions.
3. Project Type Screening (the project generates fewer than 110 daily vehicle trips or is a local-serving retail land use less than 50,000 square feet)

The applicability of each criterion to the project is discussed below.

- *Screening Criteria 1* - Transit Priority Area Screening: According to the City's guidelines, projects located in a TPA may be presumed to have a less than significant impact. The proposed project is located within a half-mile buffer of a high-quality bus stop as shown in the Santa Ana Transit Priority Areas Map (See Exhibit 6).[6] A project would be consistent with the RTP/SCS assumptions if the land use growth projections already assume growth in households or employment greater than or equal to the project. According to the Growth Forecast Appendix prepared by Southern California Association of Governments (SCAG) for the RTP/SCS, the City of Santa Ana is projected to add a total of 12,000 new households and 4,700 new employees from the year 2019 to 2050. For the purposes of analysis, we assume all occupants of the three live/work units are employees. The proposed project would introduce 61 new households, and 11 employees (assuming a rate of 3.82 persons per household[7]) which would be below SCAG projections. Therefore, the project would meet Screening Criteria 1 – Transit Priority Area Screening.
- *Screening Criteria 2* - Low VMT Area Screening: The City's guidelines include a screening threshold for projects located in a low VMT generating area. Low VMT generating area is defined as traffic analysis zones (TAZs) with a total daily VMT/Service Population (SP) that is less than 15% below the Orange County Average. According to the VMT/SP in Santa Ana as Compared to Orange County Average Map, the proposed project is located within an area with VMT/SP below 15% the Orange County Average (See Exhibit 7).[8] Although the project is consistent with RTP/SCS assumptions, the proposed and use would not be considered a low VMT/SP land use. Therefore, the project would not meet Screening Criteria 2 – Low-VMT Area Screening.
- *Screening Criteria 3* –Project Type: According to the City's guidelines, projects that propose local serving retail (retail projects less than 50,000 square feet) or other local serving uses would have a less than significant impact on VMT. Additionally, projects that generate less than 110 net daily trips do not require VMT analysis. As shown in Table 1, the project would generate more than 110 net daily trips. Therefore, the project would not meet Screening Criteria 3 – Project Type Screening.

Because the project would meet Screening Criteria 1 – Transit Priority Area Screening, the project can be screened from further VMT analysis. Therefore, the project would not the project's impact on VMT would be considered less than significant and an analysis of VMT would not be required. As a result, the project will not result in a conflict or be inconsistent with Section 15064.3 subdivision (b) of the CEQA Guidelines. *Therefore, the project would result in less than significant impacts.*

[6] Fehr & Peers. *City of Santa Ana Traffic Impact Study Guidelines*. September 2019.

[7] California Department of Finance Demographic Research Unit. *Report E-5 Population and Housing Estimates for Cities, Counties, and the State, January 1, 2021-2025, with 2020 Benchmark*. May 1, 2025.

[8] Fehr & Peers. *City of Santa Ana Traffic Impact Study Guidelines*. September 2019.

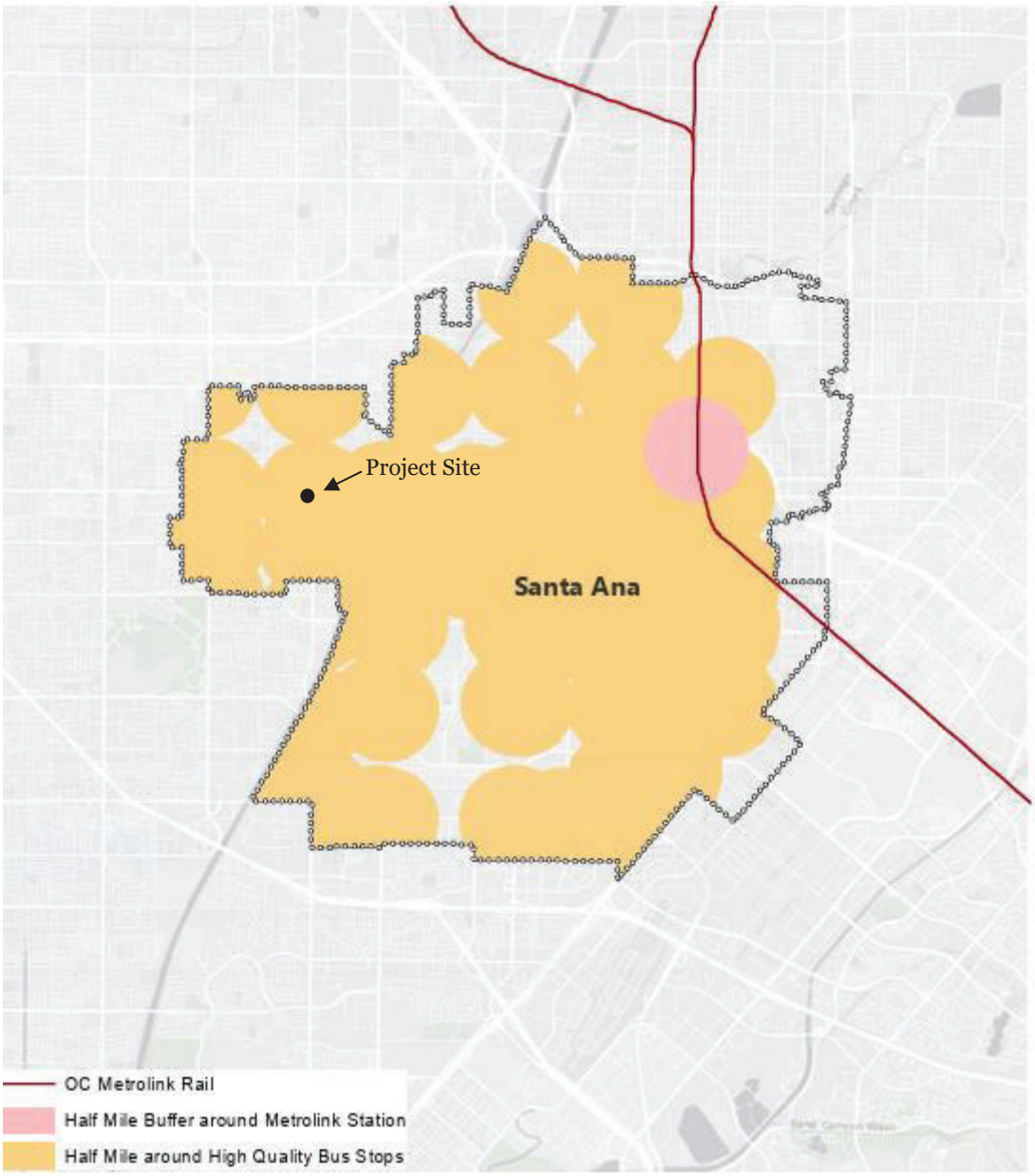

EXHIBIT 6 SANTA ANA TRANSIT PRIORITY AREAS

SOURCE: Fehr & Peers

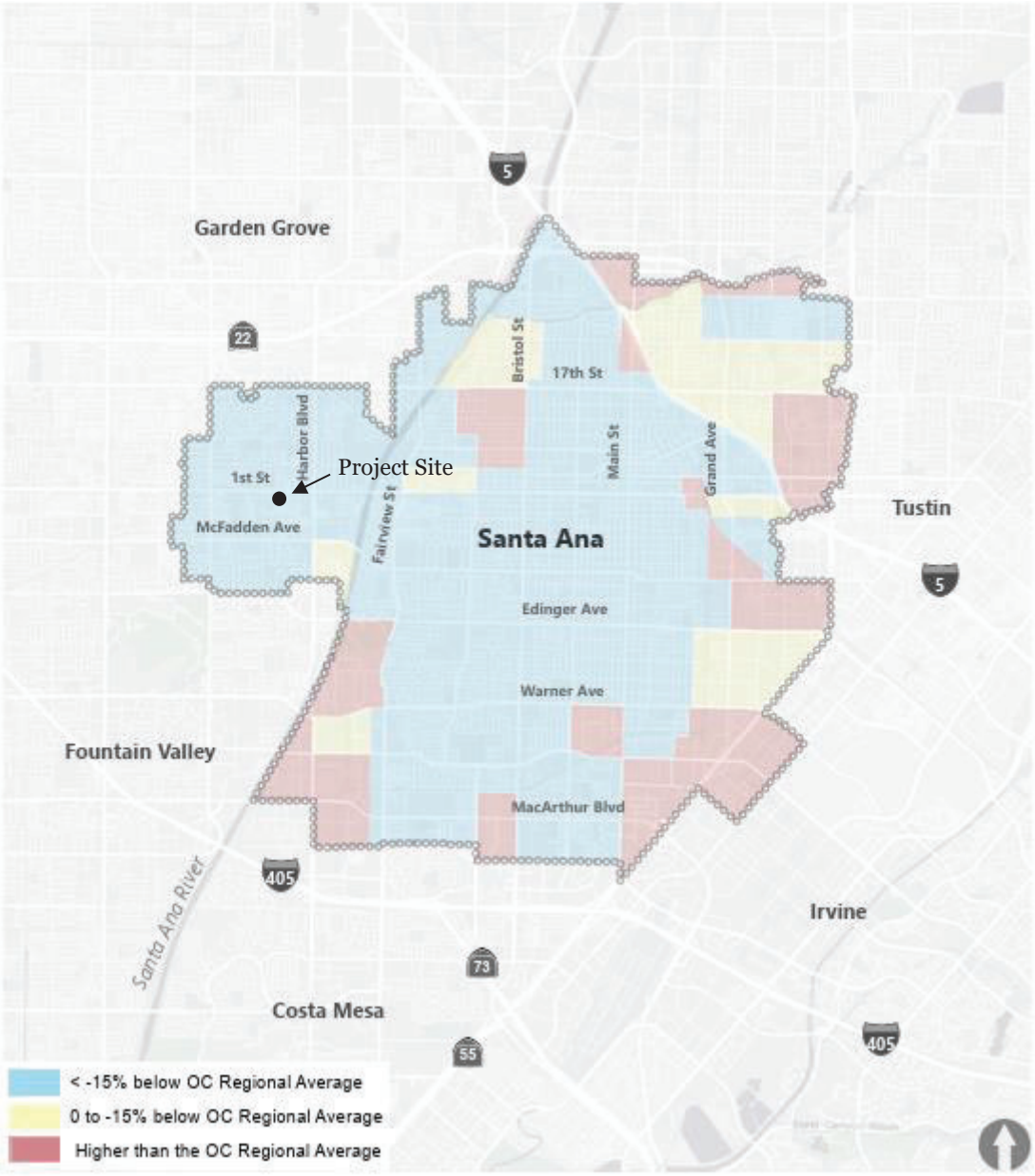

EXHIBIT 7 VMT/SP IN STANTA ANA AS COMPARED TO ORANGE COUNTY AVERAGE
SOURCE: Fehr & Peers

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LLG Reference: 2.25.5002.1

Subject: **Focused Traffic Study for**
1st & Mountain View Residential Project
Santa Ana, California

Dear Layan:

As requested, Linscott, Law & Greenspan, Engineers (LLG) is pleased to submit the following Focused Traffic Study for the proposed 1st & Mountain View Residential Project addressed at 4320 W. 1st Street (herein after referred to as Project) in the City of Santa Ana, California. This focused traffic assessment includes the following:

- Existing traffic counts,
- Estimated project traffic generation/distribution/assignment,
- AM and PM peak hour capacity analyses for existing conditions,
- AM and PM peak hour capacity analyses for existing plus project conditions,
- Signal warrant,
- Crash history research,
- Site distance analysis,
- Site access evaluation,
- Internal circulation and sight distance evaluation, and
- Recommended intersection improvements, if any.

STUDY AREA

The following one (1) key study intersection has been selected for evaluation in this focused traffic study based to validate the adequacy of access to/from the site. ***Figure 1*** presents a vicinity map that illustrates the general location of the Project and surrounding street system.

Key Study Intersection

1. S. Mountain View Street at W. 1st Street

David S. Shender, PE (Ret.)
John A. Boarman, PE
Richard E. Barretto, PE
Keil D. Maberry, PE
KC Yellapu, PE
Dave Roseman, PE
Shankar Ramakrishnan, PE
Daniel A. Kloos, PE
Zawwar Saiyed, MS, PE, RSP
An LGZWB Company Founded 1966

PROJECT DESCRIPTION

The Project site is a square-shaped 2.539-acre parcel of land that was previously developed and occupied by a food truck commissary/storage with up to 140 spaces. The site is in the General Commercial (C-2) zoning district and has a General Plan land use designation of Light Industrial (M-1), with a proposed zoning of SD, Specific Development; the site is located within the Harbor Mixed Transit Corridor. ***Figure 2*** presents an aerial depiction of the project site.

The proposed Project is proposing to construct 61 multifamily residential units, inclusive of 3 live/work units, consisting of 7 two-bedroom units, 23 three-bedroom units, and 31 four-bedroom units. Parking for the proposed residential development totals 135 spaces and consists of 122 garage spaces (each unit has a 2-car garage), and 13 guest (open) parking spaces. Primary access to the site will be provided via a full access driveway on Mountain View Street; no vehicular access is proposed on W.1st Street. As part of the Project, it will construct S. Mountain View Street adjacent to the project site to ultimate full section along with the proposed cul-de-sac. ***Figure 3*** presents the site plan for the proposed Project and roadway improvements.

EXISTING TRAFFIC VOLUMES

Vehicular turning movement counts were conducted at the one (1) key study intersection 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 key study intersection were collected by Transportation Studies, Inc. in September 2025 when local area schools were in session. ***Figure 4*** presents an inventory of the existing roadway conditions for the arterials and intersections evaluated in this report. This figure identifies the number of travel lanes for key arterials, as well as intersection configurations and controls for the key area study intersections. ***Figures 5*** and ***6*** illustrate the existing AM and PM peak hour traffic volumes at the one (1) key study intersection evaluated in this report, respectively.

Appendix A contains the detailed peak hour count sheets for the one (1) key intersection evaluated in this report.

TRAFFIC ANALYSIS METHODOLOGY

In conformance with City of Santa Ana, AM and PM peak hour operating conditions for the study intersections and project driveways were evaluated using the

methodology outlined in the *Highway Capacity Manual 7* (HCM 7) for unsignalized intersections.

HCM 7 Method of Analysis (Unsignalized Intersections)

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 1.***

LOS Standards and Thresholds

Based on the City of Santa Ana, the need for potential improvements will be assessed based on the following criteria:

- At unsignalized intersections, the project causes an intersection at LOS D or better to degrade to LOS E or F.

PROJECT TRAFFIC CHARACTERISTICS

Project Traffic Generation

Traffic generation is expressed in vehicle trip ends, defined as one-way vehicular movements, either entering or exiting the generating land use. Generation factors and/or equations used in this traffic analysis are based on information found in the 12th Edition of *Trip Generation,* published by the Institute of Transportation Engineers (ITE), [Washington, D.C., 2025].

