Kimley»Horn

To: Ann French Gonsalves, RTE, DCE
City of San Diego

From: Naomi Germain, PE, TE
Kimley-Horn & Associates

Date: April 13, 2026

**RE: *Bunker Hill Apartments (Site 2) – Traffic Signal Warrant Analysis for Balboa Avenue and Morena Boulevard Northbound Ramp, Morena Boulevard and Jutland Drive (PRJ-1132845)***

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Dear Ms. Gonsalves,

In accordance with your request, Kimley-Horn and Associates has prepared a letter summarizing trip generation, distribution, and assignment and traffic signal warrant analyses for the proposed Bunker Hill Apartments (Site 2) project ("project"). The project includes the construction of a new 3-story multifamily building with 20 dwelling units at 2923 Bunker Hill Street in the Pacific Beach neighborhood of San Diego and requires a discretionary Coastal Development Permit (CDP).

The project lies within an urban, residential zone of San Diego that is within the Community Village area of the Balboa Avenue Station Area Specific Plan. The Specific Plan was adopted by the City of San Diego in 2019, and by the California Coastal Commission in 2019, and the plan calls for the construction of two traffic signals (if warranted) prior to any future development with the Community Village area of the Specific Plan. The Supplemental Development Regulation (SDR) excerpts are included below:

> SDR-5 No development permits shall be issued for any development project on properties designated Community Village until a traffic signal has been installed at the intersection of the Morena Boulevard northbound ramp and Balboa Avenue unless the warrants for a traffic signal are not met as determined by the City Engineer in accordance with Council Policy 200-06.
>
> SDR-6 No development permits shall be issued for any development project on properties designated Community Village until either a traffic signal or roundabout is installed at the intersection of Morena Boulevard and Jutland Drive, unless the warrants for the traffic signals are not met as determined by the City Engineer in accordance with Council Policy 200-06.

Accordingly, traffic signal warrant analyses were completed for the intersections of **Balboa Avenue with Morena Boulevard Northbound Ramp** and **Morena Boulevard with Jutland Drive.** As discussed below, results of the warrant analyses are not anticipated to differ under both Existing and Existing Plus Project conditions

The traffic signal warrant analyses are based on 8-hour vehicle, bicycle, and pedestrian intersection movement counts and 24-hour vehicle approach volume counts that were collected by National Data & Surveying Services (NDS) on Tuesday, July 8, 2025. The counts are provided in **Attachment A**.

## PROJECT TRIP GENERATION, DISTRIBUTION, AND ASSIGNMENT

Kimley-Horn developed project trip generation using the City of San Diego Trip Generation Manual (2003). Trip generation is summarized in **Table 1: Trip Generation**.

*Table 1: Trip Generation*

| Land Use | Size | Trip Rate | Unit | Daily Trips | AM Peak Hour | | | PM Peak Hour | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | In | Out | Total | In | Out | Total |
| Multiple Dwelling Unit – Over 20 DU / Acre | 20 | 6 | DU | 120 | 2 | 8 | 10 | 8 | 3 | 11 |

Source: City of San Diego Trip Generation Manual (2003)

Replica, which provides location-based service data, was used to estimate trip distribution for the project site. Replica allows users to analyze anonymous travel patterns to and from geographic areas (i.e., zones). For this study, the 0.04-mile zone around 2636 Grand Avenue, a 3-story, multifamily building located 0.5 miles from the project site was used as a proxy site to represent comparable travel patterns. The proxy site is located between Grand Avenue and Garnet Avenue, similar to the project site, and has similar access points to the regional network, resulting in similar travel distribution patterns.

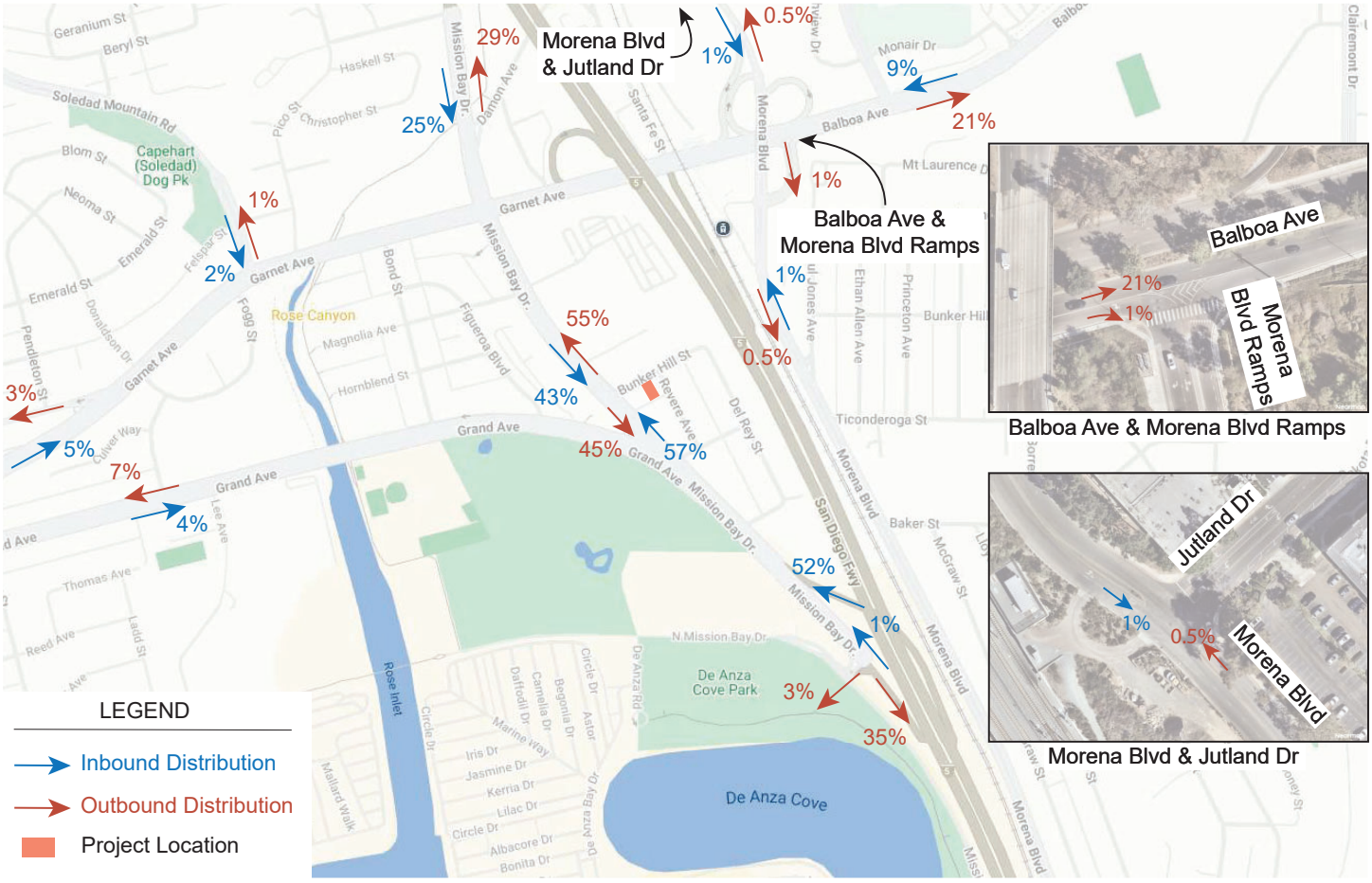
The project team used Replica's private auto and taxi/TNC data from spring 2025. Two types of demand analyses were utilized to estimate the project's expected travel patterns:

- **Origin analysis** analyzed outbound trips originating from the proxy site in the am peak (7-9 am). This analysis was used to identify trends in egress for the project.
- **Destination analysis** analyzed inbound trips destined to the proxy site in the pm peak (4-6 pm). This analysis was used to identify trends in ingress for the project.

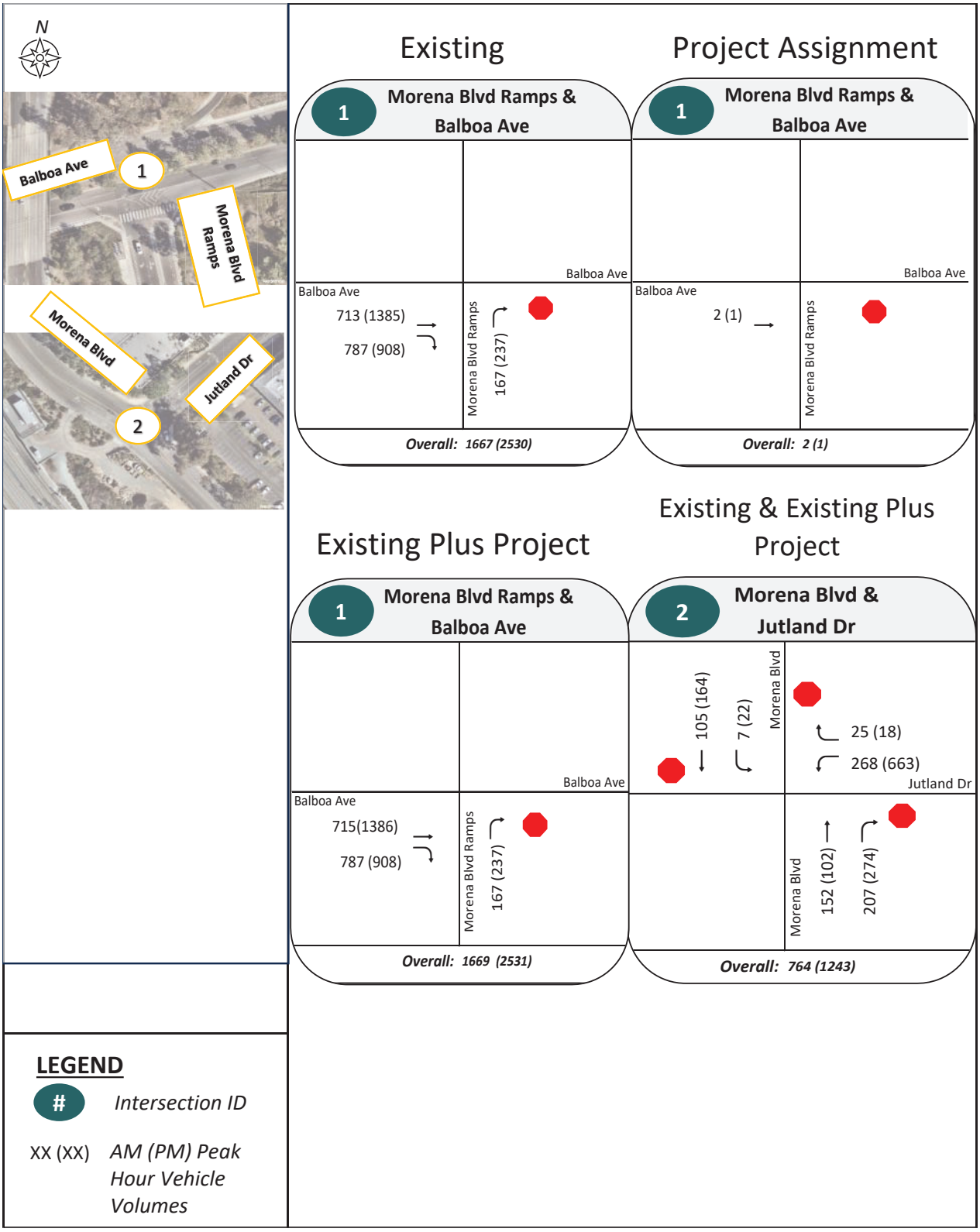
The results were post-processed with minor balancing and rounding revisions to develop the trip distribution illustrated in **Figure 1: Bunker Hill Apartments Trip Distribution**.

The project trip generation was applied to the trip distribution to develop project trip assignments. Peak hour trip assignments for the intersections of Morena Boulevard Northbound Ramps with Balboa Avenue and Morena Boulevard and Jutland Drive, along with Existing and Existing Plus Project peak hour turning movements, are illustrated in **Figure 2: Peak Hour Intersection Turning Movements**. Existing peak hour turning movements for the intersection of Morena Boulevard with Jutland Drive are also illustrated in Figure 2. Given the low project trip distribution to the intersection of Morena Boulevard and Jutland Drive, the project is anticipated to add negligible traffic and is not expected to add project trips during the AM or PM peak hours.

*Figure 1. Bunker Hill St Apartments Trip Distribution*



## *Figure 2. Peak Hour Intersection Turning Movements*



## SIGNAL WARRANT ANALYSIS: BALBOA AVENUE AND MORENA BOULEVARD NORTHBOUND RAMP

At the study intersection, Balboa Avenue functions as a one-way eastbound street due to the presence of a raised center median and has a speed limit of 35 mph, and a recorded eastbound 85th percentile speed of 42 mph. South of Balboa Avenue, the Morena Boulevard Northbound Ramp runs north-south and meets Balboa Avenue as a T-intersection. As shown in **Figure 3: Intersection of Balboa Avenue with Morena Boulevard Northbound** Ramp, Balboa Avenue is uncontrolled with two eastbound through lanes and an eastbound right-turn pocket and Morena Boulevard (Northbound Ramp) is yield controlled, with a right-turn only lane.

*Figure 3: Intersection of Balboa Avenue with Morena Boulevard Northbound Ramp*


Using the California Manual on Uniform Traffic Control Devices (CA-MUTCD) (2014 Edition, Revision 9) warrants, the intersection of Balboa Avenue with Morena Boulevard Ramp was evaluated for signalization.

Below is a summary of the analysis:

- Warrant 1 – Eight Hour Vehicular Volume
    - The 8-hour traffic volumes that satisfy the major street thresholds and the minor street thresholds specified in Warrant 1 (as indicated in the 100 percent column) were utilized for the analysis. The current vehicular volumes entering the study intersection meet the 8-hour volume thresholds as defined by Conditions A and B. **Warrant 1 is satisfied.**
- Warrant 2 – Four Hour Vehicular Volume

- The existing vehicular volumes entering the study intersection meet the 4-hour volume thresholds. **Warrant 2 is satisfied.**

- Warrant 3 – Peak Hour
  - The existing vehicular volumes entering the study intersection meet the peak hour volume thresholds. **Warrant 3 is satisfied.**
- Warrant 4 – Pedestrian Volume
  - With 4 pedestrians in the highest peak-hour and 12 pedestrians in the peak 4-hours, the existing pedestrian volumes entering the study intersection do not meet the 4-hour or peak-hour volume thresholds. **Warrant 4 is not satisfied.**
- Warrant 5 – School Crossing
  - Does not apply to this intersection since Balboa Avenue does not serve as a desired school crossing location. **Warrant 5 is not satisfied.**
- Warrant 6 – Coordinated Signal System
  - Based on aerial observations, the nearest existing signal system is less than the minimum 1,000' spacing required. Therefore, **Warrant 6 is not satisfied.**
- Warrant 7 – Crash Experience Warrant
  - There were four reported injury crashes at this intersection from 2020-2024 (Statewide Integrated Traffic Records System (SWITRS), 2025). The collisions included two rear ends (2021, 2023), a hit object (2022), and improper motorcycle turning (2024). There is not a reported history of pedestrian or bicycle collisions at the intersection within the last five years. Therefore, the intersection does not meet the 12-month crash experience threshold. **Warrant 7 is not satisfied.**
- Warrant 8 – Roadway Network
  - Morena Boulevard Ramp is not classified as a major roadway in the Clairemont Mesa Community Plan (Update adopted December 2025). **Warrant 8 is not satisfied**.
- Warrant 9 – Intersection Near a Grade Crossing
  - Does not apply to this intersection since not located near a grade crossing. **Warrant 9 is not satisfied**.

## SIGNAL WARRANT ANALYSIS: MORENA BOULEVARD AND JUTLAND DRIVE

Morena Boulevard runs approximately north-south and has a speed limit of 45 mph near the study intersection. Jutland Drive runs approximately east-west and meets Morena Boulevard at an with a rail maintenance driveway located on the west side of the intersection. As illustrated in **Figure 4: Intersection of Morena Boulevard and Jutland Drive**, the intersection has a total of three approaches, exclusive of a private service driveway, and is all-way stop controlled. Northbound Morena Boulevard has one through lane and one right-turn lane, southbound Morena Boulevard has one through lane and one through-left lane, and Jutland Drive has one right-turn lane and one left-turn lane.

The proposed project would add negligible traffic to this intersection given that the trip distribution estimates 1% of inbound and 0.5% of outbound trips to and from the project site would travel through the intersection; therefore, the warrant analysis is the same under both Existing and Existing Plus Project Conditions.

*Figure 4: Intersection of Morena Boulevard and Jutland Drive*


Using the CA-MUTCD warrants, the intersection of Morena Boulevard with Jutland Drive was evaluated for signalization. The warrant analysis is included as **Attachment B**. Below is a summary of the analysis:

- Warrant 1 – Eight Hour Vehicular Volume
  - The 8-hour traffic volumes that satisfy the major street thresholds and the minor street thresholds specified in Warrant 1 were utilized for the analysis. The current vehicular volumes entering the study intersection meet the 8-hour volume thresholds as defined by Condition A. **Warrant 1 is satisfied.**
- Warrant 2 – Four Hour Vehicular Volume
  - The existing vehicular volumes entering the study intersection meet the 4-hour volume thresholds (70 percent factor). The 70 percent factor was used because the speed limit on Morena Boulevard is greater than 40 mph. **Warrant 2 is satisfied.**
- Warrant 3 – Peak Hour
  - The existing vehicular volumes entering the study intersection from Morena Boulevard and Jutland Drive approach meet the peak hour volume thresholds (70 percent factor). The 70 percent factor was used because the speed limit on Morena Boulevard is greater than 40 mph. **Warrant 3 is satisfied.**
- Warrant 4 – Pedestrian Volume
  - The existing pedestrian volumes entering the study intersection do not meet the 4-hour or peak-hour volume thresholds. **Warrant 4 is not satisfied.**
- Warrant 5 – School Crossing
  - Does not apply to this intersection since not located near a school. **Warrant 5 is not satisfied.**
- Warrant 6 – Coordinated Signal System
  - Based on aerial observations, there is one adjacent signal approximately 1,700’ away. Providing an additional signal at the intersection is not anticipated to create a beneficial platooning operation along the corridor. **Warrant 6 is not satisfied.**
- Warrant 7 – Crash Experience Warrant
  - There was one reported crash at this intersection from 2020-2024 (Statewide Integrated Traffic System (SWITRS), 2025). The collision report states improper turning and hit object (2020). There is not a reported history of pedestrian or bicycle collisions at the intersection within the last five years. Therefore, the intersection does not meet the 12-month crash experience threshold. **Warrant 7 is not satisfied.**
- Warrant 8 – Roadway Network
  - Jutland Drive has an existing and future classification as a 2-lane collector per the Clairemont Mesa Community Plan (Update adopted December 2025). **Warrant 8 is not satisfied**.
- Warrant 9 – Intersection Near a Grade Crossing
  - Does not apply to this intersection since not located near a grade crossing. **Warrant 9 is not satisfied.**

## FAIR SHARE CALCULATIONS

As a result of both intersections satisfying at least one signal warrant, the project is responsible for a fair share contribution towards the signalization of each intersection. The fair share contribution is based on the amount of project traffic added to the intersection during the peak hour as a percentage of the total traffic volumes at the intersection during the same peak hour.

$$Fair\ Share\ Contribution\ \% = \frac{Peak\ Hour\ Project\ Traffic}{Peak\ Hour\ Total\ Intersection\ Traffic\ Volumes}$$

The fair share contributions for each intersection are calculated below.