Table 2 summarizes the trip generation rates used in forecasting the vehicular trips generated by the proposed Project. As shown in the upper portion of *Table 2,* ITE Land Use 220: Multifamily Housing (Low-Rise) trip rates was used to forecast the trip generation potential for the proposed Project.

The lower portion of *Table 2* indicates that the proposed Project is forecast to generate 379 daily trips, with 25 trips (6 inbound, 19 outbound) produced in the AM

peak hour and 32 trips (20 inbound, 12 outbound) produced in the PM peak hour on a "typical" weekday.

It is common engineering practice to prepare a traffic study when a project is expected to generate more than "50 peak hour" trips. Therefore, based on the results of the trip generation analysis, the Project is below this threshold, and as such a comprehensive traffic assessment is not required. However, a focused traffic study has been prepared as an additional step to confirm that the Project will have adequate access to/from the site via the unsignalized intersection adjacent to the site located along 1st Street.

Project Traffic Distribution and Assignment

Project traffic volumes both entering and exiting the project 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
- presence of traffic congestion in the surrounding vicinity.

Figure** 7* illustrates the general, directional traffic distribution pattern for the proposed Project. The anticipated AM and PM peak hour traffic volumes associated with the proposed Project are presented in ***Figures 8 and ***9***, respectively. The traffic volume assignments presented in *Figures 8* and *9* reflect the traffic distribution characteristics shown in *Figure 7* and the traffic generation forecast of the proposed Project presented in *Table 2.*

Existing Plus Project Traffic Conditions

The Existing Plus Project traffic conditions have been generated based upon existing conditions and the estimated project traffic. These forecast traffic conditions have been prepared to assess the potential effects of the Project upon the circulation system as it currently exists per the requirements of the City. This traffic volume scenario and the related intersection capacity analyses will identify the roadway improvements necessary to offset the Project, if any.

Figures 10 and ***11*** present projected AM and PM peak hour traffic volumes at one (1) key study intersection and one (1) Project driveway with the addition of the trips generated by the proposed Project to existing traffic volumes, respectively.

PEAK HOUR INTERSECTION CAPACITY ANALYSIS

Table 3 summarizes the existing peak hour level of service results at one (1) key study intersection. The first column (1) of Delay/LOS values in *Table 3* presents a summary of existing AM and PM peak hour traffic. The second column (2) lists Existing Plus Project traffic conditions. The third column (3) shows the increase in delay value due to the added peak hour project trips and indicates whether the traffic associated with the Project will exceed the LOS standards and criteria defined in this report. The fourth column (4) presents the resultant level of service with the inclusion of recommended traffic improvements, where needed, to achieve an acceptable level of service.

Existing Traffic Conditions

Review of column (1) of *Table 3* indicates that the one (1) key study intersection currently operates at an acceptable level of service during the AM and PM peak hours.

Existing Plus Project Traffic Conditions

Review of columns (2) and (3) of *Table 3* indicates that the one (1) key study intersection is forecast to continue operating at an acceptable level of service during the AM and PM peak hours under Existing traffic conditions with the addition of project traffic. As such, improvements at the study intersection are not required.

Appendix B presents the presents the HCM/LOS calculation worksheets for the one (1) key study intersection.

SITE ACCESS EVALUATION

Level of Service Analysis for Project Access

Table 4 summarizes the intersection operations at the one (1) project driveway under Existing Plus Project traffic conditions. Review of *Table 4* shows that the one (1) project driveway is forecast to operate at acceptable level of service during the AM and PM peak hours. As such, access to the project site can be considered adequate.

Appendix C presents the HCM/LOS calculation worksheets for the one (1) project driveway.

Queuing Analysis For Project Access Location

A queueing evaluation was completed for the westbound left-turn and northbound shared left/through/right turn lane at the intersection of S. Mountain View Street at W. 1st Street to validate that the existing storage provided is adequate to accommodate the proposed Project traffic. The queueing evaluation was conducted based on Existing Plus Project peak hour traffic volumes and the HCM 95th Percentile methodology.

Table 5 presents the queueing results for the westbound left-turn and northbound shared left/through/right turn lane pocket at the intersection of S. Mountain View Street at W. 1st Street. Review of *Table 5* indicates that the anticipated queues do not exceed more than one (1) vehicle during both the AM and PM peak hours, and therefore the existing storage is considered adequate. Additionally, it should be noted that a "keep clear" movement legend is provided for the westbound direction at S. Mountain View Street and W. 1st Street. It is anticipated that the keep clear would help to facilitate egress from the site.

Traffic Signal Warrant Analysis

A traffic signal warrant analysis has been prepared for the one (1) study intersection. This assessment is made on the basis of signal warrant criteria adopted by Caltrans. For this focus study, the need for signalization is assessed on the basis of the peak-hour traffic signal warrant, Warrant #3, described in the *California Manual on Uniform Traffic Control Devices (MUTCD)*.

Warrant #3 has two parts:

1. *Part A* evaluates peak hour vehicle delay for traffic on the minor street approach with the highest delay and
2. *Part B* evaluates peak-hour traffic volumes on the major and minor streets.

This method provides an indication of whether peak-hour traffic conditions or peak-hour traffic volume levels are, or would be, sufficient to justify installation of a traffic signal.

The decision to install a traffic signal should not be based purely on the warrants alone. Instead, the installation of a signal should be considered, and further analysis performed when one or more of the warrants are met. Additionally, engineering judgment is exercised on a case-by-case basis to evaluate the effect a traffic signal will have on certain types of accidents and traffic conditions at the subject intersection as well as at adjacent intersections.

The results of the peak-hour traffic signal warrant analysis for Existing Plus Project traffic conditions are summarized in ***Table 6***. The results indicate that the unsignalized intersection of S. Mountain View Street at W. 1st Street is not forecast to exceed the volume thresholds of Warrant #3 Part A or B under Existing Plus Project traffic conditions. Therefore, the installation of a traffic signal at the intersection of S. Mountain View Street at W. 1st Street is not recommended.

The peak-hour signal warrant worksheets are contained in ***Appendix D***

Crash History

The need for signalization is evaluated based on the crash experience signal warrant, Warrant #7, described in the *California Manual on Uniform Traffic Control Devices (MUTCD)*. This warrant requires that an intersection have five or more reported crashes within a 12-month period, with each crash involving personal injury or property damage.

Historic crash data would help determine the adequacy of the existing intersection design. Five years of crash data was researched via SWITRS from 2019-2024 to identify if the existing study intersection might have safety concerns related to its design. ***Figure 12*** presents the crash data which shows there were two (2) crashes over a five-year period related to ingress and egress from the site. Since the intersection does not meet the threshold of five or more crashes within a single 12-month period, Warrant #7 is not satisfied, and installation of a traffic signal is not recommended.

INTERNAL CIRCULATION EVALUATION

Our evaluation of the on-site circulation for the Project 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 SU-30, trash truck, and fire truck turning templates were utilized in this evaluation. ***Figures 13, 14*** and ***15*** present the turning movements

required of a SU-30, trash truck and fire truck to circulate throughout the project site, respectively. Review of *Figures 13, 14* and *15* identifies that the turning maneuvers for a SU-30, trash truck and fire truck are considered adequate.

SIGHT DISTANCE EVALUATION

At intersections and/or project driveways, a substantially clear line of sight should be maintained between the driver of a vehicle, bicyclist, or pedestrian stopped on the minor road and the driver of an approaching vehicle on the major road that has no stop. 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. A sight distance evaluation has been performed at S. Mountain View Street at W. 1st Street.

The Sight Distance Evaluation prepared for the project driveways are based on the criteria and procedures set forth by the California Department of Transportation (Caltrans) in the State's *Highway Design Manual (HDM)*. Corner sight distance was utilized for the evaluation. Corner sight distance is defined in the Caltrans HDM to be the line-of-sight requirement at an unsignalized intersection that provides an adequate time gap for a vehicle, bicycle, or pedestrian stopped on the minor road to cross, turn left, or turn right onto the major road while an approaching vehicle on the major road travels at the major-road design speed, without requiring through traffic to radically alter their speed. Line of sight for corner sight distance is to be determined from a 3½ foot height at the location of the driver of a vehicle on a minor road to a 4¼ foot object height in the center of the approaching lane of the major road.

Based on the criteria set forth in the Caltrans HDM and a posted speed limit of 40 mph on W. 1st Street, the corner sight distance required at S. Mountain View Street for a left-turning vehicle is 576 feet for vehicles approaching from the right and 517 feet for vehicles approaching from the left.

Figure 16 presents the results of the sight distance evaluation at the intersection of S. Mountain View Street at W. 1st Street based on the application of the corner sight distance criteria. The figures illustrate the limited use areas. As shown, the sight lines at the proposed Project driveways are expected to be adequate as long as obstructions within the sight triangles are minimized.

CONCLUSIONS

Based on the above findings, the trip generation potential of the proposed Project amounts to 379 daily trips, with 25 trips (6 inbound, 19 outbound) produced in the AM peak hour and 32 trips (20 inbound, 12 outbound) produced in the PM peak hour on a "typical" weekday. Direct comparison between the proposed project trips and the "50 peak hour" trip threshold, a comprehensive traffic assessment is not required. However, a focused assessment has been prepared as an additional step to confirm that the Project will have adequate access to/from the site via the unsignalized intersection adjacent to the site located along 1st Street.

The one (1) key study intersection and one (1) project driveway are forecast to operate at acceptable level of service during the AM and PM peak hours under existing traffic conditions with the addition of project traffic. Additionally, the sight lines at the study intersection are expected to be adequate. The results of the peak-hour traffic signal (Warrant #3) and crash experience (Warrant #7) signal warrants are not satisfied. As such, the installation of a signal is not recommended. It is anticipated that motorists entering and exiting the Project site will be able to do so comfortably without undue congestion. Therefore, it can be concluded that access to the project site is considered adequate and that no changes are recommended at the intersection of S. Mountain View Street at W. 1st Street.

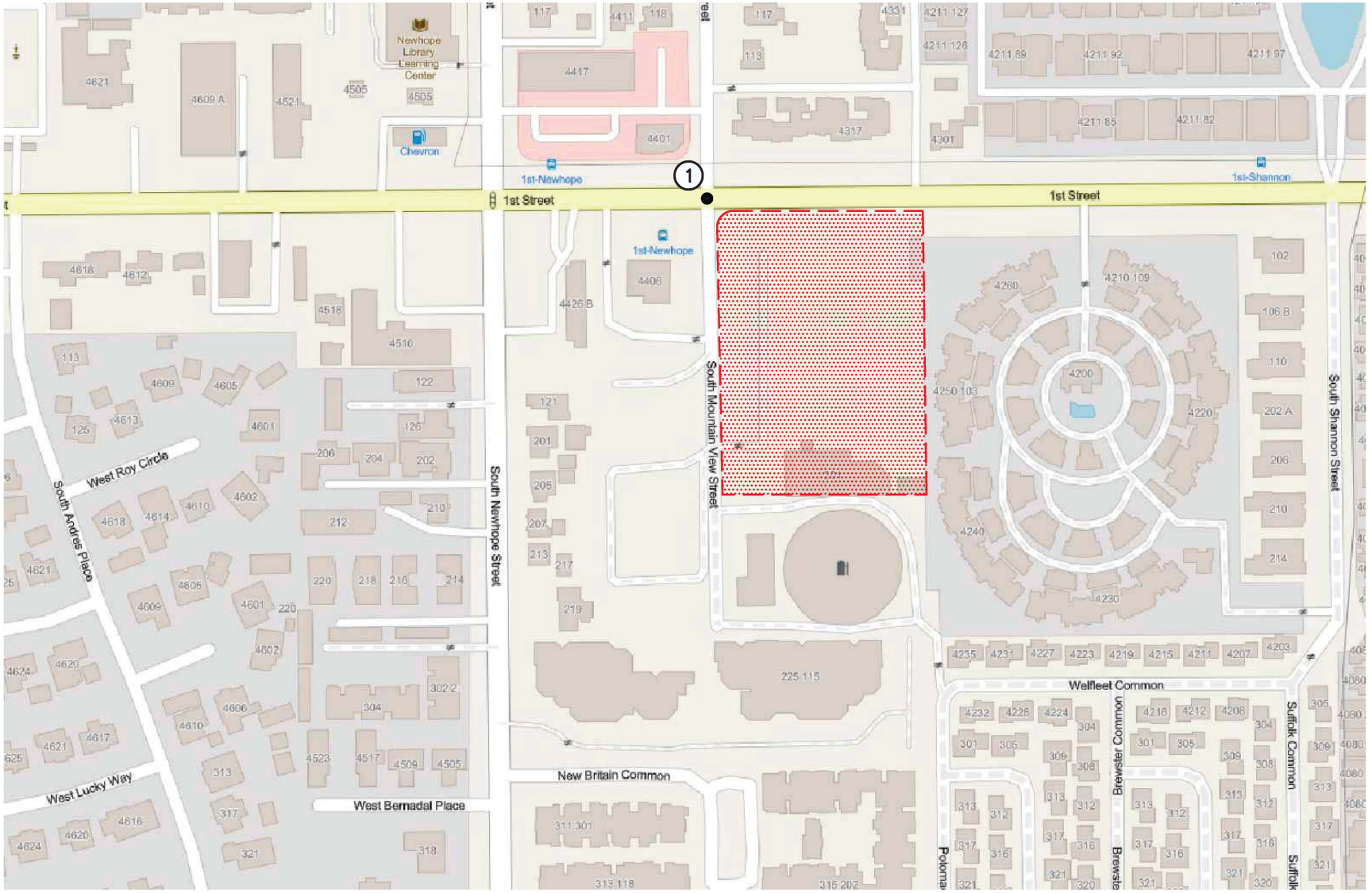
* * * * * * * * * * *

We appreciate the opportunity to provide this focused traffic assessment. Should you have any questions, please call Shane Green or myself at (949) 825-6175.

Very truly yours,
Linscott, Law & Greenspan, Engineers

Shane Green, P.E.
Senior Transportation Engineer

cc: Richard Barretto, P.E., Principal Engineer



n:\5000\2255002 - first & mountain view residential, santa ana\dwg\5002 f-1.dwg LDP 10:05:28 09-15-2025 aguilar

SOURCE: OPEN STREETS

KEY

(#) = STUDY INTERSECTION

= PROJECT SITE

NO SCALE

FIGURE 1

VICINITY MAP

FIRST & MOUNTAIN VIEW RESIDENTIAL, SANTA ANA



n:\5000\2255002 - first & mountain view residential, santa ana\dwg\5002 f-2.dwg LDP 11:11:25 09-15-2025 aguilar

SOURCE: NEAR MAPS

KEY

= PROJECT SITE

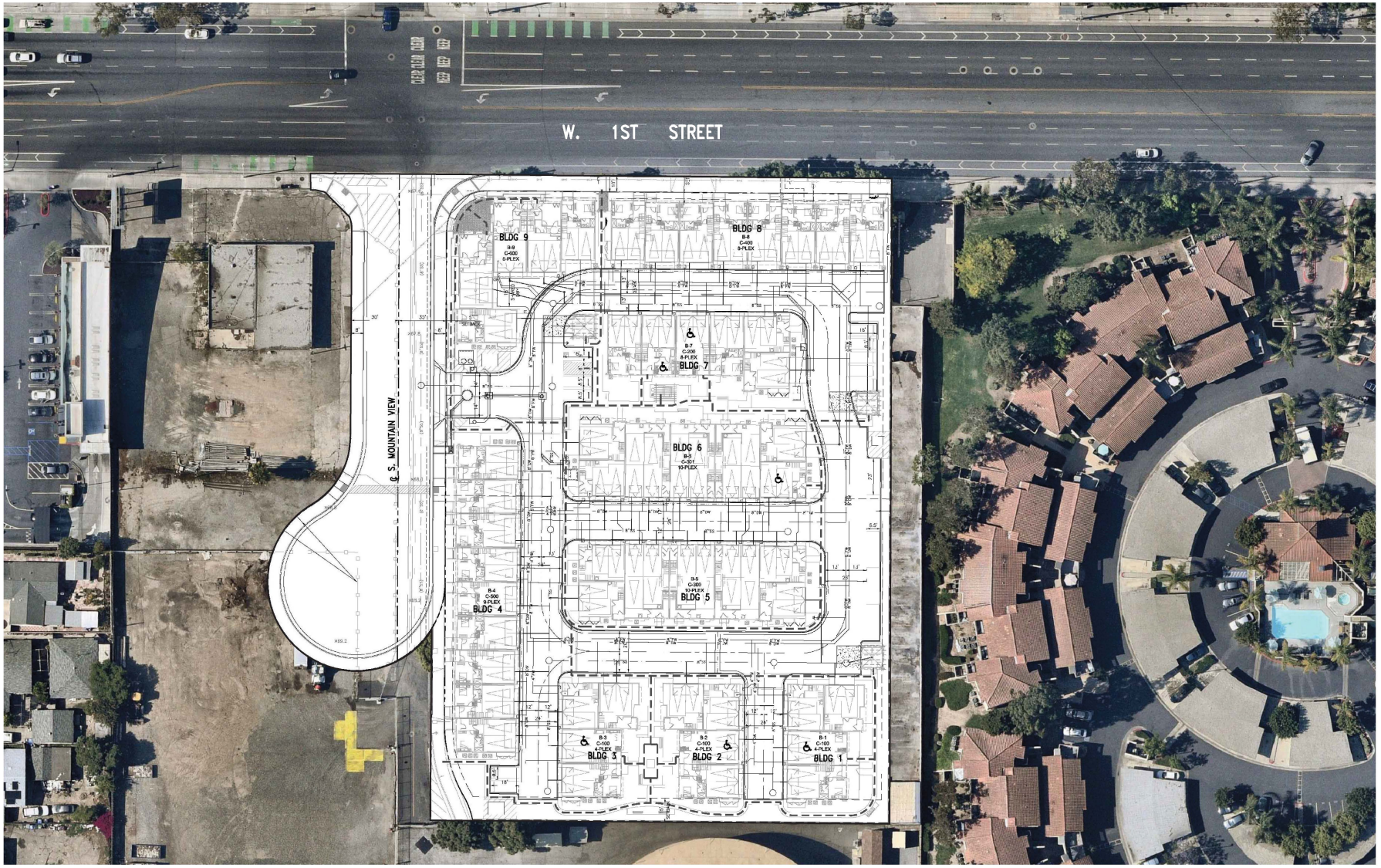
N

NO SCALE

FIGURE 2

EXISTING SITE AERIAL

FIRST & MOUNTAIN VIEW RESIDENTIAL, SANTA ANA



n:\5000\2255002 - first & mountain view residential, santa ana\dwg\5002 f-3.dwg LDP 11:15:11 09-15-2025 aguilar

SOURCE: C&V CONSULTING

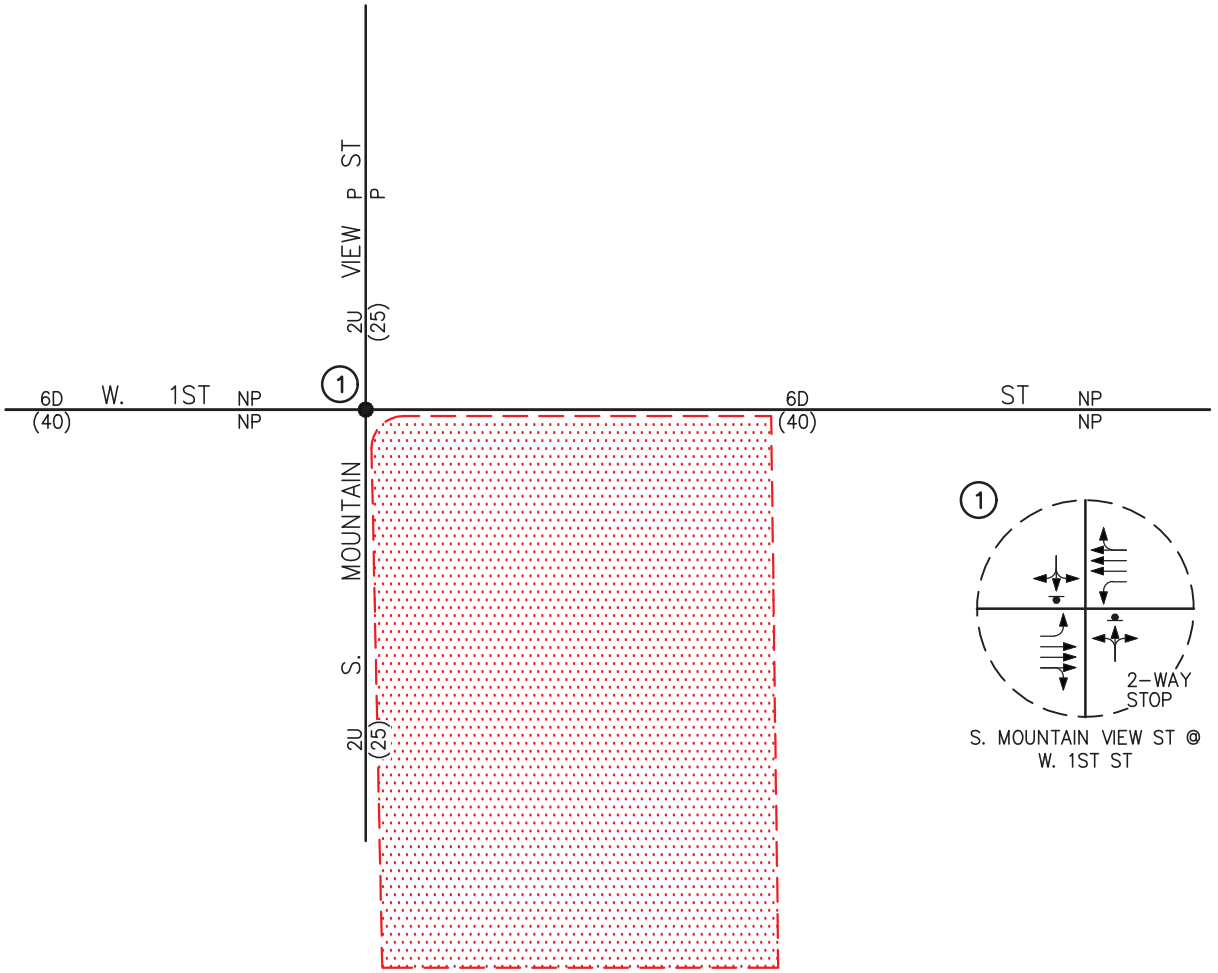
LLG

N NO SCALE

FIGURE 3

PROPOSED SITE PLAN

FIRST & MOUNTAIN VIEW RESIDENTIAL, SANTA ANA



n:\5000\2255002 - first & mountain view residential, santa ana\dwg\5002 f-4.dwg LDP 13:15:13 09-15-2025 aguilar

KEY

(#) = STUDY INTERSECTION
= APPROACH LANE ASSIGNMENT
● = TRAFFIC SIGNAL, ▾ = STOP SIGN
P = PARKING, NP = NO PARKING
U = UNDIVIDED, D = DIVIDED

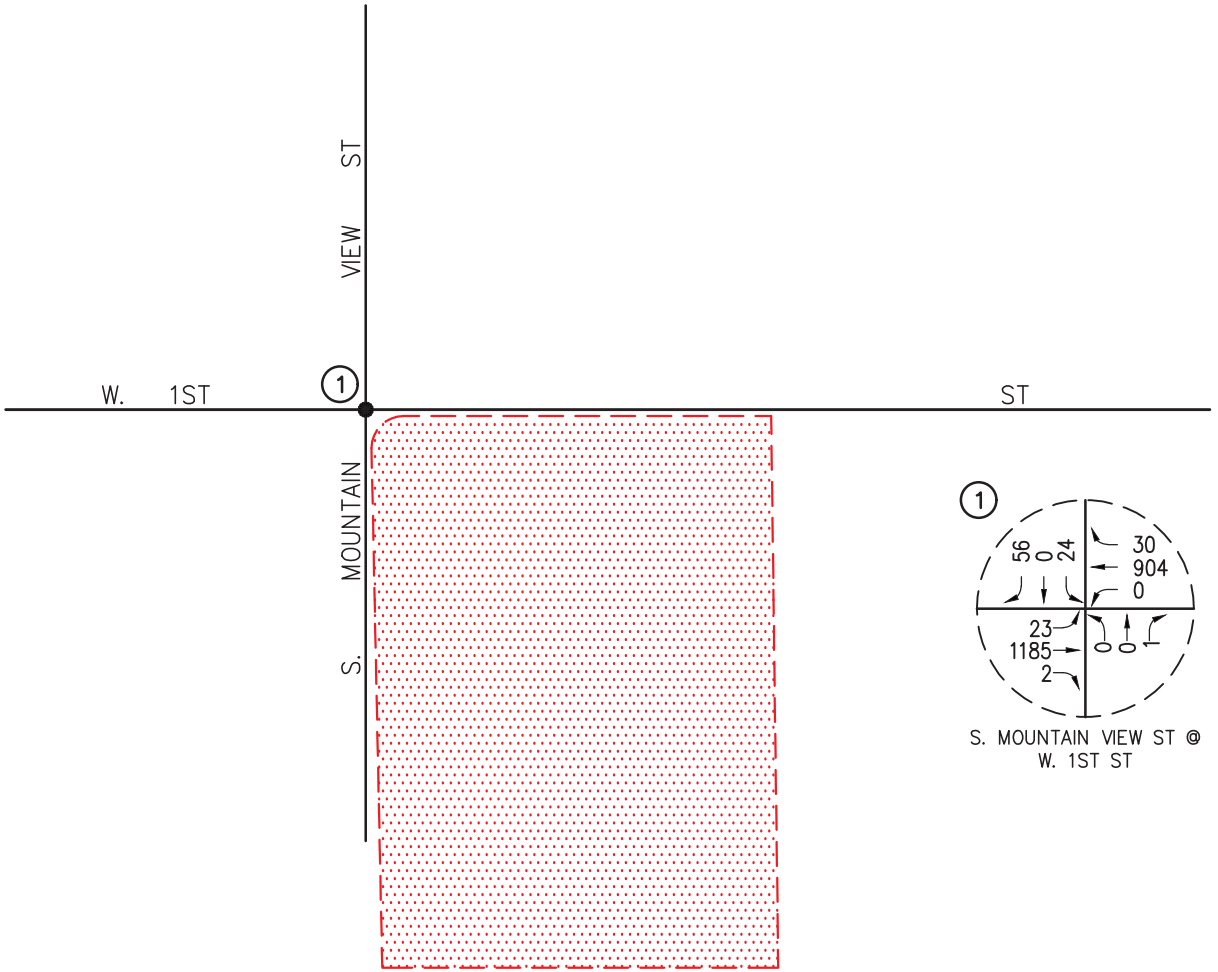
2 = NUMBER OF TRAVEL LANES
(XX)= POSTED SPEED LIMIT (MPH)
= PROJECT SITE

N NO SCALE

FIGURE 4

EXISTING ROADWAY CONDITIONS AND INTERSECTION CONTROLS

FIRST & MOUNTAIN VIEW RESIDENTIAL, SANTA ANA



n:\5000\2255002 - first & mountain view residential, santa ana\dwg\5002 f-5.dwg LDP 14:06:39 09-15-2025 aguilar