**Balboa Avenue and Morena Blvd Northbound Ramps**

The amount of project traffic traveling through the intersection of Balboa Avenue and Morena Boulevard Northbound Ramps is equal to 22% of the project's peak hour trips out during each peak hour. This equates to 6 trips in the AM peak and 2 trips in the PM peak.

$$AM\ Fair\ Share\ Contribution\ \% = \frac{2}{1{,}667} = 0.12\%.$$

$$PM\ Fair\ Share\ Contribution\ \% = \frac{1}{2{,}530} = 0.04\%$$

Therefore, the project is responsible for 0.12% of the cost of installation of a new traffic signal. It is assumed the traffic signal would be a half signal for the eastbound direction of travel on Balboa Avenue, as the westbound direction has all free movements with no conflicts.

**Morena Blvd and Jutland Drive**

The amount of project traffic traveling through the intersection of Morena Boulevard and Jutland Drive is equal to 0.5% of the peak hour trips out plus 1% of the peak hour trips in during each peak hour. This equates to 0 trips in the AM peak and 0 trips in the PM peak. Therefore, the project is not responsible for a fair share contribution towards this intersection.

## CONCLUSION

After performing the applicable traffic signal warrants outlined in the CA-MUTCD, it was determined that **Balboa Avenue and Morena Boulevard Northbound Ramp** intersection satisfies **Warrants 1, 2, and 3**. Additionally **Morena Boulevard and Jutland Drive** satisfies **Warrants 1, 2 and 3**. Therefore, SDR-5 and SDR-6 of the Balboa Avenue Station Area Specific Plan are applicable to this project.

The project is not anticipated to add project traffic to the Morena Boulevard and Jutland Drive intersection. Therefore, the project is not responsible for signal improvements at this location. For the Balboa Avenue and Morena Boulevard Northbound Ramp intersection, fair share contribution will be made based on the amount of project traffic anticipated to be added to the intersection. Based on the fair share contribution calculation, **the project will be responsible for 0.12% of the cost of installation of a new traffic signal at the Balboa Avenue and Morena Boulevard Northbound Ramp intersection**.

Please call me if you have any questions or comments.

Sincerely,

KIMLEY-HORN AND ASSOCIATES, INC.

Naomi Germain, P.E., T.E.
P.E. No. 87935
T.E. No. 3056

**Attachments:**

- Attachment A – Existing Traffic Count Data Sheets
- Attachment B – CA-MUTCD Traffic Signal Warrant Excerpts, Worksheets, and Calculations
- Attachment C – Statewide Integrated Traffic Records System (SWITRS) Data

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# Attachment A – Existing Traffic Count Data Sheets

Prepared by National Data & Surveying Services

# VOLUME

## Morena Blvd NB Ramps S/O Balboa Ave

**Day:** Tuesday
**Date:** 7/8/2025

**City:** San Diego
**Project #:** CA25_040117_004

| DAILY TOTALS | NB | SB | EB | WB | Total |
|---|---|---|---|---|---|
| | 3,188 | 11,420 | 0 | 0 | 14,608 |

DAILY TOTALS

### 15-Minutes Interval

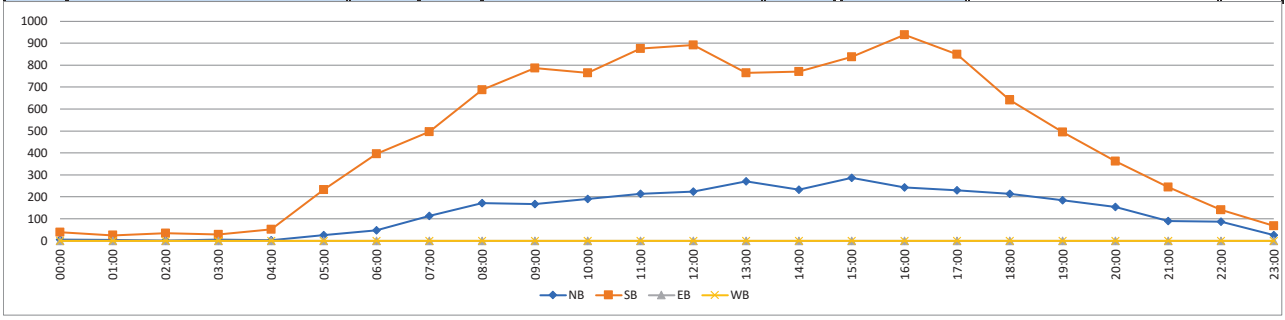
| TIME | NB | SB | EB | WB | TOTAL | TIME | NB | SB | EB | WB | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0:00 | 1 | 12 | | | 13 | 12:00 | 60 | 224 | | | 284 |
| 0:15 | 0 | 9 | | | 9 | 12:15 | 60 | 231 | | | 291 |
| 0:30 | 0 | 7 | | | 7 | 12:30 | 47 | 226 | | | 273 |
| 0:45 | 4 | 11 | | | 15 | 12:45 | 57 | 210 | | | 267 |
| 1:00 | 0 | 8 | | | 8 | 13:00 | 68 | 194 | | | 262 |
| 1:15 | 3 | 6 | | | 9 | 13:15 | 63 | 192 | | | 255 |
| 1:30 | 1 | 7 | | | 8 | 13:30 | 70 | 174 | | | 244 |
| 1:45 | 0 | 4 | | | 4 | 13:45 | 69 | 205 | | | 274 |
| 2:00 | 0 | 7 | | | 7 | 14:00 | 63 | 206 | | | 269 |
| 2:15 | 0 | 10 | | | 10 | 14:15 | 45 | 193 | | | 238 |
| 2:30 | 1 | 12 | | | 13 | 14:30 | 66 | 190 | | | 256 |
| 2:45 | 0 | 6 | | | 6 | 14:45 | 59 | 182 | | | 241 |
| 3:00 | 4 | 5 | | | 9 | 15:00 | 68 | 175 | | | 243 |
| 3:15 | 1 | 4 | | | 5 | 15:15 | 74 | 231 | | | 305 |
| 3:30 | 0 | 6 | | | 6 | 15:30 | 82 | 221 | | | 303 |
| 3:45 | 1 | 13 | | | 14 | 15:45 | 63 | 211 | | | 274 |
| 4:00 | 1 | 4 | | | 5 | 16:00 | 62 | 211 | | | 273 |
| 4:15 | 0 | 10 | | | 10 | 16:15 | 68 | 241 | | | 309 |
| 4:30 | 2 | 18 | | | 20 | 16:30 | 61 | 249 | | | 310 |
| 4:45 | 0 | 20 | | | 20 | 16:45 | 52 | 237 | | | 289 |
| 5:00 | 3 | 21 | | | 24 | 17:00 | 71 | 207 | | | 278 |
| 5:15 | 5 | 46 | | | 51 | 17:15 | 50 | 244 | | | 294 |
| 5:30 | 7 | 59 | | | 66 | 17:30 | 64 | 222 | | | 286 |
| 5:45 | 11 | 107 | | | 118 | 17:45 | 44 | 176 | | | 220 |
| 6:00 | 10 | 71 | | | 81 | 18:00 | 58 | 163 | | | 221 |
| 6:15 | 7 | 92 | | | 99 | 18:15 | 56 | 203 | | | 259 |
| 6:30 | 16 | 114 | | | 130 | 18:30 | 58 | 154 | | | 212 |
| 6:45 | 14 | 119 | | | 133 | 18:45 | 42 | 120 | | | 162 |
| 7:00 | 18 | 128 | | | 146 | 19:00 | 54 | 129 | | | 183 |
| 7:15 | 30 | 115 | | | 145 | 19:15 | 42 | 125 | | | 167 |
| 7:30 | 29 | 121 | | | 150 | 19:30 | 47 | 112 | | | 159 |
| 7:45 | 36 | 133 | | | 169 | 19:45 | 42 | 129 | | | 171 |
| 8:00 | 33 | 136 | | | 169 | 20:00 | 39 | 109 | | | 148 |
| 8:15 | 52 | 178 | | | 230 | 20:15 | 41 | 97 | | | 138 |
| 8:30 | 33 | 162 | | | 195 | 20:30 | 38 | 96 | | | 134 |
| 8:45 | 53 | 211 | | | 264 | 20:45 | 36 | 60 | | | 96 |
| 9:00 | 37 | 210 | | | 247 | 21:00 | 24 | 66 | | | 90 |
| 9:15 | 34 | 172 | | | 206 | 21:15 | 26 | 61 | | | 87 |
| 9:30 | 56 | 179 | | | 235 | 21:30 | 19 | 69 | | | 88 |
| 9:45 | 40 | 226 | | | 266 | 21:45 | 21 | 48 | | | 69 |
| 10:00 | 48 | 202 | | | 250 | 22:00 | 42 | 57 | | | 99 |
| 10:15 | 39 | 187 | | | 226 | 22:15 | 30 | 34 | | | 64 |
| 10:30 | 45 | 178 | | | 223 | 22:30 | 10 | 23 | | | 33 |
| 10:45 | 58 | 197 | | | 255 | 22:45 | 5 | 27 | | | 32 |
| 11:00 | 56 | 211 | | | 267 | 23:00 | 6 | 19 | | | 25 |
| 11:15 | 54 | 237 | | | 291 | 23:15 | 11 | 18 | | | 29 |
| 11:30 | 54 | 213 | | | 267 | 23:30 | 6 | 16 | | | 22 |
| 11:45 | 50 | 214 | | | 264 | 23:45 | 2 | 15 | | | 17 |
| TOTALS | 947 | 4418 | 0 | 0 | 5365 | TOTALS | 2241 | 7002 | 0 | 0 | 9243 |
| SPLIT % | 18% | 82% | 0% | 0% | 37% | SPLIT % | 24% | 76% | 0% | 0% | 63% |

### Hourly Intervals

| TIME | | NB | SB | EB | WB | TOTAL |
|---|---|---|---|---|---|---|
| 00:00 | 01:00 | 5 | 39 | | | 44 |
| 01:00 | 02:00 | 4 | 25 | | | 29 |
| 02:00 | 03:00 | 1 | 35 | | | 36 |
| 03:00 | 04:00 | 6 | 28 | | | 34 |
| 04:00 | 05:00 | 3 | 52 | | | 55 |
| 05:00 | 06:00 | 26 | 233 | | | 259 |
| 06:00 | 07:00 | 47 | 396 | | | 443 |
| 07:00 | 08:00 | 113 | 497 | | | 610 |
| 08:00 | 09:00 | 171 | 687 | | | 858 |
| 09:00 | 10:00 | 167 | 787 | | | 954 |
| 10:00 | 11:00 | 190 | 764 | | | 954 |
| 11:00 | 12:00 | 214 | 875 | | | 1089 |
| 12:00 | 13:00 | 224 | 891 | | | 1115 |
| 13:00 | 14:00 | 270 | 765 | | | 1035 |
| 14:00 | 15:00 | 233 | 771 | | | 1004 |
| 15:00 | 16:00 | 287 | 838 | | | 1125 |
| 16:00 | 17:00 | 243 | 938 | | | 1181 |
| 17:00 | 18:00 | 229 | 849 | | | 1078 |
| 18:00 | 19:00 | 214 | 640 | | | 854 |
| 19:00 | 20:00 | 185 | 495 | | | 680 |
| 20:00 | 21:00 | 154 | 362 | | | 516 |
| 21:00 | 22:00 | 90 | 244 | | | 334 |
| 22:00 | 23:00 | 87 | 141 | | | 228 |
| 23:00 | 00:00 | 25 | 68 | | | 93 |

### STATISTICS

| | NB | SB | EB | WB | TOTAL |
|---|---|---|---|---|---|
| Peak Period | 00:00 | to | 12:00 | | |
| Volume | 947 | 4418 | | | 5365 |
| Peak Hour | 10:45 | 11:00 | | | 11:00 |
| Peak Volume | 222 | 875 | | | 1089 |
| Peak Hour Factor | 0.957 | 0.923 | | | 0.936 |
| Peak Period | 12:00 | to | 00:00 | | |
| Volume | 2241 | 7002 | | | 9243 |
| Peak Hour | 15:00 | 16:00 | | | 16:15 |
| Peak Volume | 287 | 938 | | | 1186 |
| Peak Hour Factor | 0.875 | 0.942 | | | 0.956 |
| Peak Period | 07:00 | to | 09:00 | | |
| Volume | 284 | 1184 | | | 1468 |
| Peak Hour | 8:00 | 8:00 | | | 8:00 |
| Peak Volume | 171 | 687 | | | 858 |
| Peak Hour Factor | 0.807 | 0.814 | | | 0.813 |
| Peak Period | 16:00 | to | 18:00 | | |
| Volume | 472 | 1787 | | | 2259 |
| Peak Hour | 16:15 | 16:00 | | | 16:15 |
| Peak Volume | 252 | 938 | | | 1186 |
| Peak Hour Factor | 0.887 | 0.942 | | | 0.956 |



Prepared by National Data & Surveying Services

# VOLUME

## Balboa Ave E/O Morena Blvd NB Ramps

**Day:** Tuesday
**Date:** 7/8/2025

**City:** San Diego
**Project #:** CA25_040117_005

| DAILY TOTALS | NB | SB | EB | WB | Total |
|---|---|---|---|---|---|
| | 0 | 0 | 19,556 | 0 | 19,556 |

DAILY TOTALS

### 15-Minutes Interval

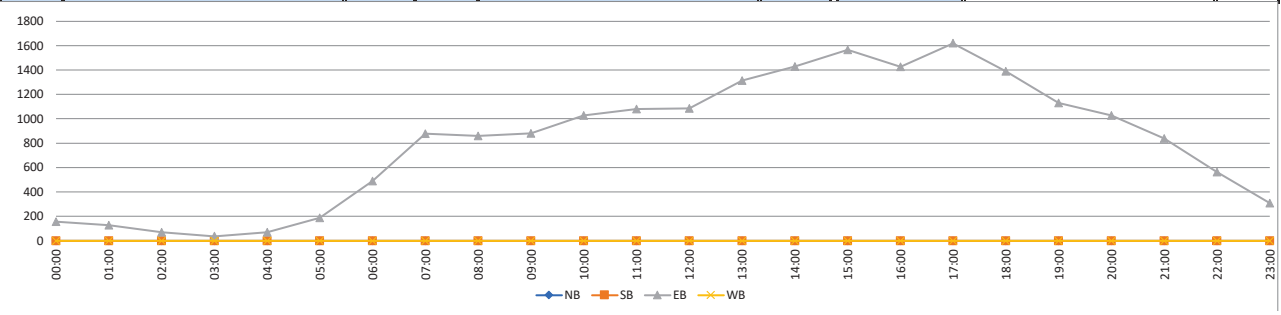
| TIME | NB | SB | EB | WB | TOTAL | TIME | NB | SB | EB | WB | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0:00 | | | 39 | | 39 | 12:00 | | | 277 | | 277 |
| 0:15 | | | 39 | | 39 | 12:15 | | | 271 | | 271 |
| 0:30 | | | 30 | | 30 | 12:30 | | | 272 | | 272 |
| 0:45 | | | 49 | | 49 | 12:45 | | | 265 | | 265 |
| 1:00 | | | 47 | | 47 | 13:00 | | | 320 | | 320 |
| 1:15 | | | 32 | | 32 | 13:15 | | | 333 | | 333 |
| 1:30 | | | 28 | | 28 | 13:30 | | | 337 | | 337 |
| 1:45 | | | 21 | | 21 | 13:45 | | | 324 | | 324 |
| 2:00 | | | 22 | | 22 | 14:00 | | | 342 | | 342 |
| 2:15 | | | 21 | | 21 | 14:15 | | | 318 | | 318 |
| 2:30 | | | 19 | | 19 | 14:30 | | | 384 | | 384 |
| 2:45 | | | 9 | | 9 | 14:45 | | | 385 | | 385 |
| 3:00 | | | 13 | | 13 | 15:00 | | | 357 | | 357 |
| 3:15 | | | 10 | | 10 | 15:15 | | | 381 | | 381 |
| 3:30 | | | 8 | | 8 | 15:30 | | | 429 | | 429 |
| 3:45 | | | 7 | | 7 | 15:45 | | | 398 | | 398 |
| 4:00 | | | 15 | | 15 | 16:00 | | | 338 | | 338 |
| 4:15 | | | 18 | | 18 | 16:15 | | | 346 | | 346 |
| 4:30 | | | 20 | | 20 | 16:30 | | | 360 | | 360 |
| 4:45 | | | 18 | | 18 | 16:45 | | | 381 | | 381 |
| 5:00 | | | 20 | | 20 | 17:00 | | | 425 | | 425 |
| 5:15 | | | 35 | | 35 | 17:15 | | | 400 | | 400 |
| 5:30 | | | 46 | | 46 | 17:30 | | | 416 | | 416 |
| 5:45 | | | 86 | | 86 | 17:45 | | | 379 | | 379 |
| 6:00 | | | 97 | | 97 | 18:00 | | | 329 | | 329 |
| 6:15 | | | 88 | | 88 | 18:15 | | | 386 | | 386 |
| 6:30 | | | 137 | | 137 | 18:30 | | | 355 | | 355 |
| 6:45 | | | 167 | | 167 | 18:45 | | | 318 | | 318 |
| 7:00 | | | 167 | | 167 | 19:00 | | | 294 | | 294 |
| 7:15 | | | 199 | | 199 | 19:15 | | | 277 | | 277 |
| 7:30 | | | 235 | | 235 | 19:30 | | | 306 | | 306 |
| 7:45 | | | 276 | | 276 | 19:45 | | | 252 | | 252 |
| 8:00 | | | 258 | | 258 | 20:00 | | | 278 | | 278 |
| 8:15 | | | 201 | | 201 | 20:15 | | | 266 | | 266 |
| 8:30 | | | 211 | | 211 | 20:30 | | | 257 | | 257 |
| 8:45 | | | 189 | | 189 | 20:45 | | | 227 | | 227 |
| 9:00 | | | 202 | | 202 | 21:00 | | | 224 | | 224 |
| 9:15 | | | 217 | | 217 | 21:15 | | | 208 | | 208 |
| 9:30 | | | 227 | | 227 | 21:30 | | | 249 | | 249 |
| 9:45 | | | 234 | | 234 | 21:45 | | | 157 | | 157 |
| 10:00 | | | 240 | | 240 | 22:00 | | | 201 | | 201 |
| 10:15 | | | 249 | | 249 | 22:15 | | | 160 | | 160 |
| 10:30 | | | 238 | | 238 | 22:30 | | | 122 | | 122 |
| 10:45 | | | 301 | | 301 | 22:45 | | | 79 | | 79 |
| 11:00 | | | 244 | | 244 | 23:00 | | | 116 | | 116 |
| 11:15 | | | 275 | | 275 | 23:15 | | | 84 | | 84 |
| 11:30 | | | 263 | | 263 | 23:30 | | | 56 | | 56 |
| 11:45 | | | 297 | | 297 | 23:45 | | | 53 | | 53 |
| TOTALS | 0 | 0 | 5864 | 0 | 5864 | TOTALS | 0 | 0 | 13692 | 0 | 13692 |
| SPLIT % | 0% | 0% | 100% | 0% | 30% | SPLIT % | 0% | 0% | 100% | 0% | 70% |