LLG

N NO SCALE

KEY

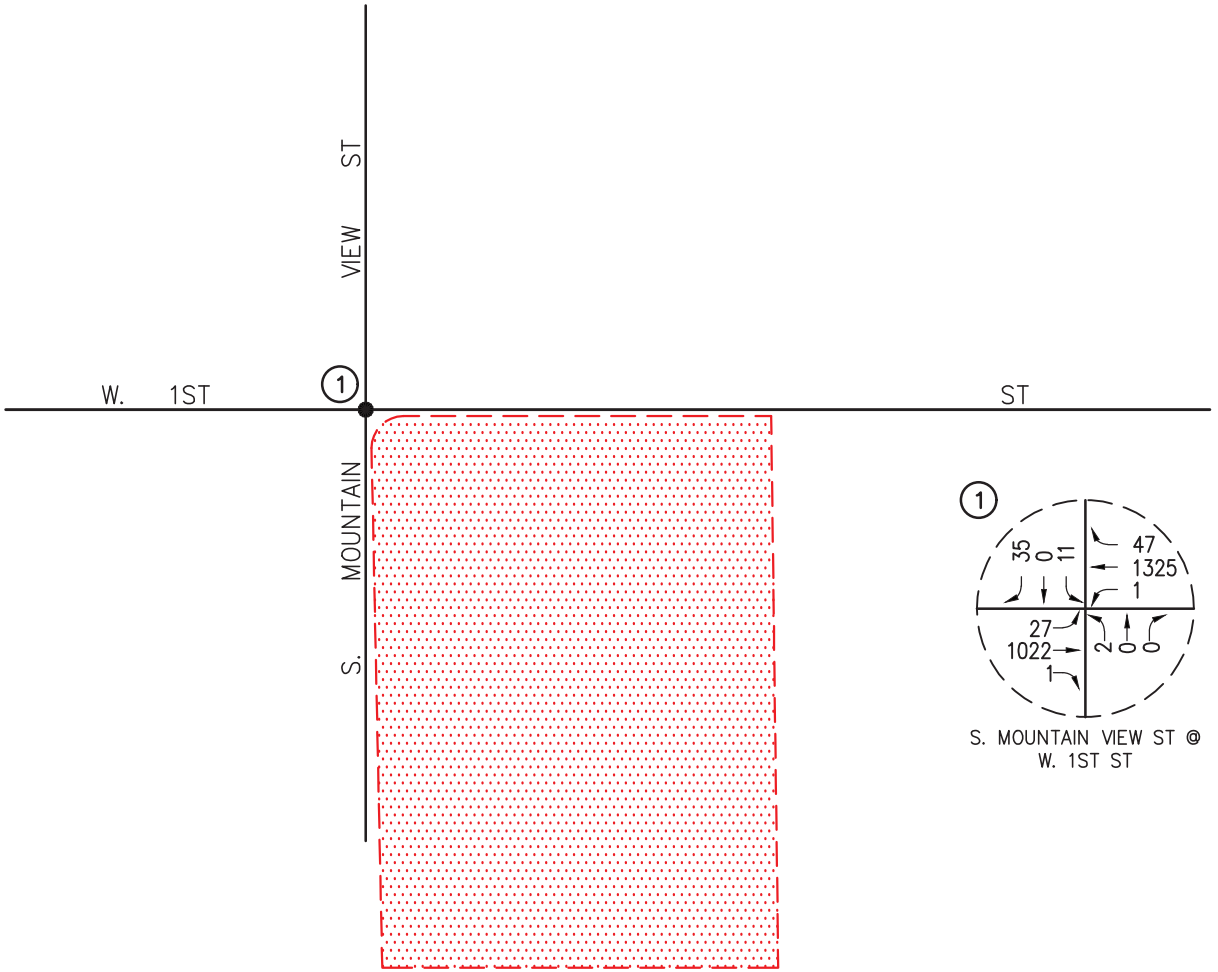
(#) = STUDY INTERSECTION

= PROJECT SITE

FIGURE 5

EXISTING AM PEAK HOUR TRAFFIC VOLUMES

FIRST & MOUNTAIN VIEW RESIDENTIAL, SANTA ANA



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LLG

N NO SCALE

KEY

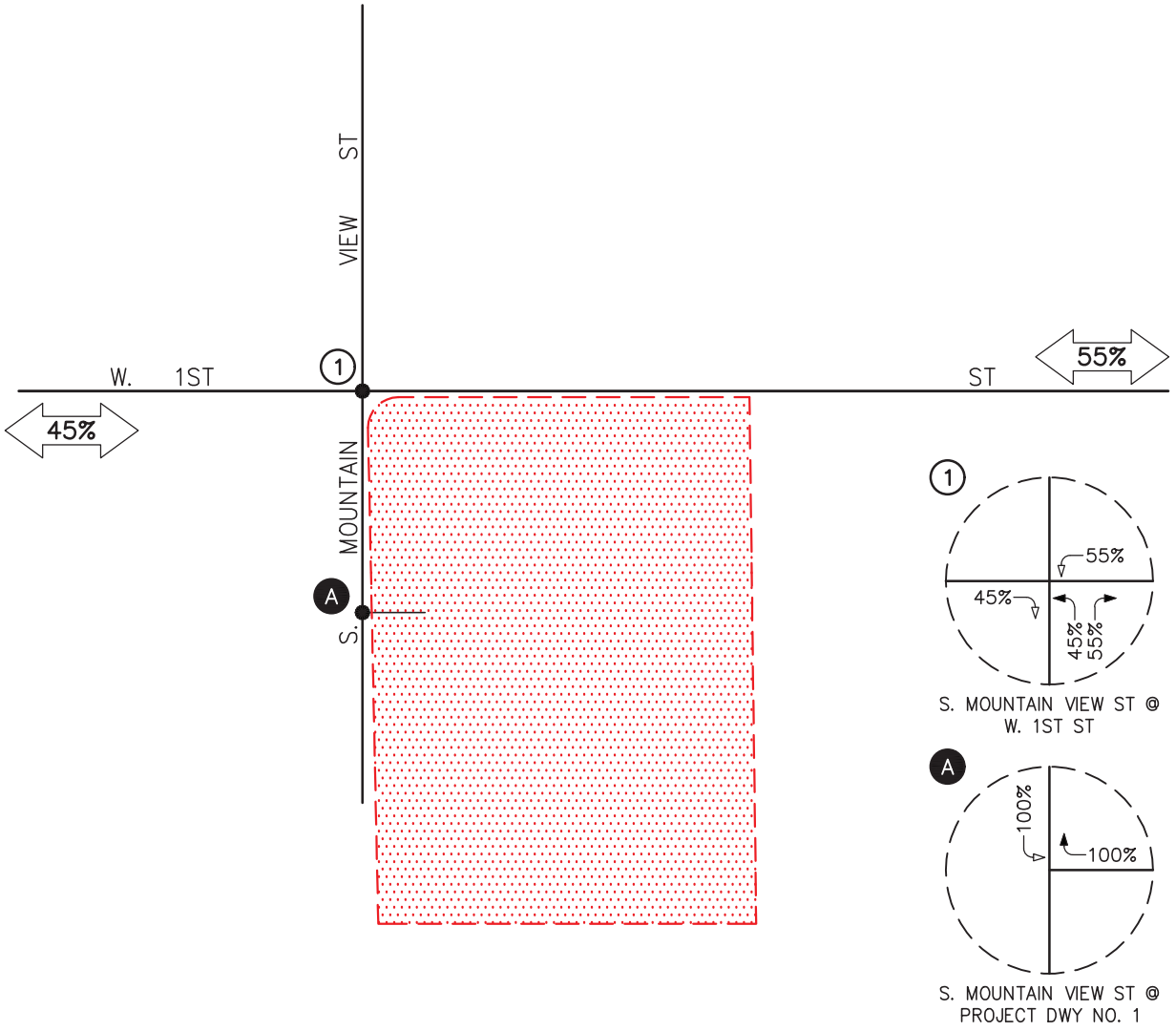
(#) = STUDY INTERSECTION

= PROJECT SITE

FIGURE 6

EXISTING PM PEAK HOUR TRAFFIC VOLUMES

FIRST & MOUNTAIN VIEW RESIDENTIAL, SANTA ANA



n:\5000\2255002 - first & mountain view residential, santa ana\dwg\5002 f-7.dwg LDP 13:17:17 09-15-2025 aguilar