### Hourly Intervals

| TIME | | NB | SB | EB | WB | TOTAL |
|---|---|---|---|---|---|---|
| 00:00 | 01:00 | | | 157 | | 157 |
| 01:00 | 02:00 | | | 128 | | 128 |
| 02:00 | 03:00 | | | 71 | | 71 |
| 03:00 | 04:00 | | | 38 | | 38 |
| 04:00 | 05:00 | | | 71 | | 71 |
| 05:00 | 06:00 | | | 187 | | 187 |
| 06:00 | 07:00 | | | 489 | | 489 |
| 07:00 | 08:00 | | | 877 | | 877 |
| 08:00 | 09:00 | | | 859 | | 859 |
| 09:00 | 10:00 | | | 880 | | 880 |
| 10:00 | 11:00 | | | 1028 | | 1028 |
| 11:00 | 12:00 | | | 1079 | | 1079 |
| 12:00 | 13:00 | | | 1085 | | 1085 |
| 13:00 | 14:00 | | | 1314 | | 1314 |
| 14:00 | 15:00 | | | 1429 | | 1429 |
| 15:00 | 16:00 | | | 1565 | | 1565 |
| 16:00 | 17:00 | | | 1425 | | 1425 |
| 17:00 | 18:00 | | | 1620 | | 1620 |
| 18:00 | 19:00 | | | 1388 | | 1388 |
| 19:00 | 20:00 | | | 1129 | | 1129 |
| 20:00 | 21:00 | | | 1028 | | 1028 |
| 21:00 | 22:00 | | | 838 | | 838 |
| 22:00 | 23:00 | | | 562 | | 562 |
| 23:00 | 00:00 | | | 309 | | 309 |

### STATISTICS

| | NB | SB | EB | WB | TOTAL |
|---|---|---|---|---|---|
| Peak Period | 00:00 | to | 12:00 | | |
| Volume | | | 5864 | | 5864 |
| Peak Hour | | | 10:45 | | 10:45 |
| Peak Volume | | | 1083 | | 1083 |
| Peak Hour Factor | | | 0.900 | | 0.900 |
| Peak Period | 12:00 | to | 00:00 | | |
| Volume | | | 13692 | | 13692 |
| Peak Hour | | | 16:45 | | 16:45 |
| Peak Volume | | | 1622 | | 1622 |
| Peak Hour Factor | | | 0.954 | | 0.954 |
| Peak Period | 07:00 | to | 09:00 | | |
| Volume | | | 1736 | | 1736 |
| Peak Hour | | | 7:30 | | 7:30 |
| Peak Volume | | | 970 | | 970 |
| Peak Hour Factor | | | 0.879 | | 0.879 |
| Peak Period | 16:00 | to | 18:00 | | |
| Volume | | | 3045 | | 3045 |
| Peak Hour | | | 16:45 | | 16:45 |
| Peak Volume | | | 1622 | | 1622 |
| Peak Hour Factor | | | 0.954 | | 0.954 |



National Data & Surveying Services

# Intersection Turning Movement Count

**Location:** Morena Blvd NB Ramps & Balboa Ave
**City:** San Diego
**Control:** 1-Way Yeild(NB)

**Project ID:** 25-040116-002
**Date:** 7/8/2025

## Data - Totals

| NS/EW Streets: | Morena Blvd NB Ramps | | | | Morena Blvd NB Ramps | | | | Balboa Ave | | | | Balboa Ave | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **AM** | NORTHBOUND | | | | SOUTHBOUND | | | | EASTBOUND | | | | WESTBOUND | | | | |
| | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| 7:00 AM | 0 | 0 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 149 | 128 | 0 | 0 | 0 | 0 | 0 | 295 |
| 7:15 AM | 0 | 0 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 169 | 115 | 0 | 0 | 0 | 0 | 0 | 314 |
| 7:30 AM | 0 | 0 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 206 | 121 | 0 | 0 | 0 | 0 | 0 | 356 |
| 7:45 AM | 0 | 0 | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 240 | 133 | 0 | 0 | 0 | 0 | 0 | 409 |
| 8:00 AM | 0 | 0 | 33 | 0 | 0 | 0 | 0 | 0 | 0 | 225 | 136 | 0 | 0 | 0 | 0 | 0 | 394 |
| 8:15 AM | 0 | 0 | 46 | 6 | 0 | 0 | 0 | 0 | 0 | 155 | 172 | 0 | 0 | 0 | 0 | 0 | 379 |
| 8:30 AM | 0 | 0 | 32 | 1 | 0 | 0 | 0 | 0 | 0 | 179 | 161 | 0 | 0 | 0 | 0 | 0 | 373 |
| 8:45 AM | 0 | 0 | 52 | 1 | 0 | 0 | 0 | 0 | 0 | 137 | 210 | 0 | 0 | 0 | 0 | 0 | 400 |
| 9:00 AM | 0 | 0 | 37 | 0 | 0 | 0 | 0 | 0 | 0 | 165 | 210 | 0 | 0 | 0 | 0 | 0 | 412 |
| 9:15 AM | 0 | 0 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 183 | 172 | 0 | 0 | 0 | 0 | 0 | 389 |
| 9:30 AM | 0 | 0 | 55 | 1 | 0 | 0 | 0 | 0 | 0 | 172 | 178 | 0 | 0 | 0 | 0 | 0 | 406 |
| 9:45 AM | 0 | 0 | 38 | 2 | 0 | 0 | 0 | 0 | 0 | 196 | 224 | 0 | 0 | 0 | 0 | 0 | 460 |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| **TOTAL VOLUMES :** | 0 | 0 | 440 | 11 | 0 | 0 | 0 | 0 | 0 | 2176 | 1960 | 0 | 0 | 0 | 0 | 0 | 4587 |
| **APPROACH %'s :** | 0.00% | 0.00% | 97.56% | 2.44% | | | | | 0.00% | 52.61% | 47.39% | 0.00% | | | | | |
| **PEAK HR :** | **09:00 AM - 10:00 AM** | | | | | | | | | | | | | | | | TOTAL |
| **PEAK HR VOL :** | 0 | 0 | 164 | 3 | 0 | 0 | 0 | 0 | 0 | 716 | 784 | 0 | 0 | 0 | 0 | 0 | 1667 |
| **PEAK HR FACTOR :** | 0.000 | 0.000 | 0.745 | 0.375 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.913 | 0.875 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.906 |
| | | | 0.746 | | | | | | | | 0.893 | | | | | | |

| **NOON** | NORTHBOUND | | | | SOUTHBOUND | | | | EASTBOUND | | | | WESTBOUND | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| 10:00 AM | 0 | 0 | 48 | 0 | 0 | 0 | 0 | 0 | 0 | 192 | 202 | 0 | 0 | 0 | 0 | 0 | 442 |
| 10:15 AM | 0 | 0 | 39 | 0 | 0 | 0 | 0 | 0 | 0 | 210 | 187 | 0 | 0 | 0 | 0 | 0 | 436 |
| 10:30 AM | 0 | 0 | 45 | 0 | 0 | 0 | 0 | 0 | 0 | 193 | 178 | 0 | 0 | 0 | 0 | 0 | 416 |
| 10:45 AM | 0 | 0 | 58 | 0 | 0 | 0 | 0 | 0 | 0 | 243 | 197 | 0 | 0 | 0 | 0 | 0 | 498 |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| **TOTAL VOLUMES :** | 0 | 0 | 190 | 0 | 0 | 0 | 0 | 0 | 0 | 838 | 764 | 0 | 0 | 0 | 0 | 0 | 1792 |
| **APPROACH %'s :** | 0.00% | 0.00% | 100.00% | 0.00% | | | | | 0.00% | 52.31% | 47.69% | 0.00% | | | | | |
| **PEAK HR :** | **10:00 AM - 11:00 AM** | | | | | | | | | | | | | | | | TOTAL |
| **PEAK HR VOL :** | 0 | 0 | 190 | 0 | 0 | 0 | 0 | 0 | 0 | 838 | 764 | 0 | 0 | 0 | 0 | 0 | 1792 |
| **PEAK HR FACTOR :** | 0.000 | 0.000 | 0.819 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.862 | 0.946 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.900 |
| | | | 0.819 | | | | | | | | 0.910 | | | | | | |

| **PM** | NORTHBOUND | | | | SOUTHBOUND | | | | EASTBOUND | | | | WESTBOUND | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| 2:00 PM | 0 | 0 | 63 | 0 | 0 | 0 | 0 | 0 | 0 | 279 | 207 | 0 | 0 | 0 | 0 | 0 | 549 |
| 2:15 PM | 0 | 0 | 45 | 0 | 0 | 0 | 0 | 0 | 0 | 273 | 192 | 0 | 0 | 0 | 0 | 0 | 510 |
| 2:30 PM | 0 | 0 | 66 | 0 | 0 | 0 | 0 | 0 | 0 | 318 | 191 | 0 | 0 | 0 | 0 | 0 | 575 |
| 2:45 PM | 0 | 0 | 59 | 0 | 0 | 0 | 0 | 0 | 0 | 326 | 181 | 0 | 0 | 0 | 0 | 0 | 566 |
| 3:00 PM | 0 | 0 | 68 | 0 | 0 | 0 | 0 | 0 | 0 | 289 | 181 | 0 | 0 | 0 | 0 | 0 | 538 |
| 3:15 PM | 0 | 0 | 74 | 0 | 0 | 0 | 0 | 0 | 0 | 307 | 225 | 0 | 0 | 0 | 0 | 0 | 606 |
| 3:30 PM | 0 | 0 | 82 | 0 | 0 | 0 | 0 | 0 | 0 | 347 | 221 | 0 | 0 | 0 | 0 | 0 | 650 |
| 3:45 PM | 0 | 0 | 62 | 1 | 0 | 0 | 0 | 0 | 0 | 336 | 210 | 0 | 0 | 0 | 0 | 0 | 609 |
| 4:00 PM | 0 | 0 | 62 | 0 | 0 | 0 | 0 | 0 | 0 | 276 | 211 | 0 | 0 | 0 | 0 | 0 | 549 |
| 4:15 PM | 0 | 0 | 68 | 0 | 0 | 0 | 0 | 0 | 0 | 278 | 244 | 0 | 0 | 0 | 0 | 0 | 590 |
| 4:30 PM | 0 | 0 | 61 | 0 | 0 | 0 | 0 | 0 | 0 | 299 | 251 | 0 | 0 | 0 | 0 | 0 | 611 |
| 4:45 PM | 0 | 0 | 52 | 0 | 0 | 0 | 0 | 0 | 0 | 329 | 237 | 0 | 0 | 0 | 0 | 0 | 618 |
| 5:00 PM | 0 | 0 | 71 | 0 | 0 | 0 | 0 | 0 | 0 | 354 | 207 | 0 | 0 | 0 | 0 | 0 | 632 |
| 5:15 PM | 0 | 0 | 50 | 0 | 0 | 0 | 0 | 0 | 0 | 350 | 246 | 0 | 0 | 0 | 0 | 0 | 646 |
| 5:30 PM | 0 | 0 | 64 | 0 | 0 | 0 | 0 | 0 | 0 | 352 | 218 | 0 | 0 | 0 | 0 | 0 | 634 |
| 5:45 PM | 0 | 0 | 44 | 0 | 0 | 0 | 0 | 0 | 0 | 335 | 173 | 0 | 0 | 0 | 0 | 0 | 552 |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| **TOTAL VOLUMES :** | 0 | 0 | 991 | 1 | 0 | 0 | 0 | 0 | 0 | 5048 | 3395 | 0 | 0 | 0 | 0 | 0 | 9435 |
| **APPROACH %'s :** | 0.00% | 0.00% | 99.90% | 0.10% | | | | | 0.00% | 59.79% | 40.21% | 0.00% | | | | | |
| **PEAK HR :** | **04:45 PM - 05:45 PM** | | | | | | | | | | | | | | | | TOTAL |
| **PEAK HR VOL :** | 0 | 0 | 237 | 0 | 0 | 0 | 0 | 0 | 0 | 1385 | 908 | 0 | 0 | 0 | 0 | 0 | 2530 |
| **PEAK HR FACTOR :** | 0.000 | 0.000 | 0.835 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.978 | 0.923 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.979 |
| | | | 0.835 | | | | | | | | 0.962 | | | | | | |

National Data & Surveying Services

# Intersection Turning Movement Count

**Location:** Morena Blvd NB Ramps & Balboa Ave
**City:** San Diego

**Project ID:** 25-040116-002
**Date:** 7/8/2025

## Data - Pedestrians (Crosswalks)

| NS/EW Streets: | Morena Blvd NB Ramps | | Morena Blvd NB Ramps | | Balboa Ave | | Balboa Ave | | |
|---|---|---|---|---|---|---|---|---|---|
| **AM** | NORTH LEG | | SOUTH LEG | | EAST LEG | | WEST LEG | | |
| | EB | WB | EB | WB | NB | SB | NB | SB | TOTAL |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 2 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 8:15 AM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 AM | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 9:00 AM | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 9:15 AM | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 9:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:45 AM | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| | EB | WB | EB | WB | NB | SB | NB | SB | TOTAL |
| **TOTAL VOLUMES :** | 0 | 0 | 2 | 6 | 0 | 0 | 0 | 0 | 8 |
| **APPROACH %'s :** | | | 25.00% | 75.00% | | | | | |
| **PEAK HR :** | **09:00 AM - 10:00 AM** | | | | | | | | TOTAL |
| **PEAK HR VOL :** | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 3 |
| **PEAK HR FACTOR :** | | | | 0.750 | | | | | 0.750 |
| | | | 0.750 | | | | | | |

| **NOON** | NORTH LEG | | SOUTH LEG | | EAST LEG | | WEST LEG | | |
|---|---|---|---|---|---|---|---|---|---|
| | EB | WB | EB | WB | NB | SB | NB | SB | TOTAL |
| 10:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:45 AM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| | EB | WB | EB | WB | NB | SB | NB | SB | TOTAL |
| **TOTAL VOLUMES :** | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| **APPROACH %'s :** | | | 100.00% | 0.00% | | | | | |
| **PEAK HR :** | **10:00 AM - 11:00 AM** | | | | | | | | TOTAL |
| **PEAK HR VOL :** | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| **PEAK HR FACTOR :** | | | 0.250 | | | | | | 0.250 |
| | | | 0.250 | | | | | | |

| **PM** | NORTH LEG | | SOUTH LEG | | EAST LEG | | WEST LEG | | |
|---|---|---|---|---|---|---|---|---|---|
| | EB | WB | EB | WB | NB | SB | NB | SB | TOTAL |
| 2:00 PM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| 2:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:30 PM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| 2:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:15 PM | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 2 |
| 3:30 PM | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 3:45 PM | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 4 |
| 5:30 PM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:45 PM | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| | EB | WB | EB | WB | NB | SB | NB | SB | TOTAL |
| **TOTAL VOLUMES :** | 0 | 0 | 4 | 8 | 0 | 0 | 0 | 0 | 12 |
| **APPROACH %'s :** | | | 33.33% | 66.67% | | | | | |
| **PEAK HR :** | **04:45 PM - 05:45 PM** | | | | | | | | TOTAL |
| **PEAK HR VOL :** | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 5 |
| **PEAK HR FACTOR :** | | | 0.250 | 0.250 | | | | | 0.313 |
| | | | 0.313 | | | | | | |

National Data & Surveying Services

# Intersection Turning Movement Count

**Location:** Morena Blvd NB Ramps & Balboa Ave
**City:** San Diego
**Control:** 1-Way Yeild(NB)

**Project ID:** 25-040116-002
**Date:** 7/8/2025

## Data - Bikes

| NS/EW Streets: | Morena Blvd NB Ramps | | | | Morena Blvd NB Ramps | | | | Balboa Ave | | | | Balboa Ave | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **AM** | NORTHBOUND | | | | SOUTHBOUND | | | | EASTBOUND | | | | WESTBOUND | | | | |
| | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| 9:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| **TOTAL VOLUMES :** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 5 |
| **APPROACH %'s :** | | | | | | | | | 0.00% | 80.00% | 20.00% | 0.00% | | | | | |
| **PEAK HR :** | **09:00 AM - 10:00 AM** | | | | | | | | | | | | | | | | TOTAL |
| **PEAK HR VOL :** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 4 |
| **PEAK HR FACTOR :** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.375 | 0.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.500 |
| | | | | | | | | | | 0.500 | | | | | | | |

| NOON | NORTHBOUND | | | | SOUTHBOUND | | | | EASTBOUND | | | | WESTBOUND | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| 10:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:15 AM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 10:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 10:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| **TOTAL VOLUMES :** | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| **APPROACH %'s :** | 0.00% | 0.00% | 100.00% | 0.00% | | | | | 0.00% | 100.00% | 0.00% | 0.00% | | | | | |
| **PEAK HR :** | **10:00 AM - 11:00 AM** | | | | | | | | | | | | | | | | TOTAL |
| **PEAK HR VOL :** | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| **PEAK HR FACTOR :** | 0.000 | 0.000 | 0.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.500 |
| | | | 0.250 | | | | | | | 0.250 | | | | | | | |

| PM | NORTHBOUND | | | | SOUTHBOUND | | | | EASTBOUND | | | | WESTBOUND | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| 2:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 1 | 0 | 0 | 4 |
| 2:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 2 |
| 3:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 |
| 3:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 |
| 4:00 PM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 5 |
| 4:45 PM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:15 PM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 5 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 3 |
| 5:45 PM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| **TOTAL VOLUMES :** | 3 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 5 | 0 | 0 | 10 | 0 | 0 | 30 |
| **APPROACH %'s :** | 42.86% | 0.00% | 57.14% | 0.00% | | | | | 0.00% | 61.54% | 38.46% | 0.00% | 0.00% | 100.00% | 0.00% | 0.00% | |
| **PEAK HR :** | **04:45 PM - 05:45 PM** | | | | | | | | | | | | | | | | TOTAL |
| **PEAK HR VOL :** | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 1 | 0 | 0 | 2 | 0 | 0 | 11 |
| **PEAK HR FACTOR :** | 0.000 | 0.000 | 0.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.750 | 0.250 | 0.000 | 0.000 | 0.250 | 0.000 | 0.000 | 0.550 |
| | | | 0.500 | | | | | | | 0.583 | | | | 0.250 | | | |

Prepared by National Data & Surveying Services

# VOLUME

## Morena Blvd & Jutland Dr

**Day:** Tuesday
**Date:** 7/8/2025

**City:** San Diego
**Project #:** CA25_040117_001

| DAILY TOTALS | NB | SB | EB | WB | Total |
|---|---|---|---|---|---|
| | 5,107 | 1,877 | 0 | 5,159 | 12,143 |

### 15-Minutes Interval

| TIME | NB | SB | EB | WB | TOTAL | TIME | NB | SB | EB | WB | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0:00 | 3 | 3 | | 2 | 8 | 12:00 | 100 | 43 | | 106 | 249 |
| 0:15 | 0 | 1 | | 0 | 1 | 12:15 | 110 | 31 | | 99 | 240 |
| 0:30 | 3 | 0 | | 0 | 3 | 12:30 | 117 | 31 | | 79 | 227 |
| 0:45 | 0 | 5 | | 0 | 5 | 12:45 | 114 | 21 | | 85 | 220 |
| 1:00 | 2 | 0 | | 0 | 2 | 13:00 | 97 | 25 | | 104 | 226 |
| 1:15 | 4 | 3 | | 0 | 7 | 13:15 | 89 | 28 | | 87 | 204 |
| 1:30 | 1 | 0 | | 0 | 1 | 13:30 | 103 | 37 | | 76 | 216 |
| 1:45 | 0 | 0 | | 0 | 0 | 13:45 | 97 | 26 | | 93 | 216 |
| 2:00 | 2 | 0 | | 2 | 4 | 14:00 | 85 | 43 | | 76 | 204 |
| 2:15 | 2 | 0 | | 0 | 2 | 14:15 | 77 | 32 | | 86 | 195 |
| 2:30 | 0 | 0 | | 2 | 2 | 14:30 | 105 | 35 | | 98 | 238 |
| 2:45 | 1 | 1 | | 4 | 6 | 14:45 | 108 | 50 | | 82 | 240 |
| 3:00 | 2 | 2 | | 0 | 4 | 15:00 | 95 | 54 | | 84 | 233 |
| 3:15 | 1 | 1 | | 0 | 2 | 15:15 | 95 | 39 | | 95 | 229 |
| 3:30 | 2 | 0 | | 3 | 5 | 15:30 | 98 | 54 | | 91 | 243 |
| 3:45 | 1 | 0 | | 11 | 12 | 15:45 | 83 | 39 | | 98 | 220 |
| 4:00 | 0 | 0 | | 0 | 0 | 16:00 | 91 | 44 | | 109 | 244 |
| 4:15 | 5 | 0 | | 3 | 8 | 16:15 | 90 | 58 | | 157 | 305 |
| 4:30 | 6 | 0 | | 3 | 9 | 16:30 | 101 | 64 | | 149 | 314 |
| 4:45 | 6 | 2 | | 7 | 15 | 16:45 | 93 | 45 | | 149 | 287 |
| 5:00 | 9 | 6 | | 2 | 17 | 17:00 | 80 | 47 | | 165 | 292 |
| 5:15 | 17 | 4 | | 5 | 26 | 17:15 | 114 | 42 | | 177 | 333 |
| 5:30 | 16 | 4 | | 12 | 32 | 17:30 | 89 | 52 | | 190 | 331 |
| 5:45 | 36 | 10 | | 27 | 73 | 17:45 | 75 | 27 | | 136 | 238 |
| 6:00 | 33 | 9 | | 7 | 49 | 18:00 | 70 | 36 | | 166 | 272 |
| 6:15 | 36 | 9 | | 32 | 77 | 18:15 | 68 | 28 | | 147 | 243 |
| 6:30 | 46 | 11 | | 34 | 91 | 18:30 | 52 | 23 | | 102 | 177 |
| 6:45 | 51 | 13 | | 38 | 102 | 18:45 | 63 | 22 | | 93 | 178 |
| 7:00 | 51 | 19 | | 27 | 97 | 19:00 | 61 | 24 | | 67 | 152 |
| 7:15 | 76 | 18 | | 32 | 126 | 19:15 | 63 | 13 | | 69 | 145 |
| 7:30 | 57 | 28 | | 36 | 121 | 19:30 | 63 | 18 | | 71 | 152 |
| 7:45 | 73 | 27 | | 42 | 142 | 19:45 | 59 | 22 | | 70 | 151 |
| 8:00 | 59 | 30 | | 51 | 140 | 20:00 | 71 | 21 | | 49 | 141 |
| 8:15 | 83 | 22 | | 57 | 162 | 20:15 | 67 | 11 | | 45 | 123 |
| 8:30 | 75 | 32 | | 63 | 170 | 20:30 | 69 | 14 | | 18 | 101 |
| 8:45 | 100 | 32 | | 82 | 214 | 20:45 | 58 | 18 | | 26 | 102 |
| 9:00 | 88 | 21 | | 59 | 168 | 21:00 | 29 | 7 | | 12 | 48 |
| 9:15 | 95 | 25 | | 84 | 204 | 21:15 | 23 | 3 | | 12 | 38 |
| 9:30 | 78 | 34 | | 68 | 180 | 21:30 | 26 | 4 | | 23 | 53 |
| 9:45 | 72 | 19 | | 78 | 169 | 21:45 | 15 | 6 | | 7 | 28 |
| 10:00 | 79 | 21 | | 65 | 165 | 22:00 | 25 | 10 | | 3 | 38 |
| 10:15 | 79 | 17 | | 92 | 188 | 22:15 | 12 | 7 | | 2 | 21 |
| 10:30 | 81 | 29 | | 59 | 169 | 22:30 | 3 | 2 | | 0 | 5 |
| 10:45 | 91 | 24 | | 90 | 205 | 22:45 | 8 | 2 | | 3 | 13 |
| 11:00 | 88 | 32 | | 74 | 194 | 23:00 | 6 | 7 | | 3 | 16 |
| 11:15 | 78 | 20 | | 97 | 195 | 23:15 | 5 | 1 | | 1 | 7 |
| 11:30 | 100 | 39 | | 72 | 211 | 23:30 | 3 | 1 | | 3 | 7 |
| 11:45 | 91 | 37 | | 73 | 201 | 23:45 | 3 | 0 | | 1 | 4 |
| TOTALS | 1879 | 610 | 0 | 1495 | 3984 | TOTALS | 3228 | 1267 | 0 | 3664 | 8159 |
| SPLIT % | 47% | 15% | 0% | 38% | 33% | SPLIT % | 40% | 16% | 0% | 45% | 67% |

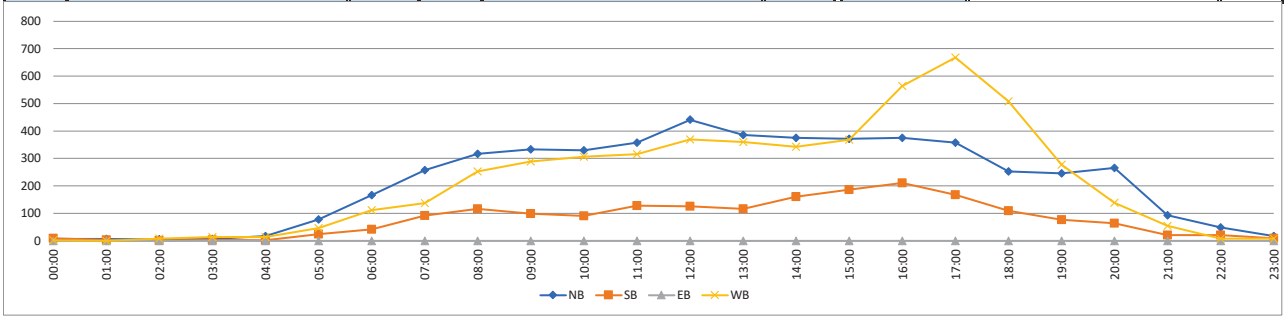
### DAILY TOTALS

### Hourly Intervals

| TIME | | NB | SB | EB | WB | TOTAL |
|---|---|---|---|---|---|---|
| 00:00 | 01:00 | 6 | 9 | | 2 | 17 |
| 01:00 | 02:00 | 7 | 3 | | 0 | 10 |
| 02:00 | 03:00 | 5 | 1 | | 8 | 14 |
| 03:00 | 04:00 | 6 | 3 | | 14 | 23 |
| 04:00 | 05:00 | 17 | 2 | | 13 | 32 |
| 05:00 | 06:00 | 78 | 24 | | 46 | 148 |
| 06:00 | 07:00 | 166 | 42 | | 111 | 319 |
| 07:00 | 08:00 | 257 | 92 | | 137 | 486 |
| 08:00 | 09:00 | 317 | 116 | | 253 | 686 |
| 09:00 | 10:00 | 333 | 99 | | 289 | 721 |
| 10:00 | 11:00 | 330 | 91 | | 306 | 727 |
| 11:00 | 12:00 | 357 | 128 | | 316 | 801 |
| 12:00 | 13:00 | 441 | 126 | | 369 | 936 |
| 13:00 | 14:00 | 386 | 116 | | 360 | 862 |
| 14:00 | 15:00 | 375 | 160 | | 342 | 877 |
| 15:00 | 16:00 | 371 | 186 | | 368 | 925 |
| 16:00 | 17:00 | 375 | 211 | | 564 | 1150 |
| 17:00 | 18:00 | 358 | 168 | | 668 | 1194 |
| 18:00 | 19:00 | 253 | 109 | | 508 | 870 |
| 19:00 | 20:00 | 246 | 77 | | 277 | 600 |
| 20:00 | 21:00 | 265 | 64 | | 138 | 467 |
| 21:00 | 22:00 | 93 | 20 | | 54 | 167 |
| 22:00 | 23:00 | 48 | 21 | | 8 | 77 |
| 23:00 | 00:00 | 17 | 9 | | 8 | 34 |

### STATISTICS

| | NB | SB | EB | WB | TOTAL |
|---|---|---|---|---|---|
| Peak Period | 00:00 | to | 12:00 | | |
| Volume | 1879 | 610 | | 1495 | 3984 |
| Peak Hour | 8:45 | 11:00 | | 10:45 | 10:45 |
| Peak Volume | 361 | 128 | | 333 | 805 |
| Peak Hour Factor | 0.903 | 0.821 | | 0.858 | 0.954 |
| Peak Period | 12:00 | to | 00:00 | | |
| Volume | 3228 | 1267 | | 3664 | 8159 |
| Peak Hour | 12:00 | 16:15 | | 16:45 | 16:45 |
| Peak Volume | 441 | 214 | | 681 | 1243 |
| Peak Hour Factor | 0.942 | 0.836 | | 0.896 | 0.933 |
| Peak Period | 07:00 | to | 09:00 | | |
| Volume | 574 | 208 | | 390 | 1172 |
| Peak Hour | 8:00 | 8:00 | | 8:00 | 8:00 |
| Peak Volume | 317 | 116 | | 253 | 686 |
| Peak Hour Factor | 0.793 | 0.906 | | 0.771 | 0.801 |
| Peak Period | 16:00 | to | 18:00 | | |
| Volume | 733 | 379 | | 1232 | 2344 |
| Peak Hour | 16:30 | 16:15 | | 16:45 | 16:45 |
| Peak Volume | 388 | 214 | | 681 | 1243 |
| Peak Hour Factor | 0.851 | 0.836 | | 0.896 | 0.933 |



National Data & Surveying Services

# Intersection Turning Movement Count

**Location:** Morena Blvd & Jutland Dr/4747 Morena Blvd Dwy
**City:** San Diego
**Control:** 4-Way Stop

**Project ID:** 25-040116-001
**Date:** 7/8/2025

## Data - Totals

| NS/EW Streets: | Morena Blvd | | | | Morena Blvd | | | | Jutland Dr/4747 Morena Blvd Dwy | | | | Jutland Dr/4747 Morena Blvd Dwy | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **AM** | NORTHBOUND | | | | SOUTHBOUND | | | | EASTBOUND | | | | WESTBOUND | | | | |
| | 0 | 1 | 1 | 0 | 0.5 | 1.5 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| 7:00 AM | 1 | 26 | 24 | 0 | 1 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | 0 | 1 | 0 | 97 |
| 7:15 AM | 1 | 49 | 26 | 0 | 3 | 15 | 0 | 0 | 0 | 0 | 1 | 0 | 30 | 0 | 2 | 0 | 127 |
| 7:30 AM | 1 | 32 | 24 | 0 | 3 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | 0 | 7 | 0 | 121 |
| 7:45 AM | 1 | 36 | 36 | 0 | 4 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 37 | 0 | 5 | 0 | 142 |
| 8:00 AM | 2 | 22 | 35 | 0 | 1 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 46 | 0 | 4 | 1 | 140 |
| 8:15 AM | 0 | 35 | 48 | 0 | 2 | 20 | 0 | 0 | 0 | 0 | 1 | 0 | 55 | 0 | 2 | 0 | 163 |
| 8:30 AM | 1 | 25 | 48 | 1 | 4 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 58 | 0 | 5 | 0 | 170 |
| 8:45 AM | 1 | 44 | 55 | 0 | 1 | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 72 | 0 | 10 | 0 | 214 |
| 9:00 AM | 0 | 38 | 50 | 0 | 1 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 52 | 0 | 7 | 0 | 168 |
| 9:15 AM | 0 | 40 | 55 | 0 | 3 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 79 | 0 | 5 | 0 | 204 |
| 9:30 AM | 1 | 30 | 47 | 0 | 2 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 65 | 0 | 3 | 0 | 180 |
| 9:45 AM | 1 | 20 | 51 | 0 | 0 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 72 | 0 | 5 | 1 | 169 |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| **TOTAL VOLUMES :** | 10 | 397 | 499 | 1 | 25 | 282 | 0 | 0 | 0 | 0 | 2 | 0 | 621 | 0 | 56 | 2 | 1895 |
| **APPROACH %'s :** | 1.10% | 43.77% | 55.02% | 0.11% | 8.14% | 91.86% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% | 0.00% | 91.46% | 0.00% | 8.25% | 0.29% | |
| **PEAK HR :** | **08:45 AM - 09:45 AM** | | | | | | | | | | | | | | | | TOTAL |
| **PEAK HR VOL :** | 2 | 152 | 207 | 0 | 7 | 105 | 0 | 0 | 0 | 0 | 0 | 0 | 268 | 0 | 25 | 0 | 766 |
| **PEAK HR FACTOR :** | 0.500 | 0.864 | 0.941 | 0.000 | 0.583 | 0.820 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.848 | 0.000 | 0.625 | 0.000 | 0.895 |
| | 0.903 | | | | 0.824 | | | | 0.000 | | | | 0.872 | | | | |

| **NOON** | NORTHBOUND | | | | SOUTHBOUND | | | | EASTBOUND | | | | WESTBOUND | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 1 | 0 | 0.5 | 1.5 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| 10:00 AM | 0 | 27 | 52 | 0 | 4 | 17 | 0 | 0 | 0 | 0 | 1 | 0 | 60 | 0 | 5 | 0 | 166 |
| 10:15 AM | 1 | 27 | 51 | 0 | 2 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 89 | 0 | 3 | 0 | 188 |
| 10:30 AM | 0 | 24 | 57 | 0 | 1 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 55 | 0 | 4 | 0 | 169 |
| 10:45 AM | 1 | 24 | 66 | 0 | 1 | 23 | 0 | 0 | 0 | 0 | 1 | 0 | 86 | 0 | 4 | 0 | 206 |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| **TOTAL VOLUMES :** | 2 | 102 | 226 | 0 | 8 | 83 | 0 | 0 | 0 | 0 | 2 | 0 | 290 | 0 | 16 | 0 | 729 |
| **APPROACH %'s :** | 0.61% | 30.91% | 68.48% | 0.00% | 8.79% | 91.21% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% | 0.00% | 94.77% | 0.00% | 5.23% | 0.00% | |
| **PEAK HR :** | **10:00 AM - 11:00 AM** | | | | | | | | | | | | | | | | TOTAL |
| **PEAK HR VOL :** | 2 | 102 | 226 | 0 | 8 | 83 | 0 | 0 | 0 | 0 | 2 | 0 | 290 | 0 | 16 | 0 | 729 |
| **PEAK HR FACTOR :** | 0.500 | 0.944 | 0.856 | 0.000 | 0.500 | 0.741 | 0.000 | 0.000 | 0.000 | 0.000 | 0.500 | 0.000 | 0.815 | 0.000 | 0.800 | 0.000 | 0.885 |
| | 0.907 | | | | 0.784 | | | | 0.500 | | | | 0.832 | | | | |

| **PM** | NORTHBOUND | | | | SOUTHBOUND | | | | EASTBOUND | | | | WESTBOUND | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 1 | 0 | 0.5 | 1.5 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| 2:00 PM | 1 | 24 | 60 | 0 | 3 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 73 | 1 | 2 | 0 | 204 |
| 2:15 PM | 0 | 23 | 54 | 0 | 6 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 81 | 0 | 4 | 1 | 195 |
| 2:30 PM | 1 | 35 | 69 | 0 | 5 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 95 | 0 | 3 | 0 | 238 |
| 2:45 PM | 0 | 31 | 77 | 0 | 9 | 41 | 0 | 0 | 0 | 0 | 0 | 0 | 78 | 0 | 4 | 0 | 240 |
| 3:00 PM | 1 | 31 | 63 | 0 | 2 | 52 | 0 | 0 | 0 | 0 | 0 | 0 | 79 | 0 | 5 | 0 | 233 |
| 3:15 PM | 0 | 28 | 65 | 2 | 4 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 94 | 0 | 1 | 0 | 229 |
| 3:30 PM | 0 | 33 | 63 | 2 | 6 | 48 | 0 | 0 | 0 | 0 | 0 | 0 | 87 | 0 | 4 | 0 | 243 |
| 3:45 PM | 0 | 19 | 64 | 0 | 2 | 36 | 1 | 0 | 0 | 0 | 0 | 0 | 97 | 0 | 1 | 0 | 220 |
| 4:00 PM | 0 | 17 | 72 | 2 | 11 | 33 | 0 | 0 | 0 | 0 | 0 | 0 | 107 | 0 | 2 | 0 | 244 |
| 4:15 PM | 0 | 26 | 64 | 0 | 8 | 50 | 0 | 0 | 0 | 0 | 0 | 0 | 153 | 0 | 4 | 0 | 305 |
| 4:30 PM | 0 | 26 | 75 | 0 | 11 | 53 | 0 | 0 | 0 | 1 | 0 | 0 | 146 | 0 | 3 | 0 | 315 |
| 4:45 PM | 0 | 24 | 69 | 0 | 5 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 146 | 0 | 3 | 0 | 287 |
| 5:00 PM | 0 | 22 | 58 | 0 | 5 | 42 | 0 | 0 | 0 | 0 | 0 | 0 | 158 | 0 | 7 | 0 | 292 |
| 5:15 PM | 0 | 32 | 82 | 0 | 6 | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 175 | 0 | 2 | 0 | 333 |
| 5:30 PM | 0 | 24 | 65 | 0 | 6 | 46 | 0 | 0 | 0 | 0 | 1 | 0 | 184 | 0 | 6 | 0 | 332 |
| 5:45 PM | 0 | 24 | 50 | 1 | 5 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 134 | 0 | 2 | 0 | 238 |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| **TOTAL VOLUMES :** | 3 | 419 | 1050 | 7 | 94 | 630 | 1 | 0 | 0 | 1 | 1 | 0 | 1887 | 1 | 53 | 1 | 4148 |
| **APPROACH %'s :** | 0.20% | 28.33% | 70.99% | 0.47% | 12.97% | 86.90% | 0.14% | 0.00% | 0.00% | 50.00% | 50.00% | 0.00% | 97.17% | 0.05% | 2.73% | 0.05% | |
| **PEAK HR :** | **04:45 PM - 05:45 PM** | | | | | | | | | | | | | | | | TOTAL |
| **PEAK HR VOL :** | 0 | 102 | 274 | 0 | 22 | 164 | 0 | 0 | 0 | 0 | 1 | 0 | 663 | 0 | 18 | 0 | 1244 |
| **PEAK HR FACTOR :** | 0.000 | 0.797 | 0.835 | 0.000 | 0.917 | 0.891 | 0.000 | 0.000 | 0.000 | 0.000 | 0.250 | 0.000 | 0.901 | 0.000 | 0.643 | 0.000 | 0.934 |
| | 0.825 | | | | 0.894 | | | | 0.250 | | | | 0.896 | | | | |