LLG

N NO SCALE

KEY

(#) = STUDY INTERSECTION

= INBOUND PERCENTAGE

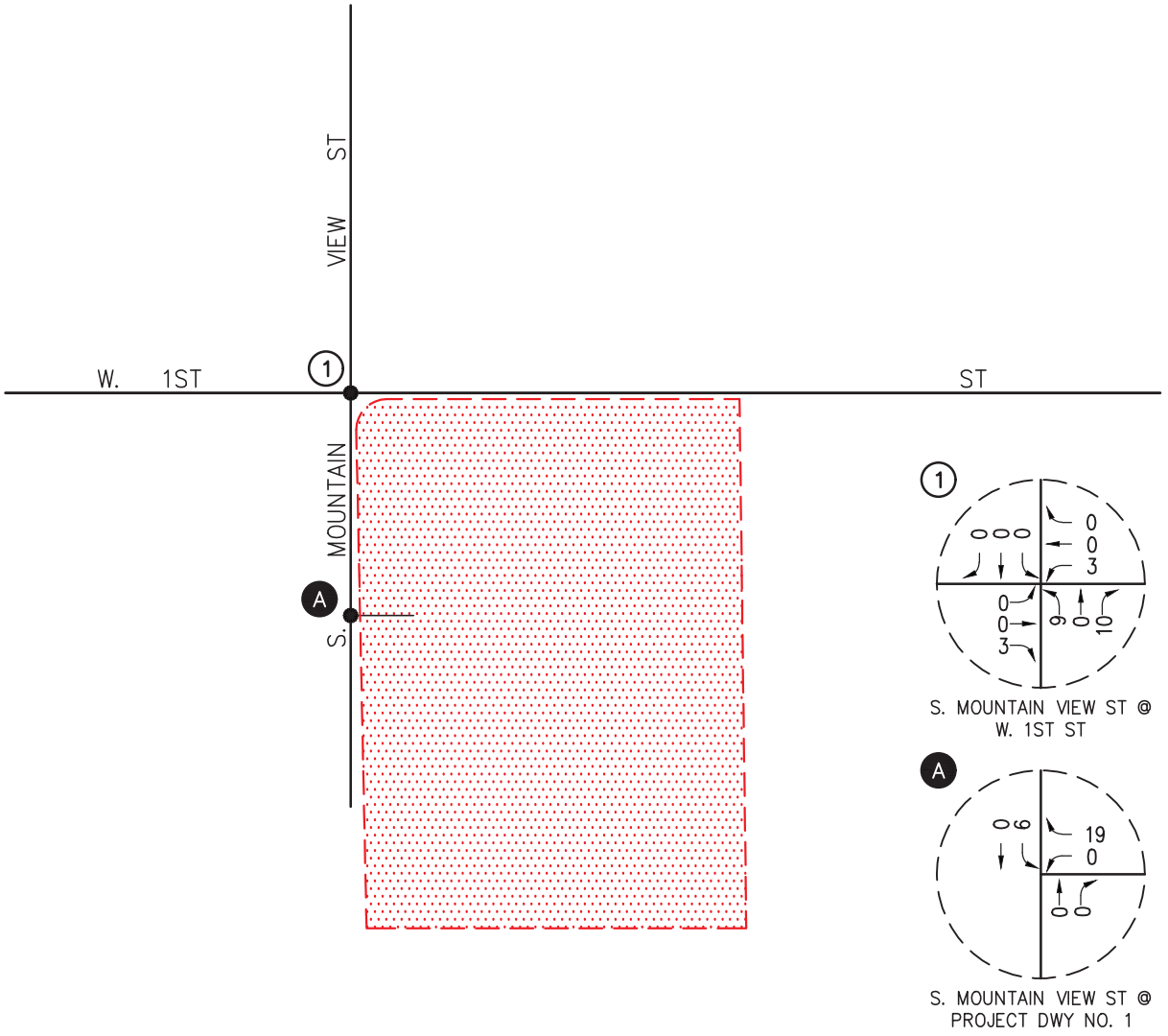
= OUTBOUND PERCENTAGE

= PROJECT SITE

FIGURE 7

PROJECT TRIP DISTRIBUTION PATTERN

FIRST & MOUNTAIN VIEW RESIDENTIAL, SANTA ANA



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LLG

N NO SCALE

KEY

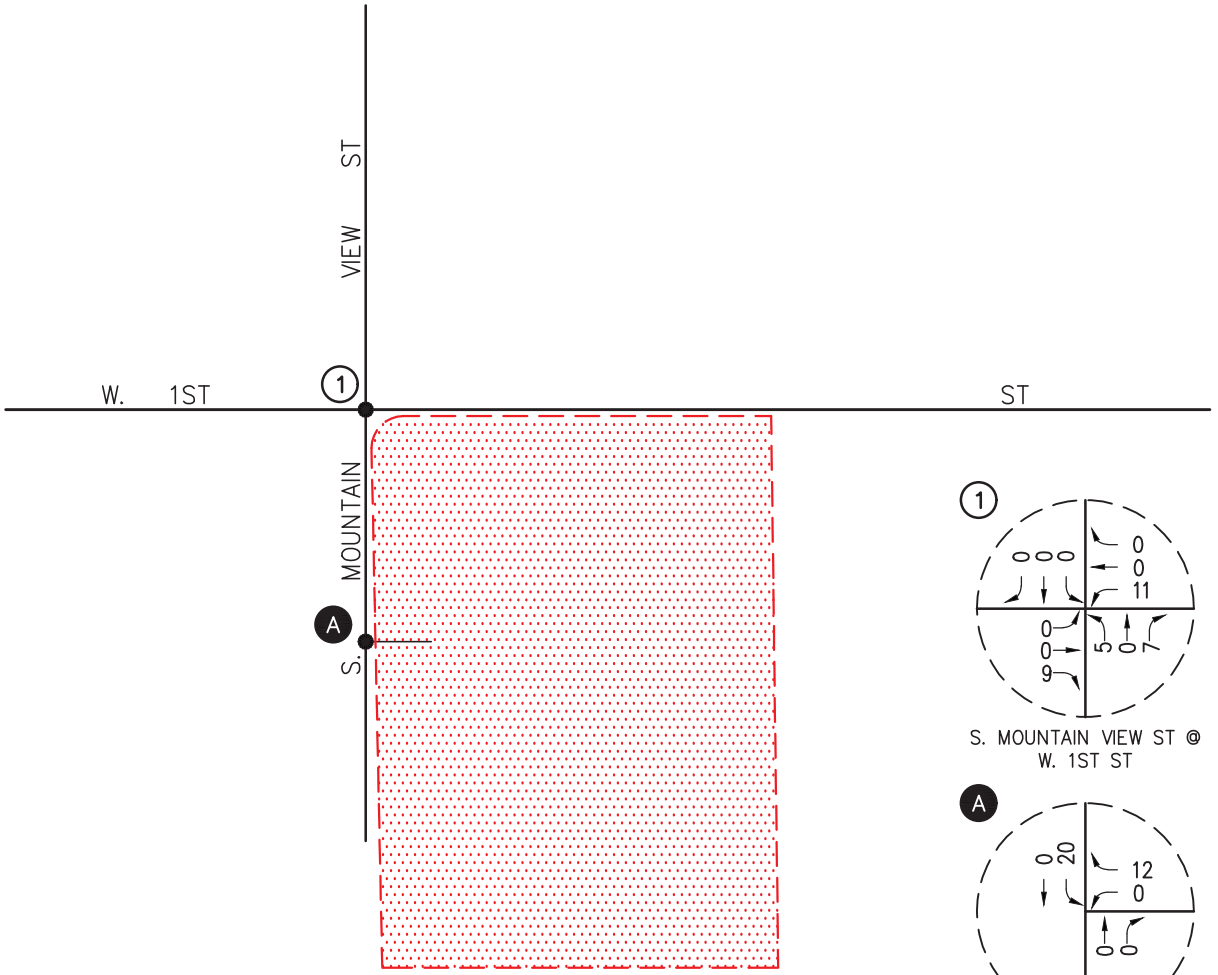
(#) = STUDY INTERSECTION

= PROJECT SITE

FIGURE 8

AM PEAK HOUR PROJECT TRAFFIC VOLUMES

FIRST & MOUNTAIN VIEW RESIDENTIAL, SANTA ANA



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LLG

N NO SCALE

KEY

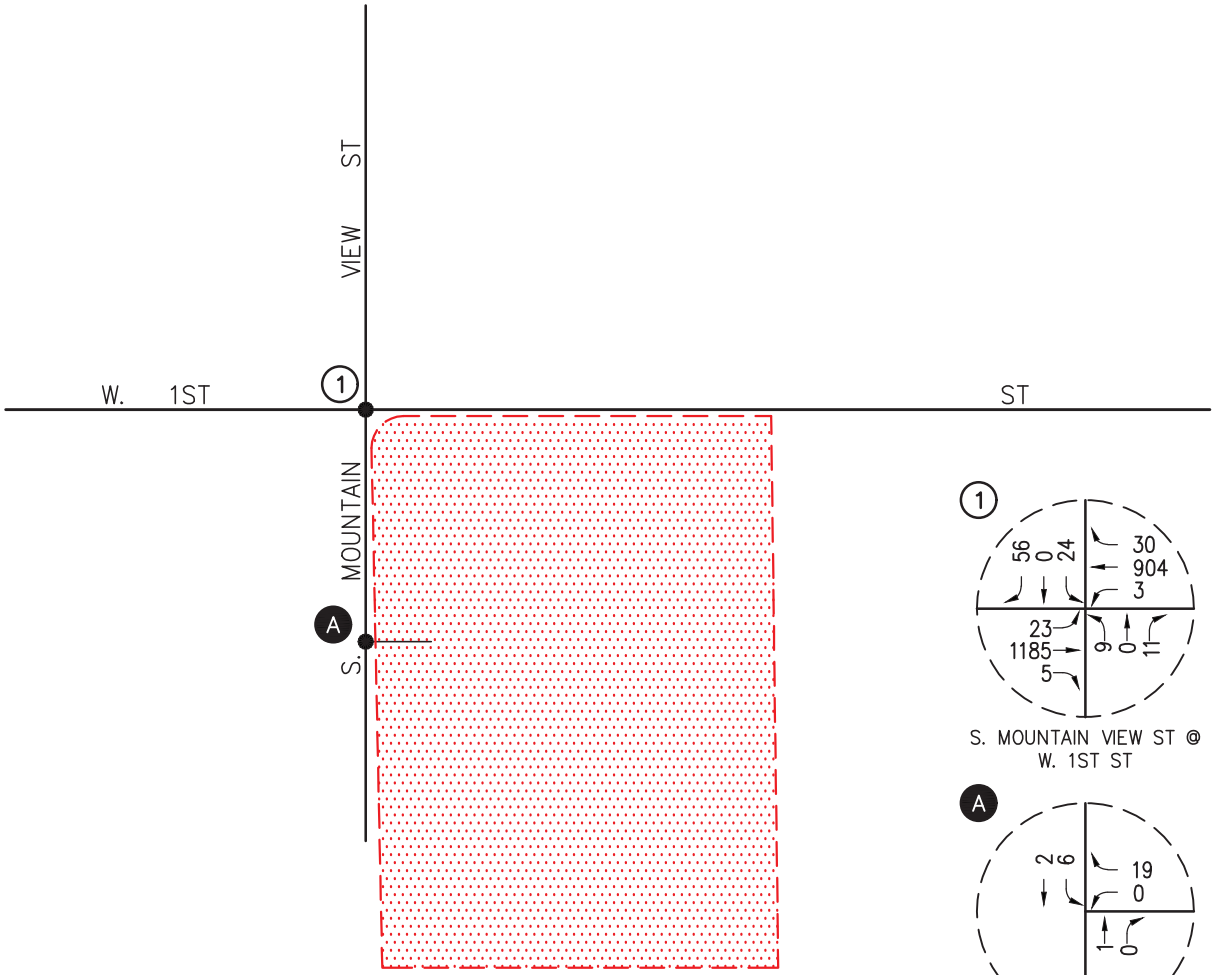
(#) = STUDY INTERSECTION

= PROJECT SITE

FIGURE 9

PM PEAK HOUR PROJECT TRAFFIC VOLUMES

FIRST & MOUNTAIN VIEW RESIDENTIAL, SANTA ANA



n:\5000\2255002 - first & mountain view residential, santa ana\dwg\5002 f-10.dwg LDP 14:10:10 09-15-2025 aguilar

LLG

N NO SCALE

KEY

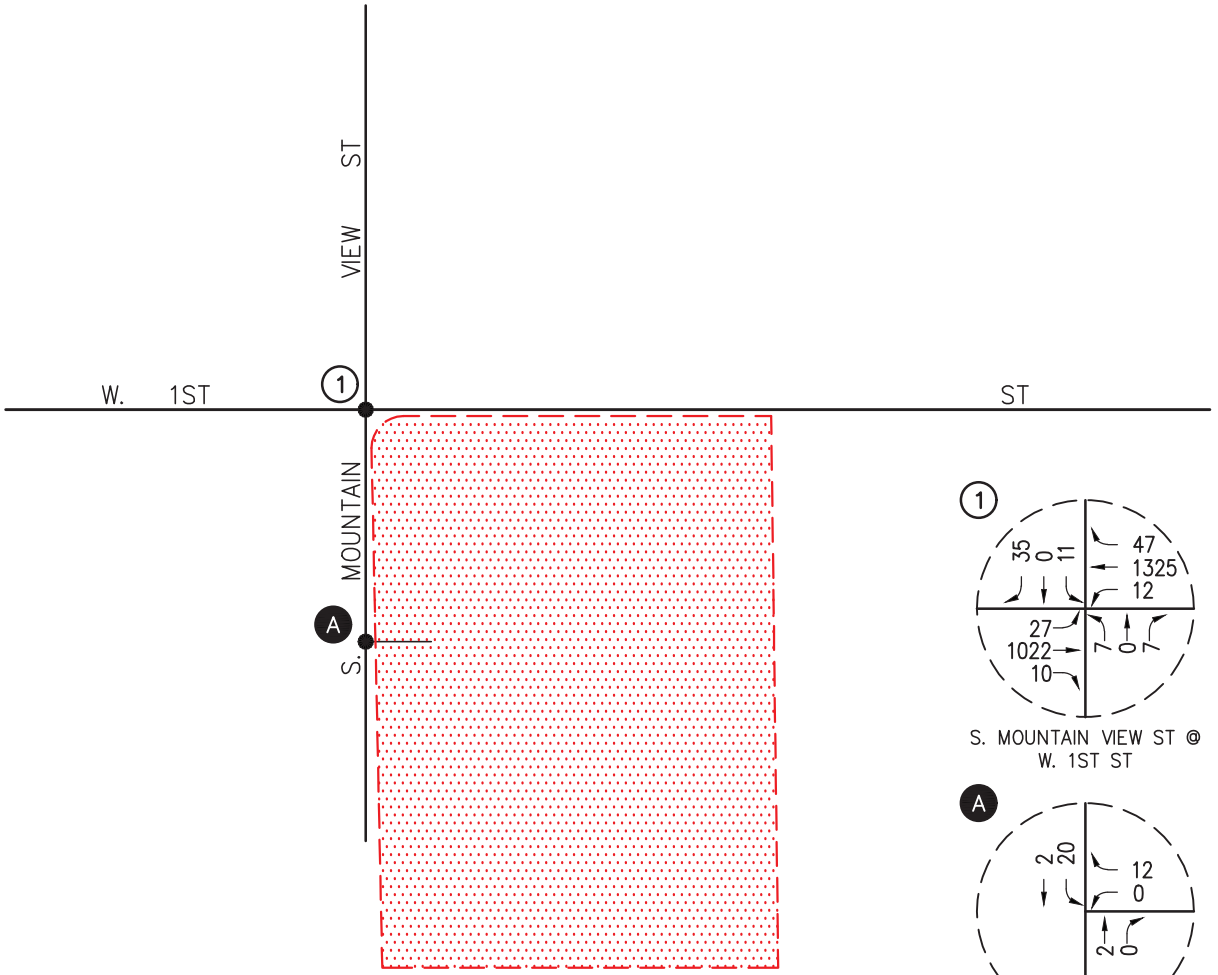
(#) = STUDY INTERSECTION

= PROJECT SITE

FIGURE 10

EXISTING PLUS PROJECT AM PEAK HOUR TRAFFIC VOLUMES

FIRST & MOUNTAIN VIEW RESIDENTIAL, SANTA ANA



n:\5000\2255002 - first & mountain view residential, santa ana\dwg\5002 f-11.dwg LDP 14:10:59 09-15-2025 aguilar

LLG

N NO SCALE

KEY

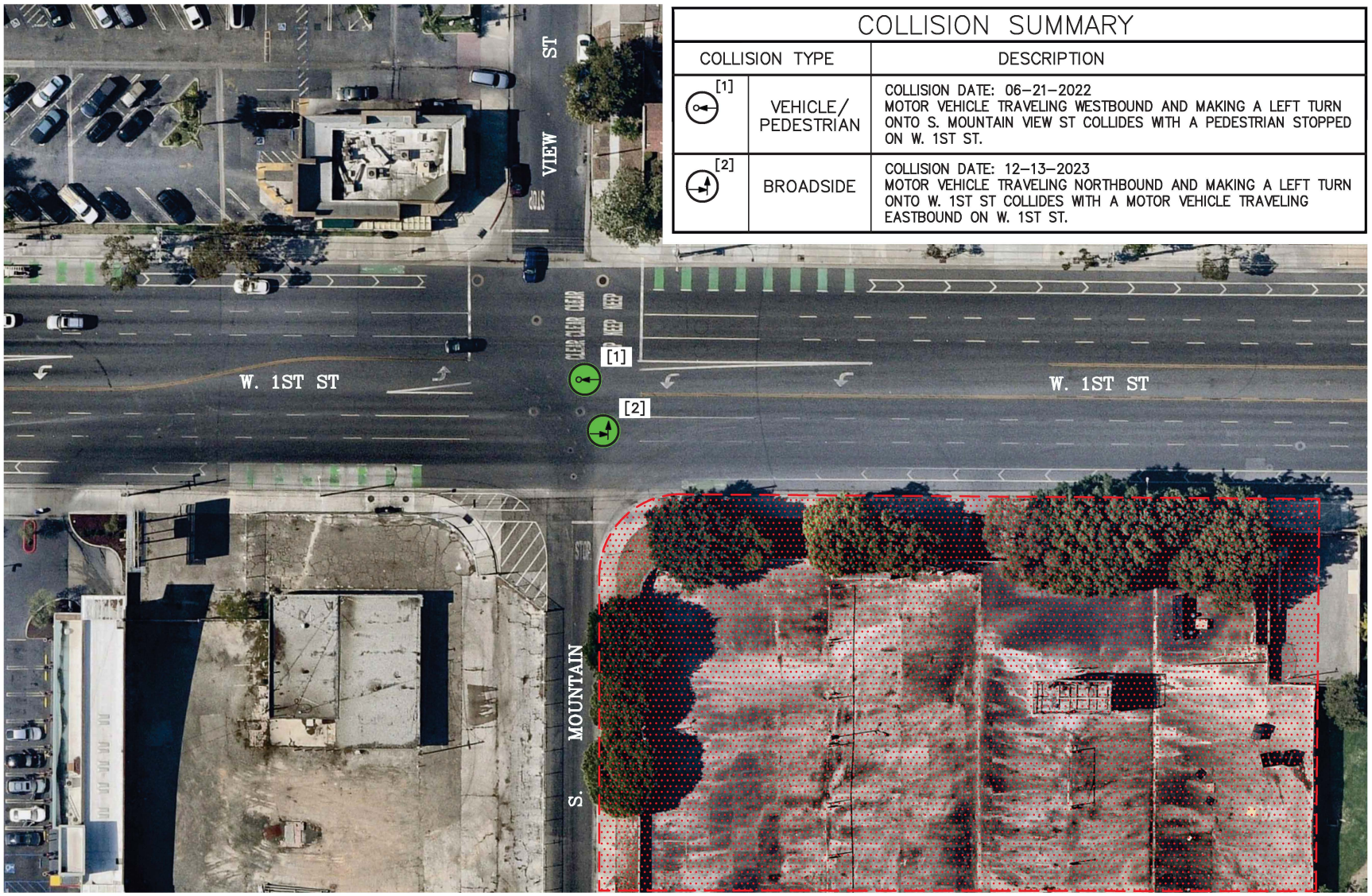
(#) = STUDY INTERSECTION

= PROJECT SITE

FIGURE 11

EXISTING PLUS PROJECT PM PEAK HOUR TRAFFIC VOLUMES

FIRST & MOUNTAIN VIEW RESIDENTIAL, SANTA ANA



COLLISION SUMMARY

COLLISION TYPE		DESCRIPTION
[1]	VEHICLE/ PEDESTRIAN	COLLISION DATE: 06-21-2022 MOTOR VEHICLE TRAVELING WESTBOUND AND MAKING A LEFT TURN ONTO S. MOUNTAIN VIEW ST COLLIDES WITH A PEDESTRIAN STOPPED ON W. 1ST ST.
[2]	BROADSIDE	COLLISION DATE: 12-13-2023 MOTOR VEHICLE TRAVELING NORTHBOUND AND MAKING A LEFT TURN ONTO W. 1ST ST COLLIDES WITH A MOTOR VEHICLE TRAVELING EASTBOUND ON W. 1ST ST.

n:\5000\2255002 - first & mountain view residential, santa ana\dwg\5002 f-10 (2).dwg LDP 08:34:08 09-16-2025 talavera-salache

LLG

N NO SCALE

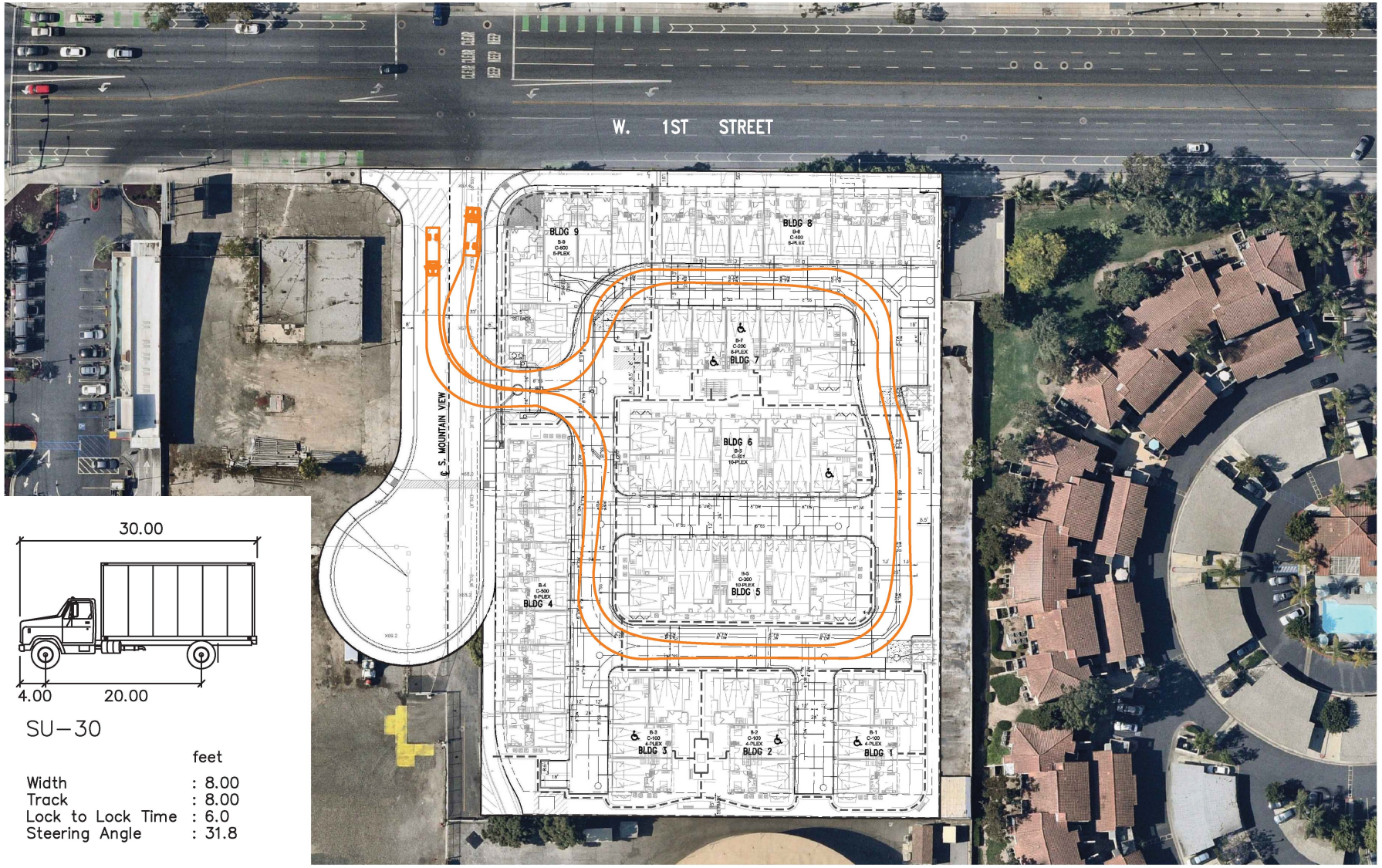
KEY

= PROJECT SITE

FIGURE 12

CRASH HISTORY

FIRST & MOUNTAIN VIEW RESIDENTIAL, SANTA ANA



SU–30

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

n:\5000\2255002 - first & mountain view residential, santa ana\dwg\5002 f-13.dwg LDP 10:38:45 09-18-2025 aguilar

SOURCE: C&V CONSULTING

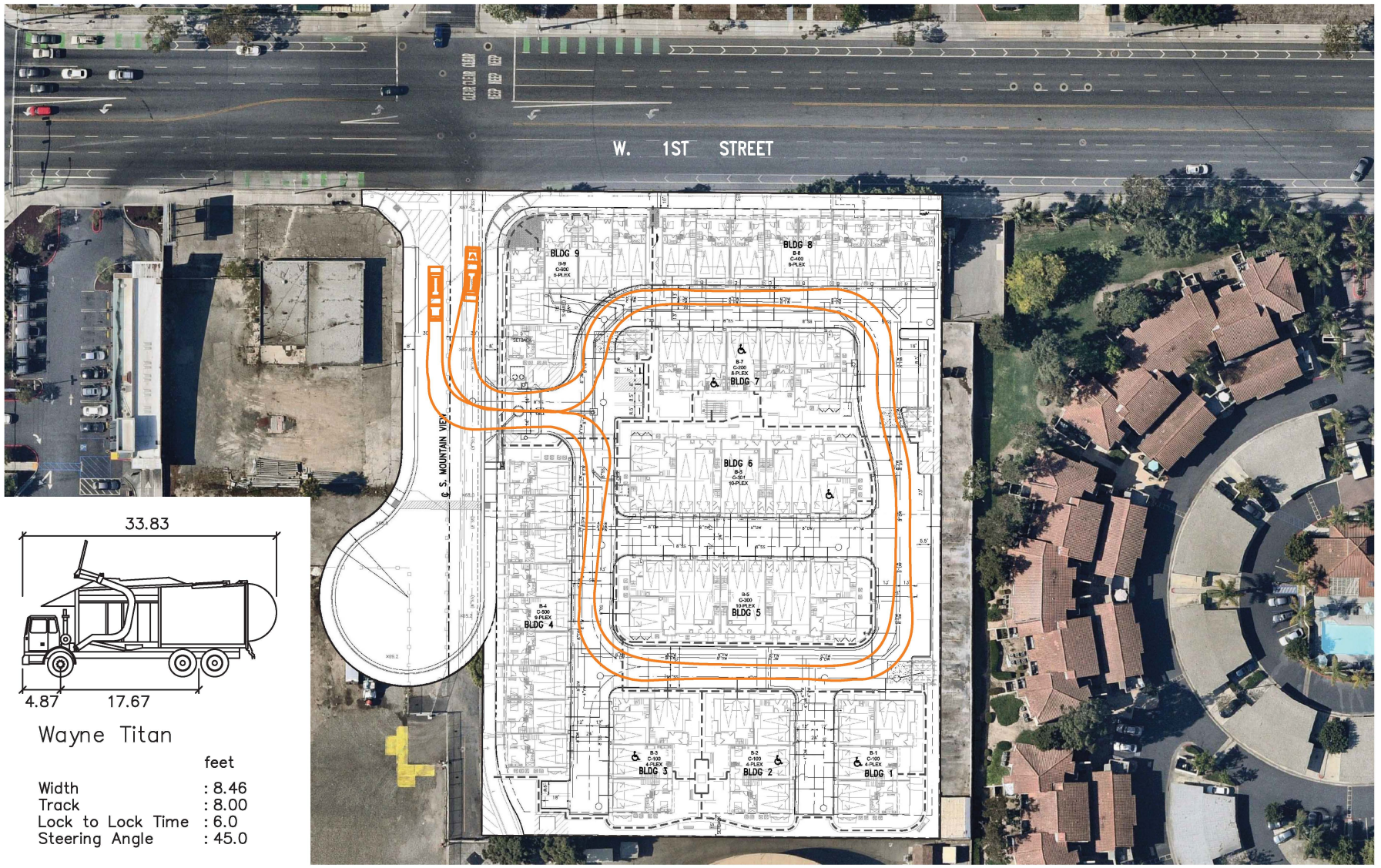
FIGURE 13

LLG

N NO SCALE

SU–30 TRUCK TURNING ANALYSIS

FIRST & MOUNTAIN VIEW RESIDENTIAL, SANTA ANA



n:\5000\2255002 - first & mountain view residential, santa ana\dwg\5002 f-12.dwg LDP 14:52:51 09-15-2025 aguilar

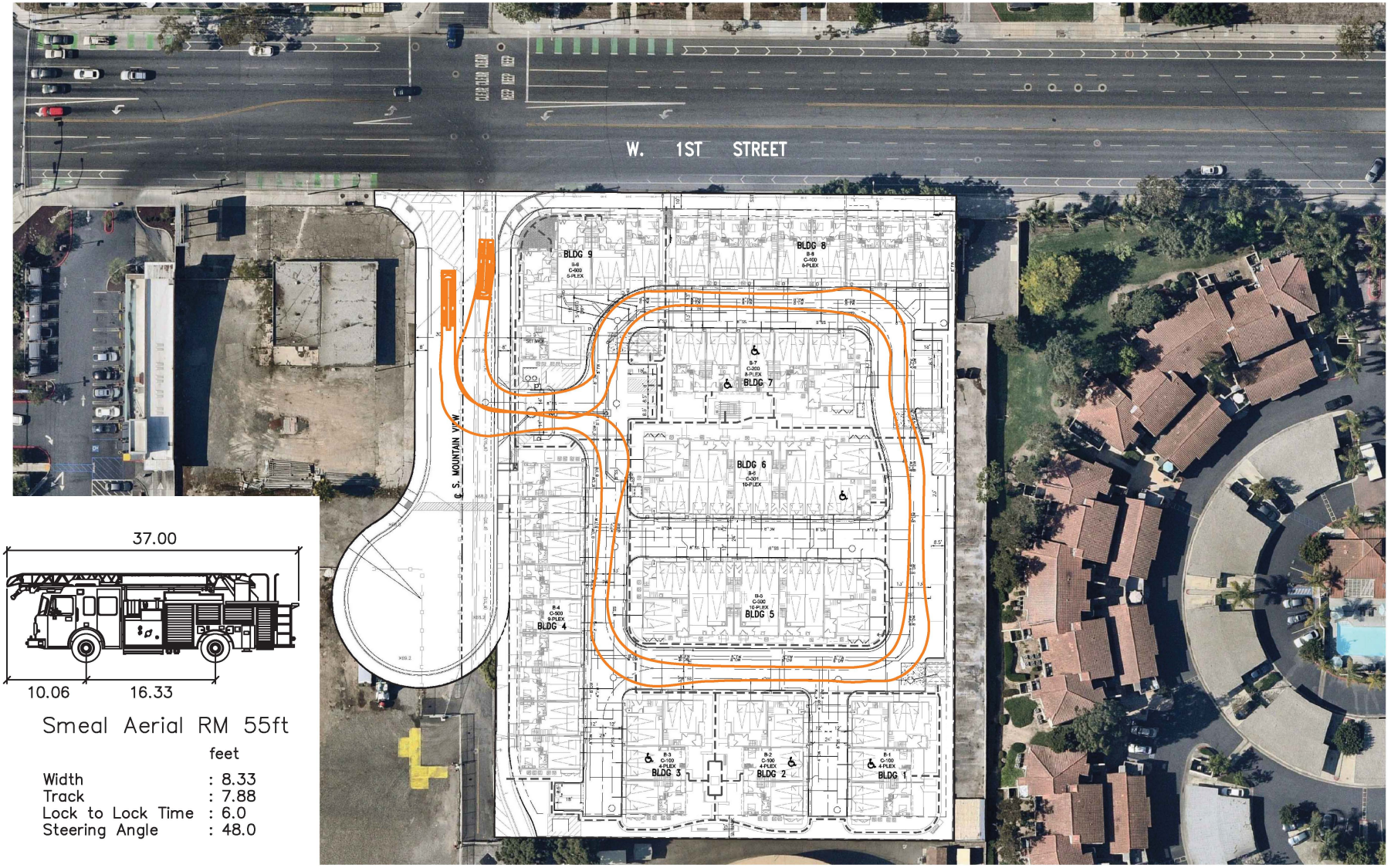
SOURCE: C&V CONSULTING

NO SCALE

FIGURE 14

TRASH TRUCK TURNING ANALYSIS

FIRST & MOUNTAIN VIEW RESIDENTIAL, SANTA ANA



Smeal Aerial RM 55ft

	feet
Width	: 8.33
Track	: 7.88
Lock to Lock Time	: 6.0
Steering Angle	: 48.0

SOURCE: C&V CONSULTING

LLG

N NO SCALE

FIGURE 15

FIRE TRUCK TURNING ANALYSIS

FIRST & MOUNTAIN VIEW RESIDENTIAL, SANTA ANA

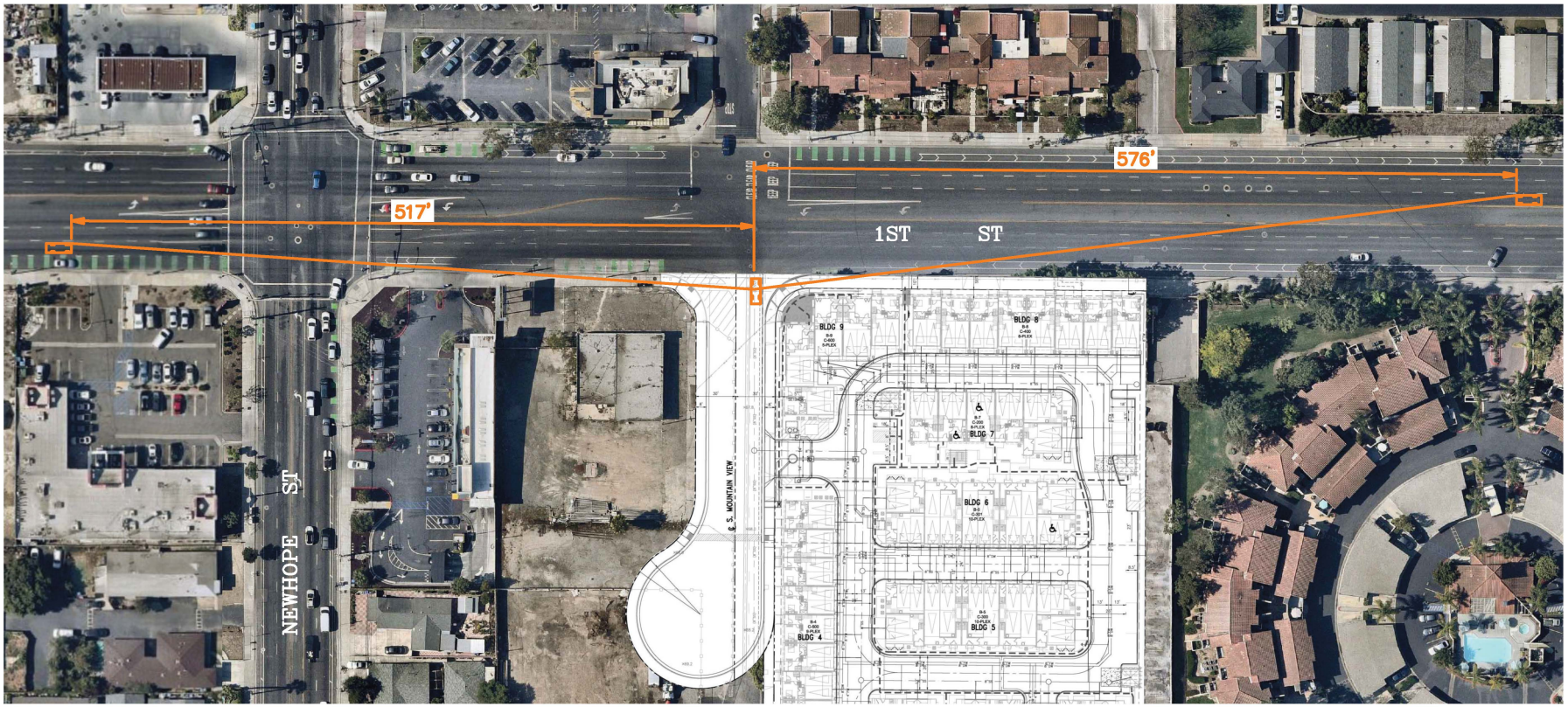
n:\5000\2255002 - first & mountain view residential, santa ana\dwg\5002 f-15.dwg LDP 11:02:52 09-18-2025 aguilar

SIGHT DISTANCE

DESIGN SPEED LIMIT:	40 MPH
REQUIRED CORNER SIGHT DISTANCE LOOKING LEFT:	517 FEET
REQUIRED CORNER SIGHT DISTANCE LOOKING RIGHT:	576 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: C&V CONSULTING

LLG

N NO SCALE

FIGURE 16

SIGHT DISTANCE ANALYSIS

FIRST & MOUNTAIN VIEW RESIDENTIAL, SANTA ANA

TABLE 1
LEVEL OF SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS (HCM 7 METHODOLOGY)[1]

Level of Service (LOS)	Highway Capacity Manual (HCM) Delay Per Vehicle (seconds/vehicle)	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

[1] Source: *Highway Capacity Manual 7*, 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.