National Data & Surveying Services

# Intersection Turning Movement Count

**Location:** Morena Blvd & Jutland Dr/4747 Morena Blvd Dwy
**City:** San Diego
**Project ID:** 25-040116-001
**Date:** 7/8/2025

## Data - Pedestrians (Crosswalks)

| NS/EW Streets: | Morena Blvd | | Morena Blvd | | Jutland Dr/4747 Morena Blvd Dwy | | Jutland Dr/4747 Morena Blvd Dwy | | |
|---|---|---|---|---|---|---|---|---|---|
| **AM** | NORTH LEG | | SOUTH LEG | | EAST LEG | | WEST LEG | | |
| | EB | WB | EB | WB | NB | SB | NB | SB | TOTAL |
| 7:00 AM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 9:00 AM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| 9:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:30 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 9:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | EB | WB | EB | WB | NB | SB | NB | SB | TOTAL |
| **TOTAL VOLUMES :** | 0 | 0 | 0 | 0 | 2 | 5 | 0 | 0 | 7 |
| **APPROACH %'s :** | | | | | 28.57% | 71.43% | | | |
| **PEAK HR :** | **08:45 AM - 09:45 AM** | | | | | | | | TOTAL |
| **PEAK HR VOL :** | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 3 |
| **PEAK HR FACTOR :** | | | | | 0.250 | 0.500 | | | 0.750 |
| | | | | | 0.750 | | | | |

| NOON | NORTH LEG | | SOUTH LEG | | EAST LEG | | WEST LEG | | |
|---|---|---|---|---|---|---|---|---|---|
| | EB | WB | EB | WB | NB | SB | NB | SB | TOTAL |
| 10:00 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 10:15 AM | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 |
| 10:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:45 AM | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 4 |
| | EB | WB | EB | WB | NB | SB | NB | SB | TOTAL |
| **TOTAL VOLUMES :** | 0 | 0 | 0 | 0 | 4 | 3 | 0 | 0 | 7 |
| **APPROACH %'s :** | | | | | 57.14% | 42.86% | | | |
| **PEAK HR :** | **10:00 AM - 11:00 AM** | | | | | | | | TOTAL |
| **PEAK HR VOL :** | 0 | 0 | 0 | 0 | 4 | 3 | 0 | 0 | 7 |
| **PEAK HR FACTOR :** | | | | | 0.250 | 0.375 | | | 0.438 |
| | | | | | 0.438 | | | | |

| PM | NORTH LEG | | SOUTH LEG | | EAST LEG | | WEST LEG | | |
|---|---|---|---|---|---|---|---|---|---|
| | EB | WB | EB | WB | NB | SB | NB | SB | TOTAL |
| 2:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | EB | WB | EB | WB | NB | SB | NB | SB | TOTAL |
| **TOTAL VOLUMES :** | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 |
| **APPROACH %'s :** | | | | | 0.00% | 100.00% | | | |
| **PEAK HR :** | **04:45 PM - 05:45 PM** | | | | | | | | TOTAL |
| **PEAK HR VOL :** | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| **PEAK HR FACTOR :** | | | | | | 0.250 | | | 0.250 |
| | | | | | 0.250 | | | | |

National Data & Surveying Services

# Intersection Turning Movement Count

**Location:** Morena Blvd & Jutland Dr/4747 Morena Blvd Dwy
**City:** San Diego
**Control:** 4-Way Stop

**Project ID:** 25-040116-001
**Date:** 7/8/2025

## Data - Bikes

| NS/EW Streets: | Morena Blvd | | | | Morena Blvd | | | | Jutland Dr/4747 Morena Blvd Dwy | | | | Jutland Dr/4747 Morena Blvd Dwy | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **AM** | NORTHBOUND | | | | SOUTHBOUND | | | | EASTBOUND | | | | WESTBOUND | | | | |
| | 0 | 1 | 1 | 0 | 0.5 | 1.5 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 AM | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 9:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:15 AM | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 3 |
| 9:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:45 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| **TOTAL VOLUMES :** | 0 | 5 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 11 |
| **APPROACH %'s :** | 0.00% | 83.33% | 16.67% | 0.00% | 0.00% | 100.00% | 0.00% | 0.00% | | | | | 100.00% | 0.00% | 0.00% | 0.00% | |
| **PEAK HR :** | **08:45 AM - 09:45 AM** | | | | | | | | | | | | | | | | TOTAL |
| **PEAK HR VOL :** | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 5 |
| **PEAK HR FACTOR :** | 0.000 | 0.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.250 | 0.000 | 0.000 | 0.000 | 0.417 |
| | 0.500 | | | | | | | | | | | | 0.250 | | | | |

| NOON | NORTHBOUND | | | | SOUTHBOUND | | | | EASTBOUND | | | | WESTBOUND | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 1 | 0 | 0.5 | 1.5 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| 10:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10:30 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 10:45 AM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| **TOTAL VOLUMES :** | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| **APPROACH %'s :** | 0.00% | 100.00% | 0.00% | 0.00% | 0.00% | 100.00% | 0.00% | 0.00% | | | | | | | | | |
| **PEAK HR :** | **10:00 AM - 11:00 AM** | | | | | | | | | | | | | | | | TOTAL |
| **PEAK HR VOL :** | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| **PEAK HR FACTOR :** | 0.000 | 0.250 | 0.000 | 0.000 | 0.000 | 0.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.500 |
| | 0.250 | | | | 0.250 | | | | | | | | | | | | |

| PM | NORTHBOUND | | | | SOUTHBOUND | | | | EASTBOUND | | | | WESTBOUND | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 1 | 0 | 0.5 | 1.5 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| 2:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:15 PM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 2:30 PM | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 2:45 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 |
| 3:00 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 3:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| 3:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 PM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| **TOTAL VOLUMES :** | 0 | 3 | 1 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 1 | 0 | 13 |
| **APPROACH %'s :** | 0.00% | 75.00% | 25.00% | 0.00% | 0.00% | 100.00% | 0.00% | 0.00% | | | | | 75.00% | 0.00% | 25.00% | 0.00% | |
| **PEAK HR :** | **04:45 PM - 05:45 PM** | | | | | | | | | | | | | | | | TOTAL |
| **PEAK HR VOL :** | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 |
| **PEAK HR FACTOR :** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.250 | 0.000 | 0.375 |
| | | | | | 0.250 | | | | | | | | 0.250 | | | | |

# Attachment B – CA-MUTCD Traffic Signal Warrant Excerpts, Worksheets, and Calculations

## *Figure 4C-101(CA). Traffic Signal Warrants Worksheet (Sheet 1 of 5)*

COUNT DATE 07/08/2025

DIST ____ CO ____ RTE ____ PM ____

CALC MW DATE 1/30/2026

CHK AR DATE 1/30/2026

Major St: Morena Blvd — Critical Approach Speed 45 (speed limit) mph

Minor St: Jutland Dr — Critical Approach Speed ____ mph

Speed limit or critical speed on major street traffic > 40 mph..... ☑ or ☐ RURAL (R)

In built up area of isolated community of < 10,000 population..... ☐ ☐ URBAN (U)

---

**WARRANT 1 - Eight Hour Vehicular Volume** **SATISFIED YES ☑ NO ☐**

**(Condition A or Condition B or combination of A and B must be satisfied)**

**Condition A - Minimum Vehicle Volume** **100% SATISFIED YES ☑ NO ☐**

**80% SATISFIED YES ☐ NO ☐**

| | MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS) | | | | 10:00 AM | 11:00 AM | 12:00 Noon | 1:00 PM | 2:00 PM | 3:00 PM | 4:00 PM | 5:00 PM | Hour |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | U | R | U | R | | | | | | | | | |
| APPROACH LANES | 1 | | 2 or More | | | | | | | | | | |
| Both Approaches Major Street | 500 (400) | 350 (280) | 600 (480) | 420 (336) | 421 | 485 | 567 | 502 | 535 | 557 | 586 | 526 | |
| Highest Approach Minor Street | 150 (120) | 105 (84) | 200 (160) | 140 (112) | 306 | 316 | 369 | 360 | 342 | 368 | 564 | 668 | |

**Condition B - Interruption of Continuous Traffic** **100% SATISFIED YES ☐ NO ☑**

**80% SATISFIED YES ☐ NO ☑**

| | MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS) | | | | 10:00 AM | 11:00 AM | 12:00 Noon | 1:00 PM | 2:00 PM | 3:00 PM | 4:00 PM | 5:00 PM | Hour |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | U | R | U | R | | | | | | | | | |
| APPROACH LANES | 1 | | 2 or More | | | | | | | | | | |
| Both Approaches Major Street | 750 (600) | 525 (420) | 900 (720) | 630 (504) | 421 | 485 | 567 | 502 | 535 | 557 | 586 | 526 | |
| Highest Approach Minor Street | 75 (60) | 53 (42) | 100 (80) | 70 (56) | 306 | 316 | 369 | 360 | 342 | 368 | 564 | 668 | |

**Combination of Conditions A & B** **SATISFIED YES ☐ NO ☑**

| REQUIREMENT | CONDITION | ✓ | FULFILLED |
|---|---|---|---|
| TWO CONDITIONS SATISFIED 80% | A. MINIMUM VEHICULAR VOLUME | | Yes ☐ No ☑ |
| | AND, B. INTERRUPTION OF CONTINUOUS TRAFFIC | | |
| AND, AN ADEQUATE TRIAL OF OTHER ALTERNATIVES THAT COULD CAUSE LESS DELAY AND INCONVENIENCE TO TRAFFIC HAS FAILED TO SOLVE THE TRAFFIC PROBLEMS | | | Yes ☐ No ☐ |

Major-street and minor-street volumes shall be for the same 8 hours for each condition; however, the 8 hours satisfied in Condition A shall not be required to be the same 8 hours satisfied in Condition B.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

## *Figure 4C-101(CA). Traffic Signal Warrants Worksheet (Sheet of 5)*

**WARRANT - Four Hour Vehicular Volume** **SATISFIED YES ☑ NO ☐**

Record hourly vehicular volumes for any four hours of an average day.

| APPROACH LANES | One | 2 or More | 2:45 PM | 3:45 PM | 4:45 PM | 5:45 PM |
|---|---|---|---|---|---|---|
| | | | Hour | | | |
| Both Approaches - Major Street | | ✓ | 593 | 570 | 562 | 379 |
| Higher Approach - Minor Street | | ✓ | 352 | 513 | 681 | 551 |

| | |
|---|---|
| All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS) | Yes ☐ No ☐ |
| OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS) | Yes ☑ No ☐ |

**WARRANT - ea Hour** **SATISFIED YES ☑ NO ☐**
**( art A or art B must be satisfied)**

**ART A** **SATISFIED YES ☐ NO ☐**

**(All parts 1 and belo must be satisfied for the same one hour for an four consecuti e 1 -minute periods)**

| | |
|---|---|
| 1. The total delay e perienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or e ceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND | Yes ☐ No ☐ not studied |
| 2. The volume on the same minor street approach (one direction only) equals or e ceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND | Yes ☑ No ☐ |
| 3. The total entering volume serviced during the hour equals or e ceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches. | Yes ☑ No ☐ |

**ART B** **SATISFIED YES ☑ NO ☐**

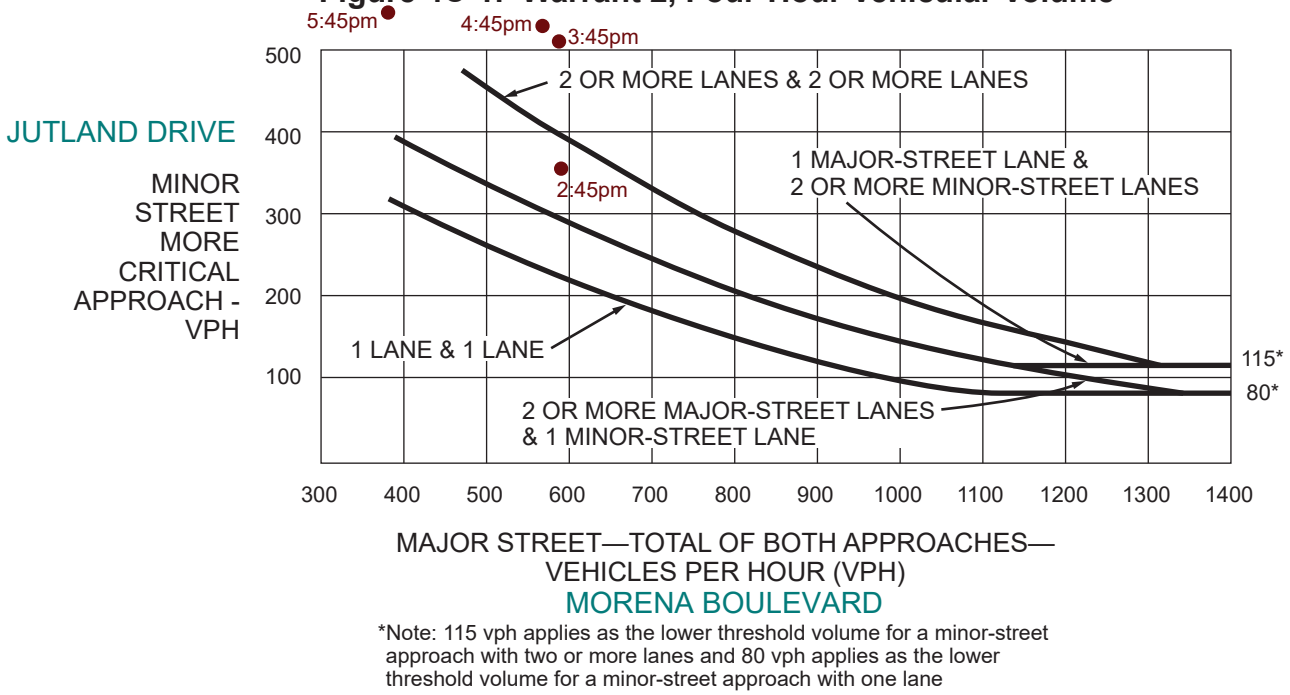
| APPROACH LANES | One | 2 or More | 4:45 PM |
|---|---|---|---|
| | | | Hour |
| Both Approaches - Major Street | | ✓ | 562 |
| Higher Approach - Minor Street | | ✓ | 681 |

| | |
|---|---|
| The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS) | Yes ☑ No ☐ |
| OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS) | Yes ☑ No ☐ |

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

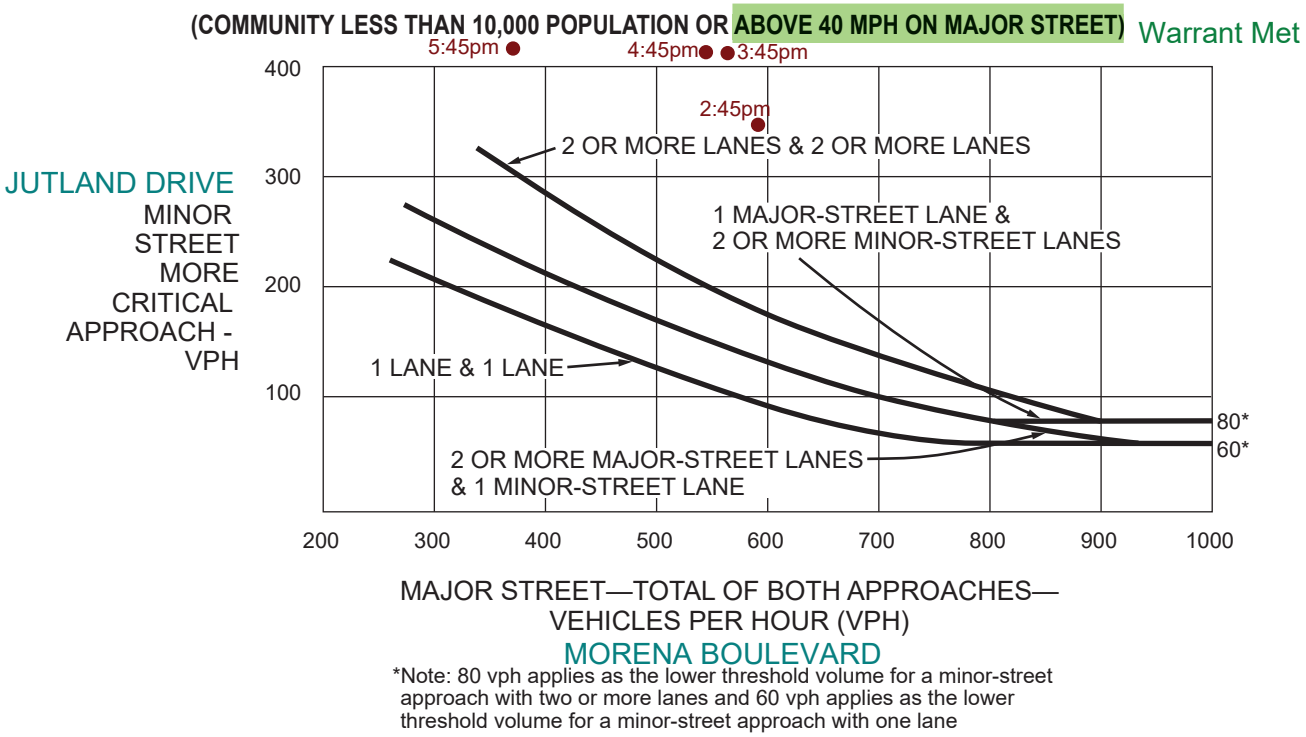
## Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume

Warrant Not Met



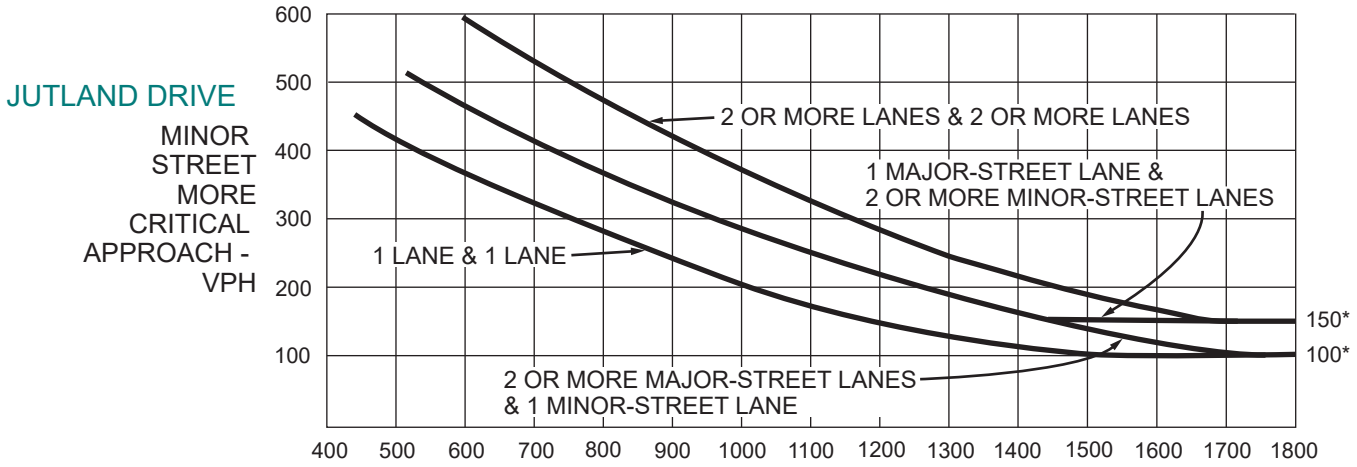

*Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane

## Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)




*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane

4:45pm ● **Figure 4C-3. Warrant 3, Peak Hour** Warrant Met



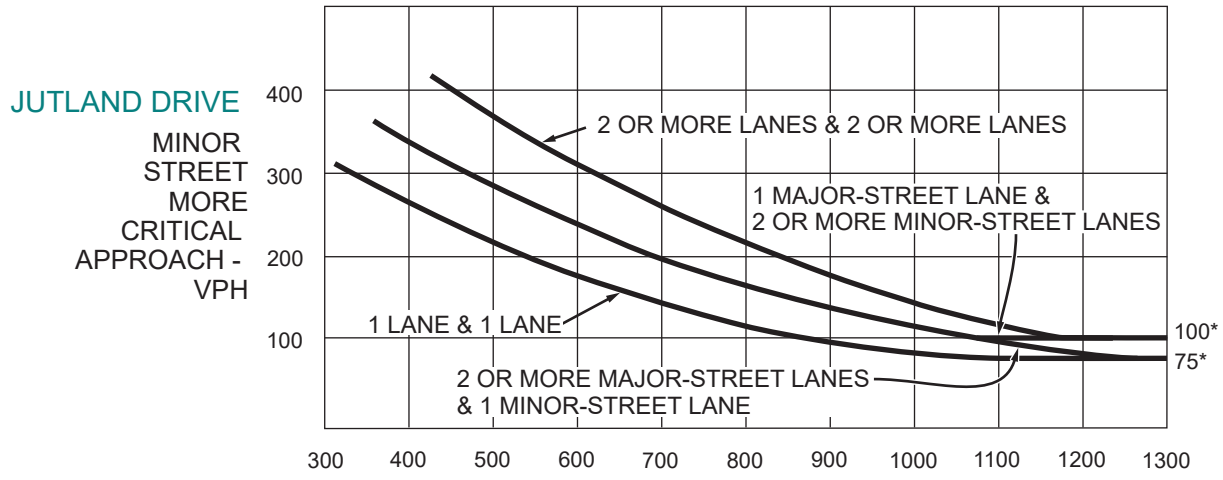

*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane

## Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

Warrant Met

4:45pm ●

**(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)**




*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane

## *Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet of 5)*

**WARRANT - edestrian Volume**
**( arts 1 and Must Be Satisfied)**

**SATISFIED YES ☐ NO ☑**

**art 1 ( arts A or B must be satisfied)**

| | Hours - - -> | 10:00 | 3:00 | 4:00 | 5:00 |
|---|---|---|---|---|---|
| A. | Vehicles per hour for any 4 hours | 421 | 557 | 586 | 526 |
| | Pedestrians per hour for any 4 hours | 7 | 0 | 2 | 1 |

**Figure C- or Figure C-**
**SATISFIED YES ☐ NO ☑**

| | Hours - - -> | 4:45 | 5:00 | 5:15 | 5:30 |
|---|---|---|---|---|---|
| B. | Vehicles per hour for any 1 hour | 138 | 127 | 156 | 141 |
| | Pedestrians per hour for any 1 hour | 0 | 0 | 1 | 0 |

**Figure C- or Figure C-8**
**SATISFIED YES ☐ NO ☑**

**art** **SATISFIED YES ☐ NO ☑**

| | |
|---|---|
| AND, The distance to the nearest traffic signal along the major street is greater than 300 ft | Yes ☐ No ☐ |
| OR, The proposed traffic signal will not restrict progressive traffic flow along the major street. | Yes ☐ No ☐ |

---

**WARRANT - School Crossing**
**( arts A and B Must Be Satisfied)**

Warrant Not Applicable

**SATISFIED YES ☐ NO ☑**

**art A** **SATISFIED YES ☐ NO ☐**

**ap Minutes and of Children**

| | | Hour |
|---|---|---|
| aps vs Minutes | Minutes Children Using Crossing | |
| | Number of Adequate aps | |
| School Age Pedestrians Crossing Street hr | | |

aps < Minutes YES ☐ NO ☐
AND Children > 20 hr YES ☐ NO ☐

| | |
|---|---|
| AND, Consideration has been given to less restrictive remedial measures. | Yes ☐ No ☐ |

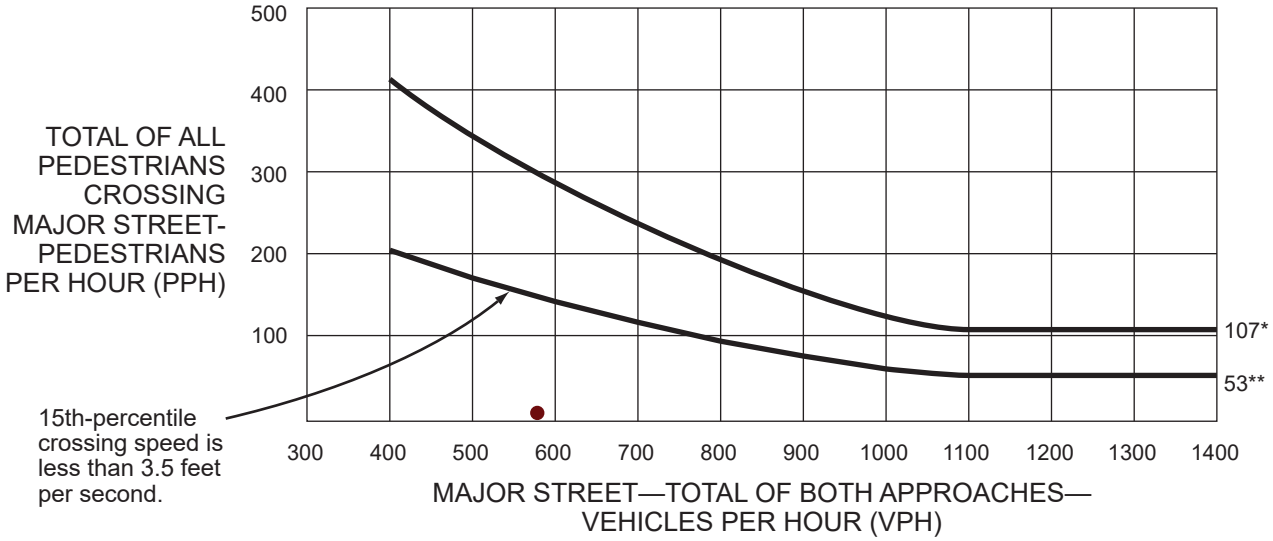
**art B** **SATISFIED YES ☐ NO ☐**

| | |
|---|---|
| The distance to the nearest traffic signal along the major street is greater than 300 ft | Yes ☐ No ☐ |
| OR, The proposed signal will not restrict the progressive movement of traffic. | Yes ☐ No ☐ |

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

## Figure 4C-5. Warrant 4, Pedestrian Four-Hour Volume

Warrant Not Met

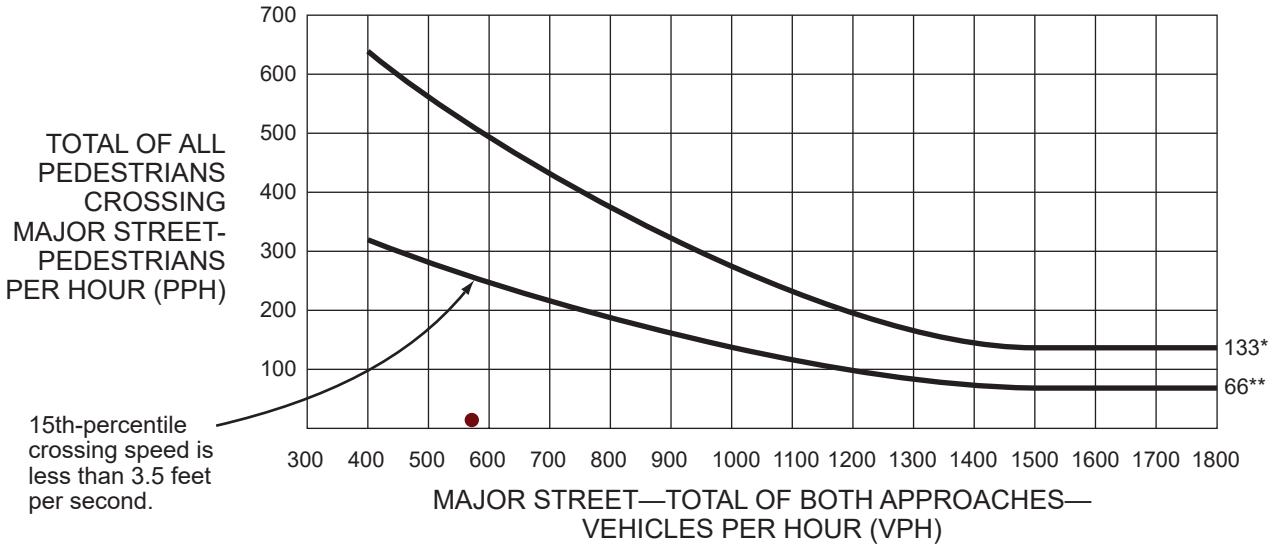



* 107 pph applies as the lower threshold volume

** 53 pph applies as the lower threshold volume if the 15th-percentile crossing speed is less than 3.5 feet per second

## Figure 4C-6. Warrant 4, Pedestrian Peak Hour

Warrant Not Met

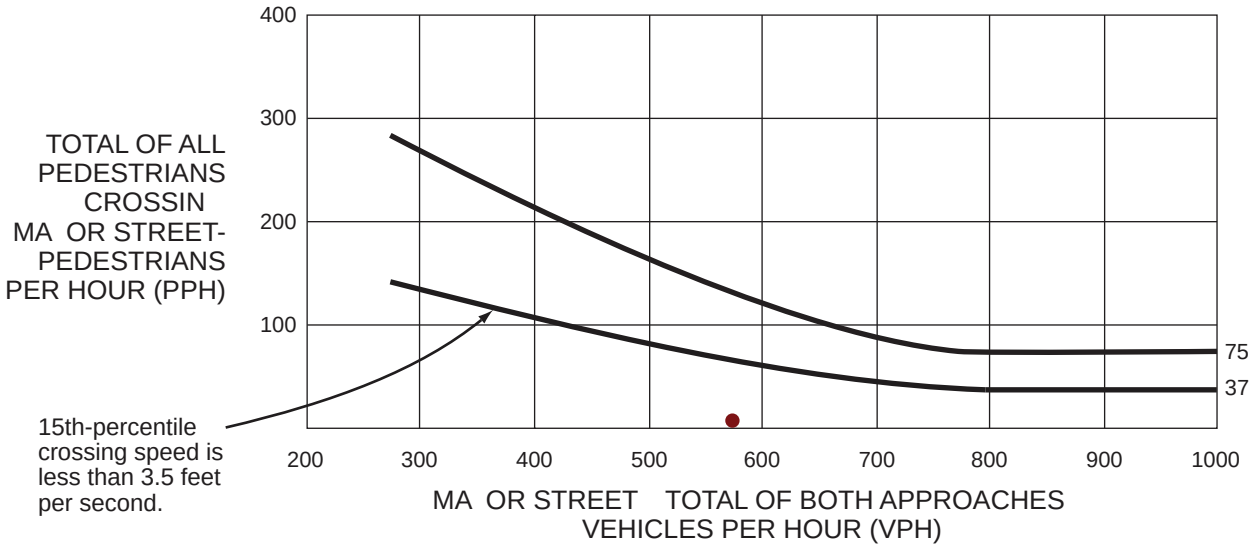



* 133 pph applies as the lower threshold volume

** 66 pph applies as the lower threshold volume if the 15th-percentile crossing speed is less than 3.5 feet per second

## Figure C- Warrant edestrian Four-Hour Volume ( 0% Factor) Warrant Not Met

**(COMMUNITY LESS THAN 10 000 O ULATION OR ABOVE 0 M H ON MA OR STREET)**



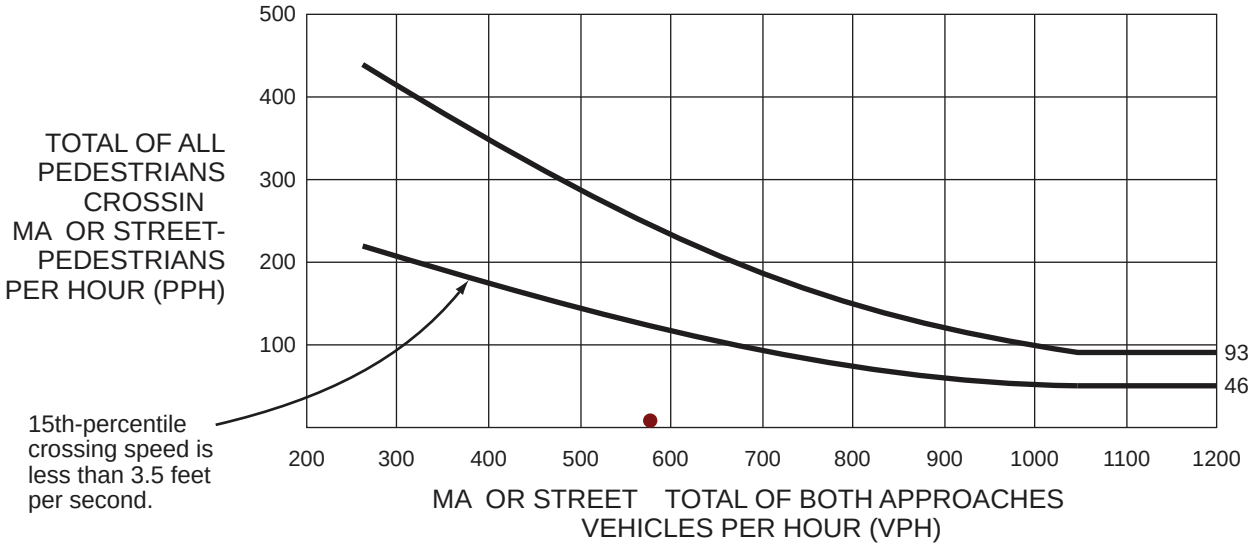

75 pph applies as the lower threshold volume

37 pph applies as the lower threshold volume if the 15th-percentile crossing speed is less than 3.5 feet per second

Refer to FHWA s List of Known Errors for error in the parenthesis below the figure title. Refer to Section 1A.04 for more details.

## Figure C-8 Warrant edestrian ea Hour ( 0% Factor)

**(COMMUNITY LESS THAN 10 000 O ULATION OR ABOVE 0 M H ON MA OR STREET)** Warrant Not Met




93 pph applies as the lower threshold volume

46 pph applies as the lower threshold volume if the 15th-percentile crossing speed is less than 3.5 feet per second

Refer to FHWA s List of Known Errors for error in the parenthesis below the figure title. Refer to Section 1A.04 for more details.