TABLE 2
PROJECT TRIP GENERATION RATES AND FORECAST[2]

ITE Land Use Code / Project Description	Daily	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
Trip Generation Rates:							
▪ 220: Multifamily Housing (Low-Rise) (TE/DU)	6.21	24%	76%	0.41	62%	38%	0.52
Project Trip Generation Forecast:							
▪ Multifamily Housing (61 DU)	379	6	19	25	20	12	32
Total Project Trip Generation	***379***	***6***	***19***	***25***	***20***	***12***	***32***

Notes:
- TE/DU = Trip End per Dwelling Units

[2] Source: *Trip Generation*, 12th Edition, Institute of Transportation Engineers (ITE), Washington, D.C. (2025).

TABLE 3
EXISTING PLUS PROJECT PEAK HOUR INTERSECTION CAPACITY ANALYSIS

Key Intersections	Time Period	(1) Existing Traffic Conditions		(2) Existing Plus Project Traffic Conditions		(3) Exceed LOS Criteria		(4) Existing Plus Project Traffic Conditions with Improvements	
		Delay (s/v)	LOS	Delay (s/v)	LOS	Increase	Yes/No	Delay (s/v)	LOS
1. Mountain View Street at 1st Street	AM	24.4	C	26.6	D	2.2	No	--	--
	PM	32.7	D	33.1	D	0.7	No	--	--

Notes:

- s/v = seconds per vehicle (delay)

TABLE 4
PROJECT DRIVEWAY PEAK HOUR INTERSECTION CAPACITY ANALYSIS

Key Intersections	Time Period	(1) Existing Plus Project Traffic Conditions	
		Delay (s/v)	LOS
A. Mountain View Street at Proposed Project Driveway	AM	8.4	A
	PM	8.4	A

Note:

- s/v = seconds per vehicle (delay)

TABLE 5
EXISTING WITH PROJECT PEAK HOUR QUEUING ANALYSIS[3]

Key Intersection	Provided/ Proposed Storage (feet)	Existing With Project Traffic Conditions			
		AM Peak Hour		PM Peak Hour	
		95th Percentile Queue (feet)	Adequate Storage (Yes / No)	95th Percentile Queue (feet)	Adequate Storage (Yes / No)
B. S. Mountain View Street at W. 1st Street					
Westbound Left-Turn Lane	100’	25’	Yes	25’	Yes
Northbound Left/Through/Right-Turn Lane	110’	25’	Yes	25’	Yes

[3] Queue is based on the *95th Percentile Queue* and is reported in total queue length (feet) per lane.

TABLE 6

EXISTING PLUS PROJECT TRAFFIC SIGNAL WARRANT ANALYSIS SUMMARY

Key Intersection	Time Period	(1) Existing Plus Project Traffic Conditions		(2) Existing Plus Project Traffic Conditions	
		Part A of Warrant 3 Satisfied?	Part B of Warrant 3 Satisfied?	Part A of Warrant 3 Satisfied?	Part B of Warrant 3 Satisfied?
A. S. Mountain View Street at W. 1st Street	AM	No	No	No	No
	PM	No	No	No	No

Notes:

- Signal warrant checks based on Warrant 3, Part A - Peak-Hour Delay Warrant and Part B - Peak-Hour Volume Warrant contained in the California MUTCD.

APPENDIX A

EXISTING TRAFFIC COUNT DATA

Transportation Studies, Inc
2640 Walnut Avenue, Suite L
Tustin, CA. 92780

City: SANTA ANA
N-S Direction: N MOUNTAIN VIEW STREET
E-W Direction: W 1ST STREET

File Name : H2509001
Site Code : 00000000
Start Date : 9/9/2025

Groups Printed- Turning Movement Count

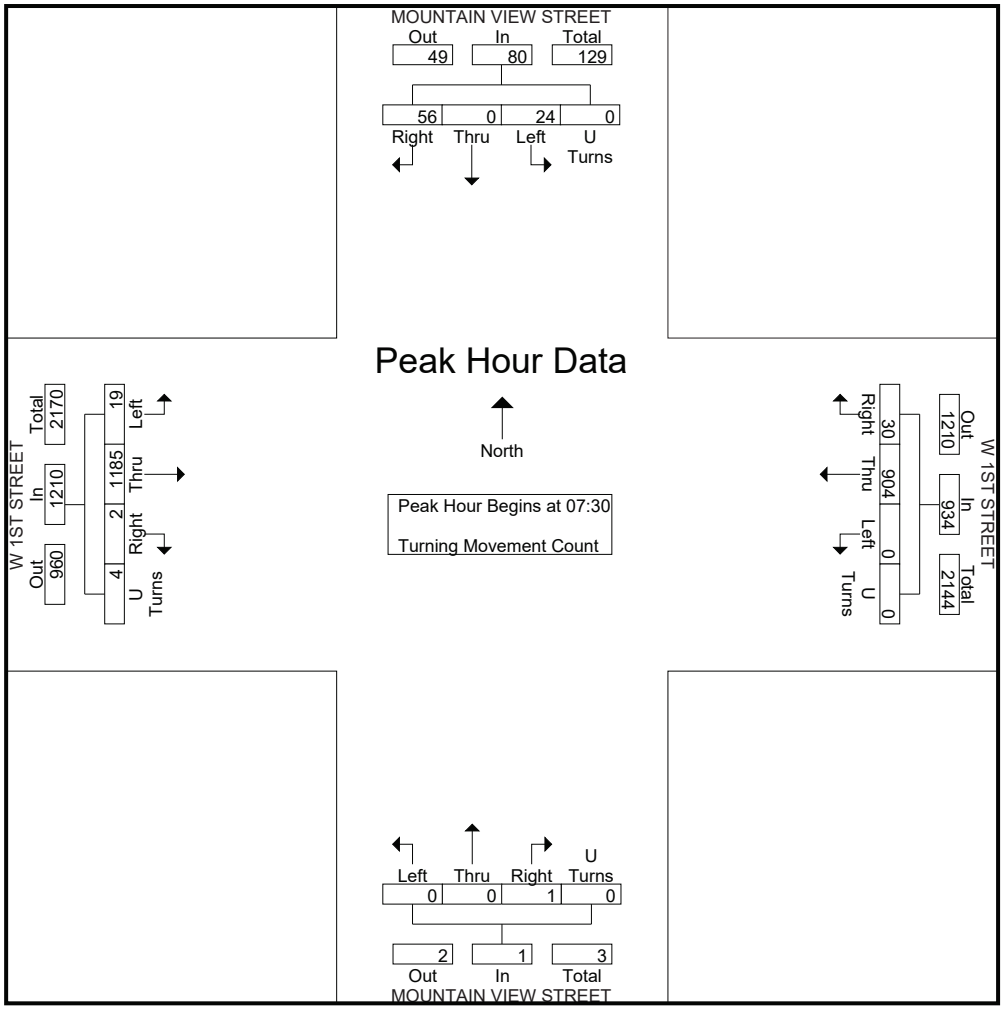
	MOUNTAIN VIEW STREET Southbound				W 1ST STREET Westbound				MOUNTAIN VIEW STREET Northbound				W 1ST STREET Eastbound				
Start Time	Right	Thru	Left	U Turns	Right	Thru	Left	U Turns	Right	Thru	Left	U Turns	Right	Thru	Left	U Turns	Int. Total
07:00	9	0	0	0	2	139	0	0	0	0	0	0	0	197	4	0	351
07:15	14	0	4	0	6	152	0	0	0	0	0	0	0	240	7	2	425
07:30	13	0	6	0	6	227	0	0	0	0	0	0	0	319	4	0	575
07:45	11	0	4	0	12	229	0	0	0	0	0	0	0	292	6	0	554
Total	47	0	14	0	26	747	0	0	0	0	0	0	0	1048	21	2	1905
08:00	20	0	9	0	4	260	0	0	0	0	0	0	2	284	2	2	583
08:15	12	0	5	0	8	188	0	0	1	0	0	0	0	290	7	2	513
08:30	6	0	5	0	5	196	0	0	1	0	0	0	1	288	9	2	513
08:45	7	0	2	0	7	185	0	0	0	0	0	0	0	257	4	2	464
Total	45	0	21	0	24	829	0	0	2	0	0	0	3	1119	22	8	2073
16:00	8	2	3	0	9	291	0	0	3	0	0	0	0	255	6	2	579
16:15	5	0	2	0	10	289	0	0	0	0	0	0	0	243	0	4	553
16:30	7	0	4	0	8	306	0	0	0	0	1	0	1	263	3	1	594
16:45	11	0	1	0	18	315	0	0	0	0	0	0	0	231	6	1	583
Total	31	2	10	0	45	1201	0	0	3	0	1	0	1	992	15	8	2309
17:00	5	0	3	0	5	347	1	0	0	0	0	1	0	272	6	2	642
17:15	12	0	3	0	16	357	0	0	0	0	0	0	0	256	7	1	652
17:30	3	0	5	0	6	333	0	0	0	0	0	0	0	221	1	1	570
17:45	11	0	0	0	12	291	1	0	1	0	0	0	1	248	3	5	573
Total	31	0	11	0	39	1328	2	0	1	0	0	1	1	997	17	9	2437
Grand Total	154	2	56	0	134	4105	2	0	6	0	1	1	5	4156	75	27	8724
Apprch %	72.6	0.9	26.4	0	3.2	96.8	0	0	75	0	12.5	12.5	0.1	97.5	1.8	0.6	
Total %	1.8	0	0.6	0	1.5	47.1	0	0	0.1	0	0	0	0.1	47.6	0.9	0.3	

Transportation Studies, Inc
2640 Walnut Avenue, Suite L
Tustin, CA. 92780

City: SANTA ANA
N-S Direction: N MOUNTAIN VIEW STREET
E-W Direction: W 1ST STREET

File Name : H2509001
Site Code : 00000000
Start Date : 9/9/2025

	MOUNTAIN VIEW STREET Southbound					W 1ST STREET Westbound					MOUNTAIN VIEW STREET Northbound					W 1ST STREET Eastbound					
Start Time	Right	Thru	Left	U Turns	App. Total	Right	Thru	Left	U Turns	App. Total	Right	Thru	Left	U Turns	App. Total	Right	Thru	Left	U Turns	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30																					
07:30	13	0	6	0	19	6	227	0	0	233	0	0	0	0	0	0	319	4	0	323	575
07:45	11	0	4	0	15	12	229	0	0	241	0	0	0	0	0	0	292	6	0	298	554
08:00	20	0	9	0	29	4	260	0	0	264	0	0	0	0	0	2	284	2	2	290	583
08:15	12	0	5	0	17	8	188	0	0	196	1	0	0	0	1	0	290	7	2	299	513
Total Volume	56	0	24	0	80	30	904	0	0	934	1	0	0	0	1	2	1185	19	4	1210	2225
% App. Total	70	0	30	0		3.2	96.8	0	0		100	0	0	0		0.2	97.9	1.6	0.3		
PHF	.700	.000	.667	.000	.690	.625	.869	.000	.000	.884	.250	.000	.000	.000	.250	.250	.929	.679	.500	.937	.954

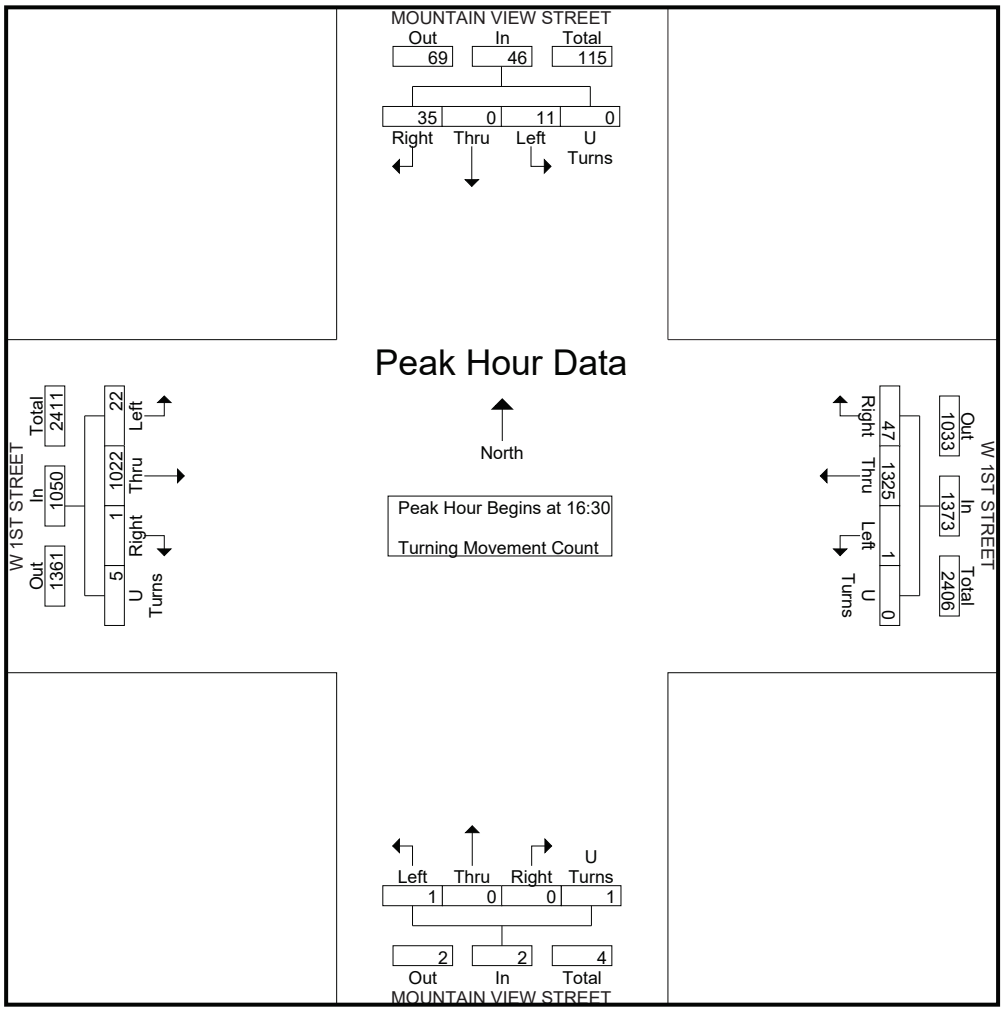


Transportation Studies, Inc
2640 Walnut Avenue, Suite L
Tustin, CA. 92780

City: SANTA ANA
N-S Direction: N MOUNTAIN VIEW STREET
E-W Direction: W 1ST STREET