## *Figure 4C-101(CA). Traffic Signal Warrants Worksheet (Sheet 4 of 5)*

**WARRANT - Coordinated Signal System** **SATISFIED YES ☐ NO ☑**
**(All Parts Must Be Satisfied)**

| MINIMUM REQUIREMENTS | DISTANCE TO NEAREST SIGNAL | |
|---|---|---|
| ≥ 1000 ft | N ft, S ft, E ft, W ft | Yes ☐ No ☐ |
| On a one-way street or a street that has traffic predominantly in one direction, the adjacent traffic control signals are so far apart that they do not provide the necessary degree of vehicular platooning. | | Yes ☐ No ☑ |
| OR, On a two-way street, adjacent traffic control signals do not provide the necessary degree of platooning and the proposed and adjacent traffic control signals will collectively provide a progressive operation. | | |

**WARRANT - Crash Experience Warrant** **SATISFIED YES ☐ NO ☑**
**(All Parts Must Be Satisfied)** Fewer than 2 collisions per year reported 2020 - 2025

| | | | |
|---|---|---|---|
| Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency. | | | Yes ☐ No ☐ |
| REQUIREMENTS | Number of crashes reported within a 12 month period susceptible to correction by a traffic signal, and involving injury or damage exceeding the requirements for a reportable crash. | | Yes ☐ No ☑ |
| 5 OR MORE | | | |
| REQUIREMENTS | CONDITIONS | ✓ | Yes ☐ No ☑ |
| ONE CONDITION SATISFIED<br>**MINIMUM REPORTED CRASHES** | Table 4C-2, Angle crashes and pedestrian crashes | | |
| | OR, Table 4C-2, Fatal-and-injury angle crashes and pedestrian crashes | | |
| | OR, Table 4C-3, Angle crashes and pedestrian crashes | | |
| | OR, Table 4C-3, Fatal-and-injury angle crashes and pedestrian crashes | | |
| ONE CONDITION SATISFIED 80% | Warrant 1, Condition A - Minimum Vehicular Volume | | Yes ☐ No ☑ |
| | OR, Warrant 1, Condition B - Interruption of Continuous Traffic | | |
| | OR, Warrant 4, Pedestrian Volume Condition<br>Ped Vol ≥ 80% of Figure 4C-5 through Figure 4C-8 | | |

**WARRANT 8 - Road a Net or** **SATISFIED YES ☐ NO ☑**
**(All Parts Must Be Satisfied)**

| MINIMUM VOLUME REQUIREMENTS | ENTERING VOLUMES - ALL APPROACHES | ✓ | FULFILLED |
|---|---|---|---|
| 1000 Veh Hr | During Typical Weekday Peak Hour Veh Hr<br>and has 5-year projected traffic volumes that meet one or more of Warrants 1, 2, and 3 during an average weekday. | | Yes ☐ No ☐ |
| | OR<br>During Each of Any 5 Hrs. of a Sat. or Sun Veh Hr | | |

| CHARACTERISTICS OF MAJOR ROUTES | MAJOR ROUTE A | MAJOR ROUTE B | |
|---|---|---|---|
| Hwy. System Serving as Principal Network for Through Traffic | | | |
| Rural or<br>Suburban Highway Outside Of, Entering, or Traversing a City | | | |
| Appears as Major Route on an Official Plan | ✓ | No | |
| Any Major Route Characteristics Met, Both Streets | | | Yes ☐ No ☑ |

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

## *Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 5 of 5)*

Warrant Not Applicable

**WARRANT - Intersection Near a rade Crossing** **SATISFIED YES ☐ NO ☑**
**(Both arts A and B Must Be Satisfied)**

| | |
|---|---|
| **ART A**<br><br>A grade crossing e ists on an approach controlled by a STOP or YIELD sign and the center of the trac nearest to the intersection is within 140 feet of the stop line or yield line on the approach. Trac Center Line to Limit Line ft | Yes ☐ No ☐ |
| **ART B**<br><br>**There is one minor street approach lane at the trac crossing -** During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point falls above the applicable curve in Figure 4C-9.<br><br>Major Street - Total of both approaches: VPH<br>Minor Street - Crosses the trac (one direction only, approaching the intersection):<br>VPH AF (Use Tables 4C-2, 3, 4 below to calculate AF) VPH | Yes ☐ No ☐ |
| **OR There are t o or more minor street approach lanes at the trac crossing -**<br>During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point falls above the applicable curve in Figure 4C-10.<br><br>Major Street - Total of both approaches : VPH<br>Minor Street - Crosses the trac (one direction only, approaching the intersection):<br>VPH AF (Use Tables 4C-2, 3, 4 below to calcualte AF) VPH | |

The minor street approach volume may be multiplied by up to three following adjustment factors (AF) as described in Section 4C.10.

1- Number of Rail Traffic per Day — Adjustment factor from table 4C-2

2- Percentage of High-Occupancy Buses on Minor Street Approach — Adjustment factor from table 4C-3

3- Percentage of Tractor-Trailer Truc s on Minor Street Approach — Adjustment factor from table 4C-4

NOTE: If no data is availale or nown, then use AF 1 (no adjustment)

# *Figure 4C-101(CA). Traffic Signal Warrants Worksheet (Sheet 1 of 5)*

COUNT DATE 07/08/2025

DIST ____ CO ____ RTE ____ PM ____

CALC MW DATE 1/30/2026

CHK AR DATE 1/30/2026

Major St: Balboa Ave — Critical Approach Speed 42 (85th Percentile) mph

Minor St: Morena Blvd NB Ramps — Critical Approach Speed ____ mph

Speed limit or critical speed on major street traffic > 40 mph..... ☑ } **RURAL (R)**

or

In built up area of isolated community of < 10,000 population..... ☐ } **URBAN (U)**

☐ **URBAN (U)**

## WARRANT 1 - Eight Hour Vehicular Volume — SATISFIED YES ☑ NO ☐

**(Condition A or Condition B or combination of A and B must be satisfied)**

### Condition A - Minimum Vehicle Volume

**100% SATISFIED YES ☑ NO ☐**

**80% SATISFIED YES ☐ NO ☐**

| APPROACH LANES | MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS) U | R | U | R |
|---|---|---|---|---|
| | 1 | | 2 or More | |
| Both Approaches Major Street | 500 (400) | 350 (280) | 600 (480) | 420 (336) |
| Highest Approach Minor Street | 150 (120) | 105 (84) | 200 (160) | 140 (112) |

| Hour | 10:45 AM | 11:45 AM | 12:45 PM | 1:45 PM | 2:45 PM | 3:45 PM | 4:45 PM | 5:45 PM |
|---|---|---|---|---|---|---|---|---|
| Both Approaches Major Street | 1,719 | 1,795 | 1,767 | 1,919 | 2,078 | 2,100 | 2,295 | 1,929 |
| Highest Approach Minor Street | 222 | 217 | 258 | 243 | 283 | 254 | 237 | 216 |

### Condition B - Interruption of Continuous Traffic

**100% SATISFIED YES ☑ NO ☐**

**80% SATISFIED YES ☐ NO ☐**

| APPROACH LANES | MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS) U | R | U | R |
|---|---|---|---|---|
| | 1 | | 2 or More | |
| Both Approaches Major Street | 750 (600) | 525 (420) | 900 (720) | 630 (504) |
| Highest Approach Minor Street | 75 (60) | 53 (42) | 100 (80) | 70 (56) |

| Hour | 10:45 AM | 11:45 AM | 12:45 PM | 1:45 PM | 2:45 PM | 3:45 PM | 4:45 PM | 5:45 PM |
|---|---|---|---|---|---|---|---|---|
| Both Approaches Major Street | 1,719 | 1,795 | 1,767 | 1,919 | 2,078 | 2,100 | 2,295 | 1,929 |
| Highest Approach Minor Street | 222 | 217 | 258 | 243 | 283 | 254 | 237 | 216 |

### Combination of Conditions A & B

**SATISFIED YES ☑ NO ☐**

| REQUIREMENT | CONDITION | ✓ | FULFILLED |
|---|---|---|---|
| TWO CONDITIONS SATISFIED 80% | A. MINIMUM VEHICULAR VOLUME | | Yes ☑ No ☐ |
| | AND, B. INTERRUPTION OF CONTINUOUS TRAFFIC | | |
| AND, AN ADEQUATE TRIAL OF OTHER ALTERNATIVES THAT COULD CAUSE LESS DELAY AND INCONVENIENCE TO TRAFFIC HAS FAILED TO SOLVE THE TRAFFIC PROBLEMS | | | Yes ☑ No ☐ |

Major-street and minor-street volumes shall be for the same 8 hours for each condition; however, the 8 hours satisfied in Condition A shall not be required to be the same 8 hours satisfied in Condition B.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

## *Figure 4C-101(CA). Traffic Signal Warrants Worksheet (Sheet of 5)*

**WARRANT - Four Hour Vehicular Volume** **SATISFIED YES ☑ NO ☐**

Record hourly vehicular volumes for any four hours of an average day.

| APPROACH LANES | One | 2 or More | 1:45 PM | 2:45 PM | 3:45 PM | 4:45 PM | Hour |
|---|---|---|---|---|---|---|---|
| Both Approaches - Major Street | | ✓ | 1,919 | 2,078 | 2,100 | 2,295 | |
| Higher Approach - Minor Street | ✓ | | 243 | 283 | 254 | 237 | |

| | |
|---|---|
| All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS) | Yes ☐ No ☐ |
| OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS) | Yes ☑ No ☐ |

**WARRANT - ea Hour** **SATISFIED YES ☑ NO ☐**
**( art A or art B must be satisfied)**

**ART A** **SATISFIED YES ☐ NO ☐**

**(All parts 1 and belo must be satisfied for the same one hour for an four consecuti e 1 -minute periods)**

| | |
|---|---|
| 1. The total delay e perienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or e ceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND | Yes ☐ No ☐ not studied |
| 2. The volume on the same minor street approach (one direction only) equals or e ceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND | Yes ☑ No ☐ |
| 3. The total entering volume serviced during the hour equals or e ceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches. | Yes ☑ No ☐ |

**ART B** **SATISFIED YES ☑ NO ☐**

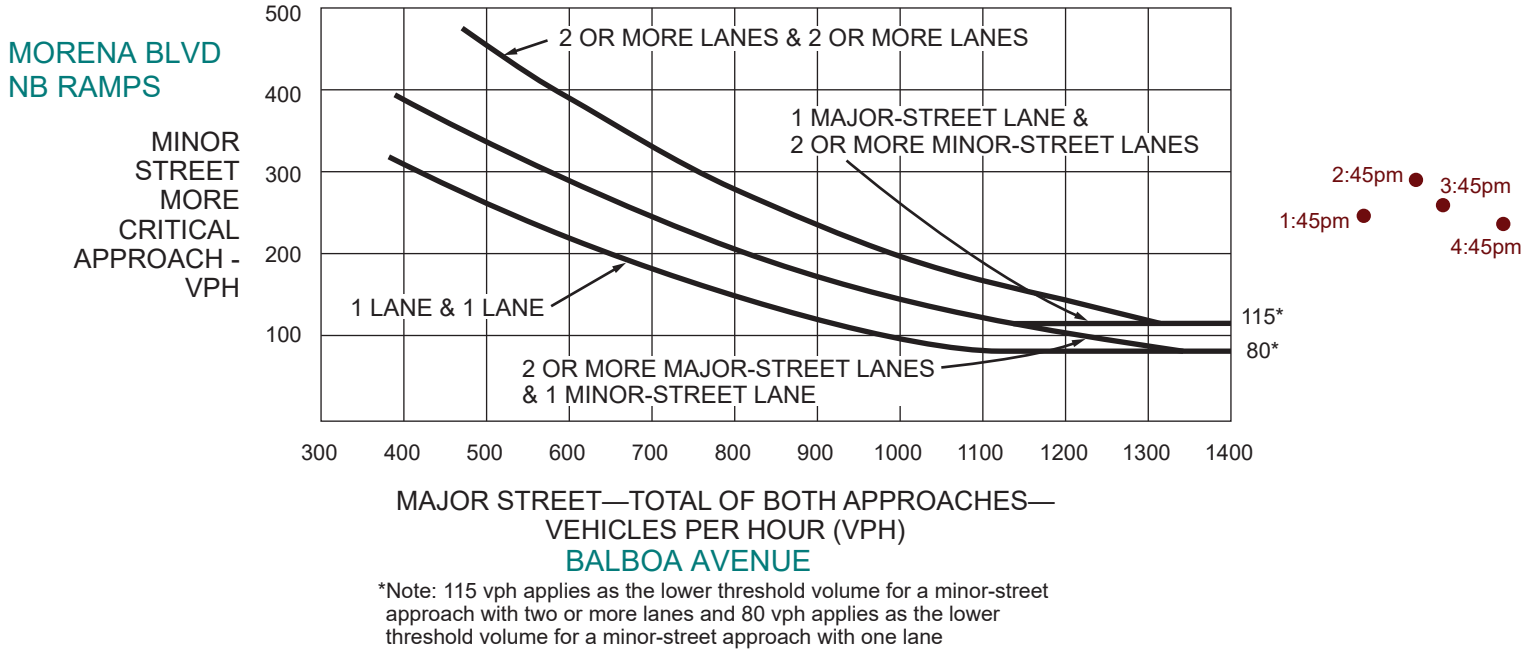
| APPROACH LANES | One | 2 or More | 4:45 PM | Hour |
|---|---|---|---|---|
| Both Approaches - Major Street | | ✓ | 2,295 | |
| Higher Approach - Minor Street | ✓ | | 237 | |

| | |
|---|---|
| The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS) | Yes ☑ No ☐ |
| OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS) | Yes ☑ No ☐ |

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

## Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume

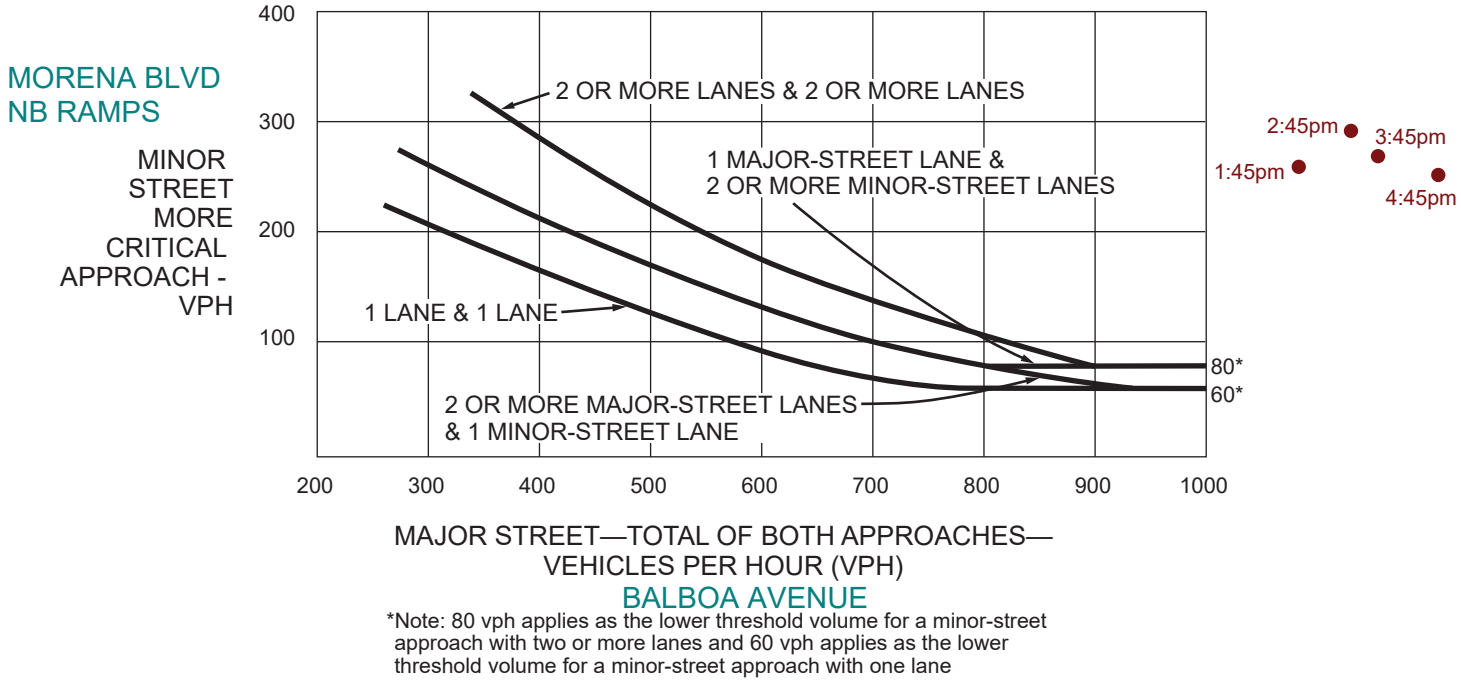
Warrant Met




*Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane

## Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)

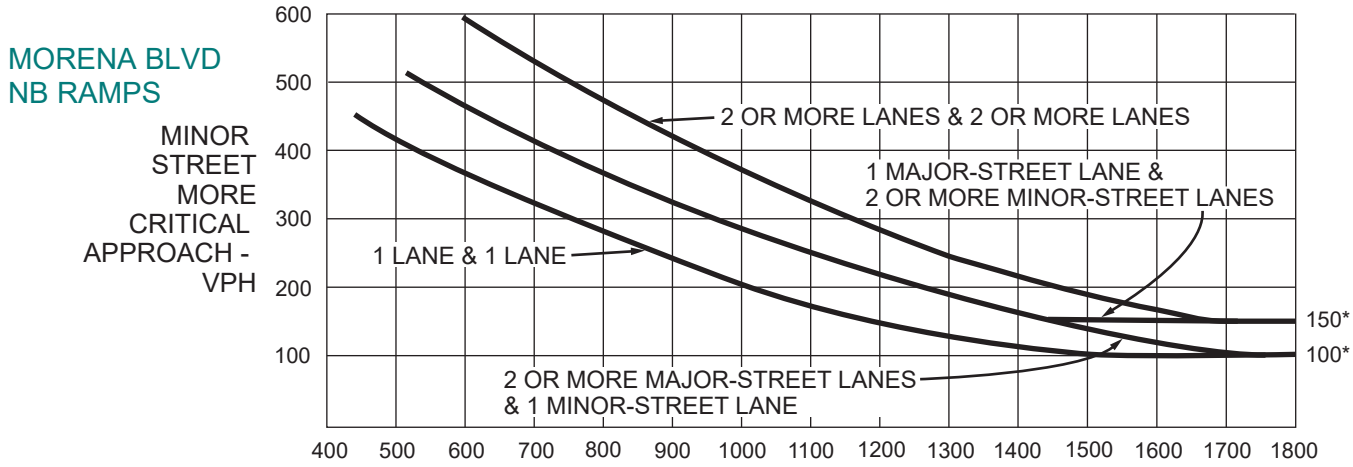
**(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)**




*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane

## Figure 4C-3. Warrant 3, Peak Hour

Warrant Met

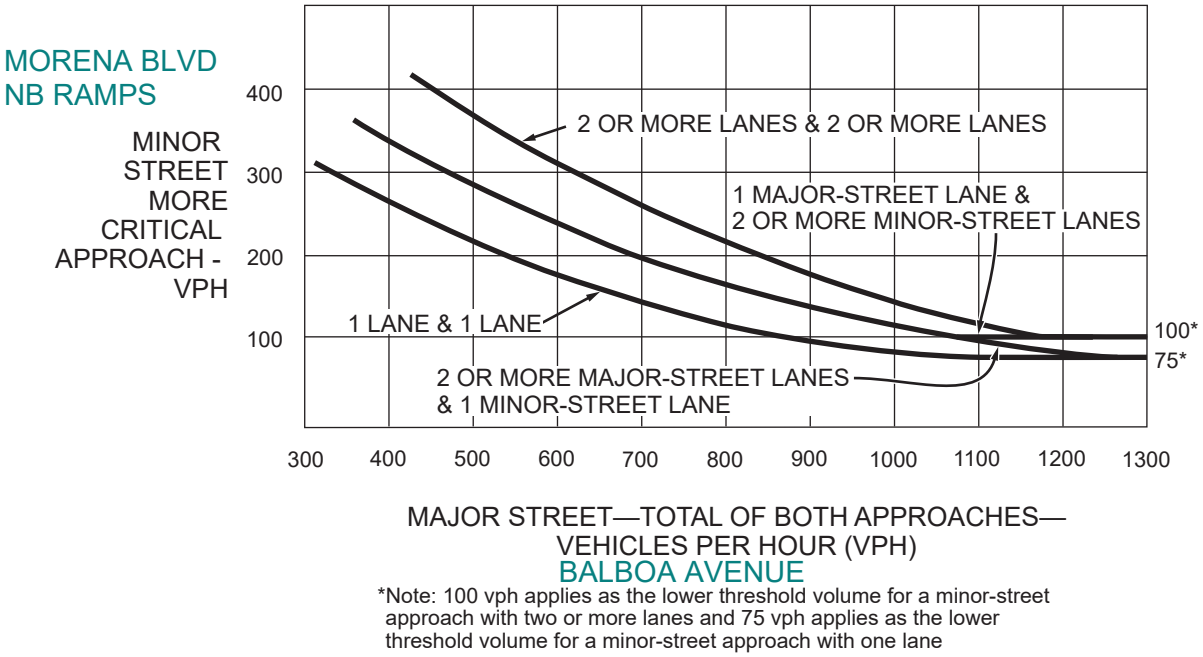



4:45pm

*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane

## Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

**(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)**




*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane

4:45pm

## *Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet of 5)*

**WARRANT - edestrian Volume**
**( arts 1 and Must Be Satisfied)**

**SATISFIED YES ☐ NO ☑**

**art 1 ( arts A or B must be satisfied)**

A.