File Name : H2509001
Site Code : 00000000
Start Date : 9/9/2025
Page No : 3

	MOUNTAIN VIEW STREET Southbound					W 1ST STREET Westbound					MOUNTAIN VIEW STREET Northbound					W 1ST STREET Eastbound					
Start Time	Right	Thru	Left	U Turns	App. Total	Right	Thru	Left	U Turns	App. Total	Right	Thru	Left	U Turns	App. Total	Right	Thru	Left	U Turns	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:30																					
16:30	7	0	4	0	11	8	306	0	0	314	0	0	1	0	1	1	263	3	1	268	594
16:45	11	0	1	0	12	18	315	0	0	333	0	0	0	0	0	0	231	6	1	238	583
17:00	5	0	3	0	8	5	347	1	0	353	0	0	0	1	1	0	272	6	2	280	642
17:15	12	0	3	0	15	16	357	0	0	373	0	0	0	0	0	0	256	7	1	264	652
Total Volume	35	0	11	0	46	47	1325	1	0	1373	0	0	1	1	2	1	1022	22	5	1050	2471
% App. Total	76.1	0	23.9	0		3.4	96.5	0.1	0		0	0	50	50		0.1	97.3	2.1	0.5		
PHF	.729	.000	.688	.000	.767	.653	.928	.250	.000	.920	.000	.000	.250	.250	.500	.250	.939	.786	.625	.938	.947



APPENDIX B

EXISTING TRAFFIC CONDITIONS INTERSECTION LEVEL OF SERVICE CALCULATION WORKSHEETS

APPENDIX B-I

EXISTING TRAFFIC CONDITIONS

Intersection Level Of Service Report
Intersection 1: N Mountain View Street at W 1st Street

Control Type:	Two-way stop	Delay (sec / veh):	38.0
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.182

Intersection Setup

Name	N Mountain View Street			N Mountain View Street			W 1st Street			W 1st 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	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]	25.00			25.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	N Mountain View Street			N Mountain View Street			W 1st Street			W 1st Street		
Base Volume Input [veh/h]	0	0	1	24	0	56	23	1185	2	0	904	30
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	1	24	0	56	23	1185	2	0	904	30
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	0	6	0	14	6	296	1	0	226	8
Total Analysis Volume [veh/h]	0	0	1	24	0	56	23	1185	2	0	904	30
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	No		
Number of Storage Spaces in Median	1	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.18	0.00	0.12	0.05	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	36.19	30.23	14.39	38.04	91.06	18.55	14.04	0.00	0.00	16.34	0.00	0.00
Movement LOS	E	D	B	E	F	C	B	A	A	C	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.01	1.23	1.23	1.23	0.17	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.20	0.20	0.20	30.86	30.86	30.86	4.32	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	14.39			24.40			0.27			0.00		
Approach LOS	B			C			A			A		
d_I, Intersection Delay [s/veh]	1.03											
Intersection LOS	E											

Intersection Level Of Service Report
Intersection 1: N Mountain View Street at W 1st Street

Control Type:	Two-way stop	Delay (sec / veh):	60.3
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.149

Intersection Setup

Name	N Mountain View Street			N Mountain View Street			W 1st Street			W 1st 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	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]	25.00			25.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	N Mountain View Street			N Mountain View Street			W 1st Street			W 1st Street		
Base Volume Input [veh/h]	2	0	0	11	0	35	27	1022	1	1	1325	47
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	0	0	11	0	35	27	1022	1	1	1325	47
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	0	9	7	256	0	0	331	12
Total Analysis Volume [veh/h]	2	0	0	11	0	35	27	1022	1	1	1325	47
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	No		
Number of Storage Spaces in Median	1	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.15	0.00	0.10	0.10	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	32.74	37.92	13.71	60.27	139.15	22.36	20.59	0.00	0.00	14.46	0.00	0.00
Movement LOS	D	E	B	F	F	C	C	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.05	0.05	0.05	0.96	0.96	0.96	0.35	0.00	0.00	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.15	1.15	1.15	24.08	24.08	24.08	8.67	0.00	0.00	0.20	0.00	0.00
d_A, Approach Delay [s/veh]	32.74			31.43			0.53			0.01		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	0.84											
Intersection LOS	F											

APPENDIX B-II

EXISTING PLUS PROJECT TRAFFIC CONDITIONS

Intersection Level Of Service Report
Intersection 1: N Mountain View Street at W 1st Street

Control Type:	Two-way stop	Delay (sec / veh):	39.7
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.190

Intersection Setup

Name	N Mountain View Street			N Mountain View Street			W 1st Street			W 1st 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	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]	25.00			25.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	N Mountain View Street			N Mountain View Street			W 1st Street			W 1st Street		
Base Volume Input [veh/h]	9	0	11	24	0	56	23	1185	5	3	904	30
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]	9	0	11	24	0	56	23	1185	5	3	904	30
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]	2	0	3	6	0	14	6	296	1	1	226	8
Total Analysis Volume [veh/h]	9	0	11	24	0	56	23	1185	5	3	904	30
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	No		
Number of Storage Spaces in Median	1	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.00	0.03	0.19	0.00	0.12	0.05	0.01	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	38.62	32.74	16.68	39.66	93.28	18.93	14.04	0.00	0.00	16.48	0.00	0.00
Movement LOS	E	D	C	E	F	C	B	A	A	C	A	A
95th-Percentile Queue Length [veh/ln]	0.35	0.35	0.35	1.28	1.28	1.28	0.17	0.00	0.00	0.03	0.00	0.00
95th-Percentile Queue Length [ft/ln]	8.84	8.84	8.84	31.95	31.95	31.95	4.32	0.00	0.00	0.72	0.00	0.00
d_A, Approach Delay [s/veh]	26.55			25.15			0.27			0.05		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	1.30											
Intersection LOS	E											

Intersection Level Of Service Report
Intersection 1: N Mountain View Street at W 1st Street

Control Type:	Two-way stop	Delay (sec / veh):	64.9
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.161

Intersection Setup

Name	N Mountain View Street			N Mountain View Street			W 1st Street			W 1st 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	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]	25.00			25.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	N Mountain View Street			N Mountain View Street			W 1st Street			W 1st Street		
Base Volume Input [veh/h]	7	0	7	11	0	35	27	1022	10	12	1325	47
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]	7	0	7	11	0	35	27	1022	10	12	1325	47
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]	2	0	2	3	0	9	7	256	3	3	331	12
Total Analysis Volume [veh/h]	7	0	7	11	0	35	27	1022	10	12	1325	47
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	Yes	No		
Number of Storage Spaces in Median	1	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.00	0.02	0.16	0.00	0.10	0.10	0.01	0.00	0.03	0.01	0.00
d_M, Delay for Movement [s/veh]	34.39	40.33	14.72	64.91	149.92	23.10	20.59	0.00	0.00	14.84	0.00	0.00
Movement LOS	D	E	B	F	F	C	C	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.23	0.23	0.23	1.02	1.02	1.02	0.35	0.00	0.00	0.10	0.00	0.00
95th-Percentile Queue Length [ft/ln]	5.65	5.65	5.65	25.46	25.46	25.46	8.67	0.00	0.00	2.46	0.00	0.00
d_A, Approach Delay [s/veh]	24.56			33.10			0.53			0.13		
Approach LOS	C			D			A			A		
d_I, Intersection Delay [s/veh]	1.04											
Intersection LOS	F											

APPENDIX C

PROJECT DRIVEWAYS LEVEL OF SERVICE CALCULATION WORKSHEETS

Intersection Level Of Service Report
Intersection 2: S Mountain View Street at Project Driveway

Control Type:	Two-way stop	Delay (sec / veh):	8.4
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.018

Intersection Setup

Name	S Mountain View Street		S Mountain View Street		Project Driveway	
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	0	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]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	S Mountain View Street		S Mountain View Street		Project Driveway	
Base Volume Input [veh/h]	1	0	6	2	0	19
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]	1	0	6	2	0	19
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	0	2	1	0	5
Total Analysis Volume [veh/h]	1	0	6	2	0	19
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
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	0.00	0.00	0.00	0.00	0.00	0.02
d_M, Delay for Movement [s/veh]	0.00	0.00	7.23	0.00	8.66	8.38
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.01	0.05	0.05
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.25	0.25	1.34	1.34
d_A, Approach Delay [s/veh]	0.00		5.42		8.38	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	7.24					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 2: S Mountain View Street at Project Driveway

Control Type:	Two-way stop	Delay (sec / veh):	8.4
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.011

Intersection Setup

Name	S Mountain View Street		S Mountain View Street		Project Driveway	
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	0	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]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	S Mountain View Street		S Mountain View Street		Project Driveway	
Base Volume Input [veh/h]	2	0	20	2	0	12
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]	2	0	20	2	0	12
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]	1	0	5	1	0	3
Total Analysis Volume [veh/h]	2	0	20	2	0	12
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
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	0.00	0.00	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	7.24	0.00	8.81	8.36
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.03	0.03	0.03	0.03
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.85	0.85	0.84	0.84
d_A, Approach Delay [s/veh]	0.00		6.59		8.36	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	6.81					
Intersection LOS	A					

APPENDIX D

PEAK-HOUR SIGNAL WARRANT WORKSHEETS

Signal Warrants Report For Intersection 1: N Mountain View Street at W 1st Street

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	S, N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	S	N
1	937	1213	20	80
2	909	1177	19	78
3	890	1152	19	76
4	834	1080	18	71
5	740	958	16	63
6	731	946	16	62
7	721	934	15	62
8	656	849	14	56
9	647	837	14	55
10	637	825	14	54
11	553	716	12	47
12	515	667	11	44
13	506	655	11	43
14	375	485	8	32
15	375	485	8	32
16	262	340	6	22
17	150	194	3	13
18	150	194	3	13
19	84	109	2	7
20	47	61	1	4
21	28	36	1	2
22	9	12	0	1
23	9	12	0	1
24	9	12	0	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	4	2150	1	80	No	No	No	No	Yes	Yes	Yes	Yes	No	No
2	4	2086	1	78	No	No	No	No	Yes	Yes	Yes	Yes	No	No
3	4	2042	1	76	No	No	No	No	Yes	Yes	Yes	Yes	No	No
4	4	1914	1	71	No	No	No	No	No	Yes	Yes	Yes	No	No
5	4	1698	1	63	No	No	No	No	No	Yes	Yes	Yes	No	No
6	4	1677	1	62	No	No	No	No	No	Yes	Yes	Yes	No	No
7	4	1655	1	62	No	No	No	No	No	Yes	Yes	Yes	No	No
8	4	1505	1	56	No	No	No	No	No	No	Yes	Yes	No	No
9	4	1484	1	55	No	No	No	No	No	No	Yes	Yes	No	No
10	4	1462	1	54	No	No	No	No	No	No	Yes	Yes	No	No
11	4	1269	1	47	No	No	No	No	No	No	No	Yes	No	No
12	4	1182	1	44	No	No	No	No	No	No	No	Yes	No	No
13	4	1161	1	43	No	No	No	No	No	No	No	Yes	No	No
14	4	860	1	32	No	No	No	No	No	No	No	No	No	No
15	4	860	1	32	No	No	No	No	No	No	No	No	No	No
16	4	602	1	22	No	No	No	No	No	No	No	No	No	No
17	4	344	1	13	No	No	No	No	No	No	No	No	No	No
18	4	344	1	13	No	No	No	No	No	No	No	No	No	No
19	4	193	1	7	No	No	No	No	No	No	No	No	No	No
20	4	108	1	4	No	No	No	No	No	No	No	No	No	No
21	4	64	1	2	No	No	No	No	No	No	No	No	No	No
22	4	21	1	1	No	No	No	No	No	No	No	No	No	No
23	4	21	1	1	No	No	No	No	No	No	No	No	No	No
24	4	21	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	3	7	10	13	0	0

Warrant 3 Condition A

Orientation	S	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	26.6	25.2
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:08	0:33
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	20	80
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	2250	2250
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 1: N Mountain View Street at W 1st Street

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	S, N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	E	W	S	N
1	1384	1059	14	46
2	1342	1027	14	45
3	1315	1006	13	44
4	1232	943	12	41
5	1093	837	11	36
6	1080	826	11	36
7	1066	815	11	35
8	969	741	10	32
9	955	731	10	32
10	941	720	10	31
11	817	625	8	27
12	761	582	8	25
13	747	572	8	25
14	554	424	6	18
15	554	424	6	18
16	388	297	4	13
17	221	169	2	7
18	221	169	2	7
19	125	95	1	4
20	69	53	1	2
21	42	32	0	1
22	14	11	0	0
23	14	11	0	0
24	14	11	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	4	2443	1	46	No	No	No	No	No	No	No	Yes	No	No
2	4	2369	1	45	No	No	No	No	No	No	No	Yes	No	No
3	4	2321	1	44	No	No	No	No	No	No	No	Yes	No	No
4	4	2175	1	41	No	No	No	No	No	No	No	No	No	No
5	4	1930	1	36	No	No	No	No	No	No	No	No	No	No
6	4	1906	1	36	No	No	No	No	No	No	No	No	No	No
7	4	1881	1	35	No	No	No	No	No	No	No	No	No	No
8	4	1710	1	32	No	No	No	No	No	No	No	No	No	No
9	4	1686	1	32	No	No	No	No	No	No	No	No	No	No
10	4	1661	1	31	No	No	No	No	No	No	No	No	No	No
11	4	1442	1	27	No	No	No	No	No	No	No	No	No	No
12	4	1343	1	25	No	No	No	No	No	No	No	No	No	No
13	4	1319	1	25	No	No	No	No	No	No	No	No	No	No
14	4	978	1	18	No	No	No	No	No	No	No	No	No	No
15	4	978	1	18	No	No	No	No	No	No	No	No	No	No
16	4	685	1	13	No	No	No	No	No	No	No	No	No	No
17	4	390	1	7	No	No	No	No	No	No	No	No	No	No
18	4	390	1	7	No	No	No	No	No	No	No	No	No	No
19	4	220	1	4	No	No	No	No	No	No	No	No	No	No
20	4	122	1	2	No	No	No	No	No	No	No	No	No	No
21	4	74	1	1	No	No	No	No	No	No	No	No	No	No
22	4	25	1	0	No	No	No	No	No	No	No	No	No	No
23	4	25	1	0	No	No	No	No	No	No	No	No	No	No
24	4	25	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	3	0	0

Warrant 3 Condition A

Orientation	S	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	24.6	33.1
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:05	0:25
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	14	46
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	2503	2503
Number of Approaches on Intersection	4	4
Total Volume Condition Met	Yes	Yes
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	