| Hours – – -> | 10:00 AM | 2:00 PM | 3:00 PM | 4:45 PM |
|---|---|---|---|---|
| Vehicles per hour for any 4 hours | 1,602 | 1,967 | 2,116 | 2,295 |
| Pedestrians per hour for any 4 hours | 1 | 2 | 4 | 5 |

**Figure C- or Figure C-**
**SATISFIED YES ☐ NO ☑**

B.

| Hours – – -> | 4:45 PM | 5:00 PM | 5:15 PM | 5:30 PM |
|---|---|---|---|---|
| Vehicles per hour for any 1 hour | 566 | 561 | 594 | 574 |
| Pedestrians per hour for any 1 hour | 0 | 0 | 4 | 1 |

**Figure C- or Figure C-8**
**SATISFIED YES ☐ NO ☑**

**art** **SATISFIED YES ☐ NO ☑**

| | |
|---|---|
| AND, The distance to the nearest traffic signal along the major street is greater than 300 ft | Yes ☐ No ☐ |
| OR, The proposed traffic signal will not restrict progressive traffic flow along the major street. | Yes ☐ No ☐ |

---

**WARRANT - School Crossing**
**( arts A and B Must Be Satisfied)** Warrant Not Applicable

**SATISFIED YES ☐ NO ☑**

**art A** **SATISFIED YES ☐ NO ☐**

**ap Minutes and of Children**

| | | Hour |
|---|---|---|
| aps vs Minutes | Minutes Children Using Crossing | |
| | Number of Adequate aps | |
| School Age Pedestrians Crossing Street hr | | |

aps < Minutes YES ☐ NO ☐
AND Children > 20 hr YES ☐ NO ☐

| | |
|---|---|
| AND, Consideration has been given to less restrictive remedial measures. | Yes ☐ No ☐ |

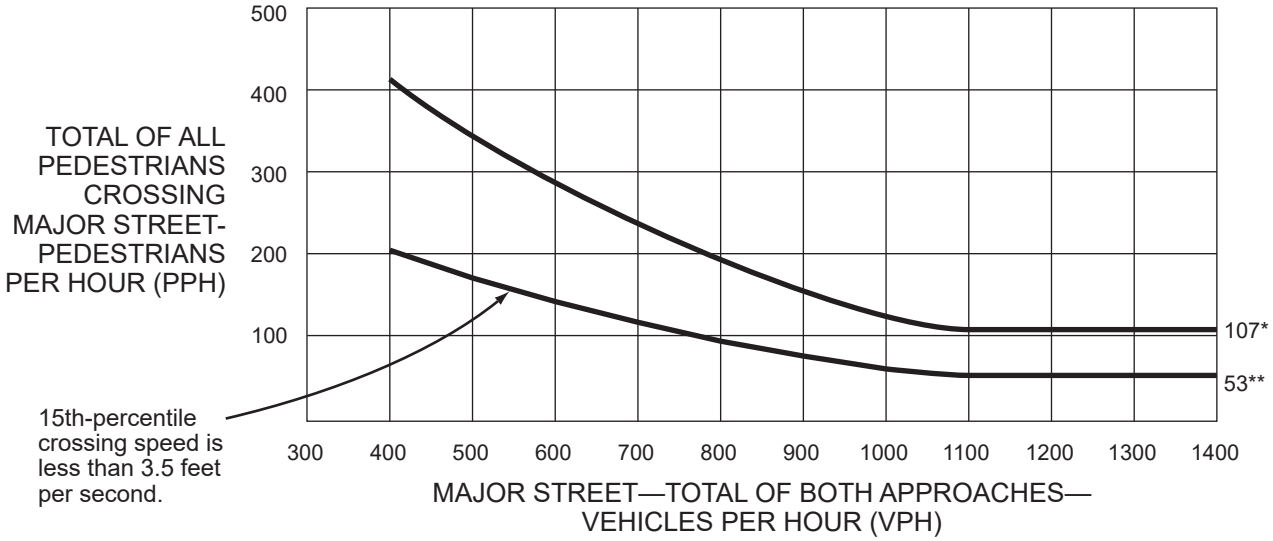
**art B** **SATISFIED YES ☐ NO ☐**

| | |
|---|---|
| The distance to the nearest traffic signal along the major street is greater than 300 ft | Yes ☐ No ☐ |
| OR, The proposed signal will not restrict the progressive movement of traffic. | Yes ☐ No ☐ |

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

## Figure 4C-5. Warrant 4, Pedestrian Four-Hour Volume

Warrant Not Met

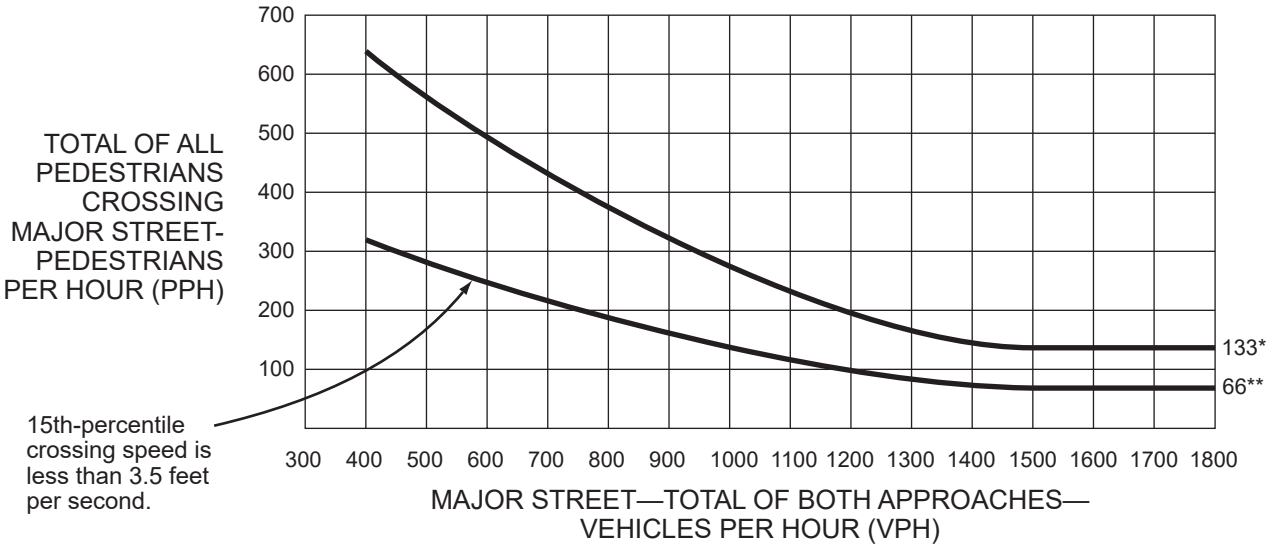



* 107 pph applies as the lower threshold volume

** 53 pph applies as the lower threshold volume if the 15th-percentile crossing speed is less than 3.5 feet per second

## Figure 4C-6. Warrant 4, Pedestrian Peak Hour

Warrant Not Met



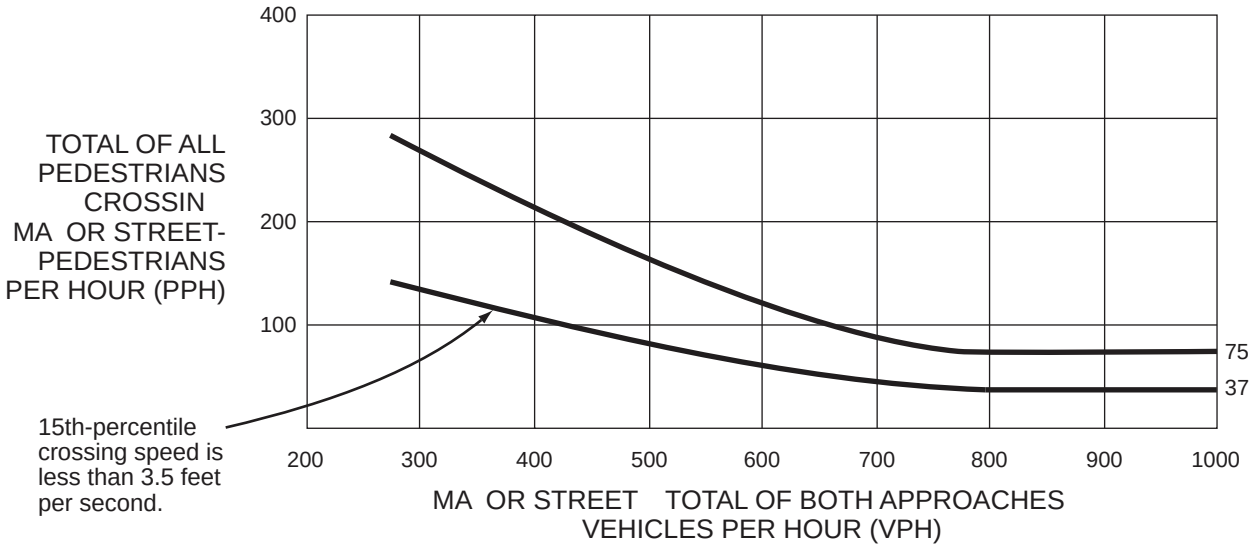

* 133 pph applies as the lower threshold volume

** 66 pph applies as the lower threshold volume if the 15th-percentile crossing speed is less than 3.5 feet per second

Warrant Not Met

## Figure C- Warrant edestrian Four-Hour Volume ( 0% Factor)

**(COMMUNITY LESS THAN 10 000 O ULATION OR ABOVE 0 M H ON MA OR STREET)**




75 pph applies as the lower threshold volume

37 pph applies as the lower threshold volume if the 15th-percentile crossing speed is less than 3.5 feet per second

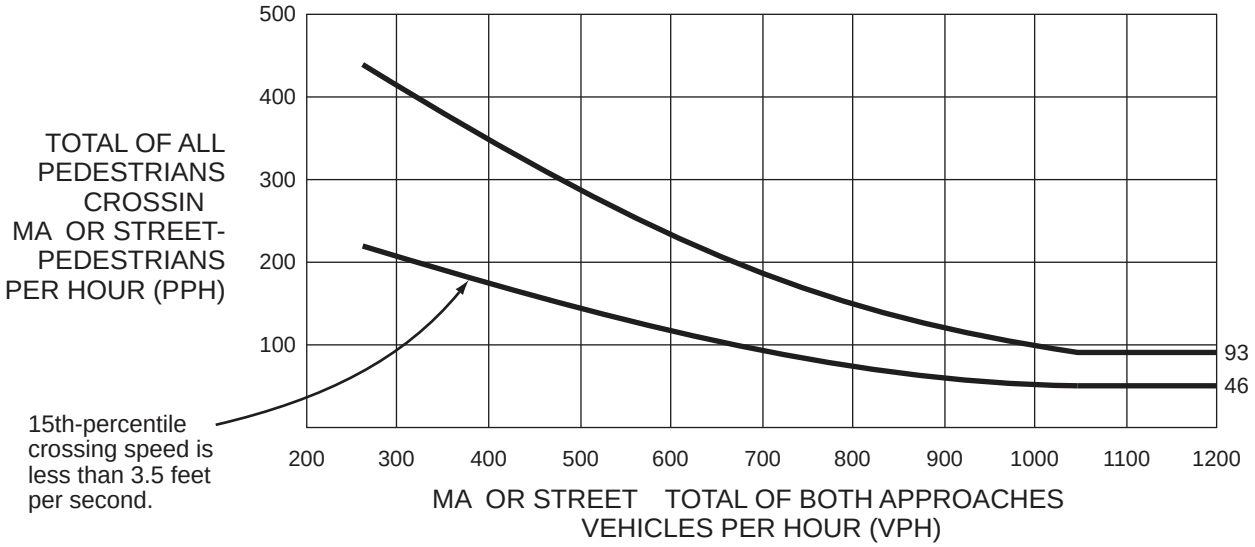
Refer to FHWA s List of Known Errors for error in the parenthesis below the figure title. Refer to Section 1A.04 for more details.

Warrant Not Applicable

Warrant Not Met

## Figure C-8 Warrant edestrian ea Hour ( 0% Factor)

**(COMMUNITY LESS THAN 10 000 O ULATION OR ABOVE 0 M H ON MA OR STREET)**




93 pph applies as the lower threshold volume

46 pph applies as the lower threshold volume if the 15th-percentile crossing speed is less than 3.5 feet per second

Refer to FHWA s List of Known Errors for error in the parenthesis below the figure title. Refer to Section 1A.04 for more details.

## *Figure 4C-101(CA). Traffic Signal Warrants Worksheet (Sheet 4 of 5)*

**WARRANT - Coordinated Signal System** **SATISFIED YES ☐ NO ☑**
**(All Parts Must Be Satisfied)**

| MINIMUM REQUIREMENTS | DISTANCE TO NEAREST SIGNAL | |
|---|---|---|
| ≥ 1000 ft | N ft, S ft, E ft, W ft | Yes ☐ No ☐ |
| On a one-way street or a street that has traffic predominantly in one direction, the adjacent traffic control signals are so far apart that they do not provide the necessary degree of vehicular platooning. | | Yes ☐ No ☑ |
| OR, On a two-way street, adjacent traffic control signals do not provide the necessary degree of platooning and the proposed and adjacent traffic control signals will collectively provide a progressive operation. | | |

**WARRANT - Crash Experience Warrant** **SATISFIED YES ☐ NO ☑**
**(All Parts Must Be Satisfied)** Fewer than 2 collisions per year reported 2020 - 2025

| | | | |
|---|---|---|---|
| Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency. | | | Yes ☐ No ☐ |
| REQUIREMENTS | Number of crashes reported within a 12 month period susceptible to correction by a traffic signal, and involving injury or damage exceeding the requirements for a reportable crash. | | Yes ☐ No ☑ |
| 5 OR MORE | | | |
| REQUIREMENTS | CONDITIONS | ✓ | Yes ☐ No ☑ |
| ONE CONDITION SATISFIED<br>**MINIMUM REPORTED CRASHES** | Table 4C-2, Angle crashes and pedestrian crashes | | |
| | OR, Table 4C-2, Fatal-and-injury angle crashes and pedestrian crashes | | |
| | OR, Table 4C-3, Angle crashes and pedestrian crashes | | |
| | OR, Table 4C-3, Fatal-and-injury angle crashes and pedestrian crashes | | |
| ONE CONDITION SATISFIED 80% | Warrant 1, Condition A - Minimum Vehicular Volume | | Yes ☐ No ☑ |
| | OR, Warrant 1, Condition B - Interruption of Continuous Traffic | | |
| | OR, Warrant 4, Pedestrian Volume Condition<br>Ped Vol ≥ 80% of Figure 4C-5 through Figure 4C-8 | | |

**WARRANT 8 - Road a Net or** **SATISFIED YES ☐ NO ☑**
**(All Parts Must Be Satisfied)**

| MINIMUM VOLUME REQUIREMENTS | ENTERING VOLUMES - ALL APPROACHES | ✓ | FULFILLED |
|---|---|---|---|
| 1000 Veh Hr | During Typical Weekday Peak Hour Veh Hr<br>and has 5-year projected traffic volumes that meet one or more of Warrants 1, 2, and 3 during an average weekday. | | Yes ☐ No ☐ |
| | OR<br>During Each of Any 5 Hrs. of a Sat. or Sun Veh Hr | | |

| CHARACTERISTICS OF MAJOR ROUTES | MAJOR ROUTE A | MAJOR ROUTE B | |
|---|---|---|---|
| Hwy. System Serving as Principal Network for Through Traffic | | | |
| Rural or<br>Suburban Highway Outside Of, Entering, or Traversing a City | | | |
| Appears as Major Route on an Official Plan | ✓ | No | |
| Any Major Route Characteristics Met, Both Streets | | | Yes ☐ No ☑ |

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

## *Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 5 of 5)*

Warrant Not Applicable

**WARRANT - Intersection Near a rade Crossing** **SATISFIED YES ☐ NO ☑**
**(Both arts A and B Must Be Satisfied)**

| | |
|---|---|
| **ART A**<br><br>A grade crossing e ists on an approach controlled by a STOP or YIELD sign and the center of the trac nearest to the intersection is within 140 feet of the stop line or yield line on the approach. Trac Center Line to Limit Line ft | Yes ☐ No ☐ |
| **ART B**<br><br>**There is one minor street approach lane at the trac crossing -** During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point falls above the applicable curve in Figure 4C-9.<br><br>Major Street - Total of both approaches: VPH<br>Minor Street - Crosses the trac (one direction only, approaching the intersection):<br>VPH AF (Use Tables 4C-2, 3, 4 below to calculate AF) VPH | Yes ☐ No ☐ |
| **OR There are t o or more minor street approach lanes at the trac crossing -**<br>During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point falls above the applicable curve in Figure 4C-10.<br><br>Major Street - Total of both approaches : VPH<br>Minor Street - Crosses the trac (one direction only, approaching the intersection):<br>VPH AF (Use Tables 4C-2, 3, 4 below to calcualte AF) VPH | |

The minor street approach volume may be multiplied by up to three following adjustment factors (AF) as described in Section 4C.10.

1- Number of Rail Traffic per Day — Adjustment factor from table 4C-2

2- Percentage of High-Occupancy Buses on Minor Street Approach — Adjustment factor from table 4C-3

3- Percentage of Tractor-Trailer Truc s on Minor Street Approach — Adjustment factor from table 4C-4

NOTE: If no data is availale or nown, then use AF 1 (no adjustment)

# Attachment C – Statewide Integrated Traffic Records System (SWITRS) Data

# 252382 Jun 1, 2020 - Av. 2023/2024/2025 Crashes within 200 ft of Balboa Av/Garnet Av and Morena Bl, City of San Diego, San Diego Co.



Primary Rd MORENA BL | Distance(ft) I | Direction | Secondary Rd GARNET AV | NCIC 3711 | State Hwy? N | Route | Postmile Prefix | Postmile | Side of Hwy
City SAN DIEGO | County SAN DIEGO | Population 7 | Rpt Dist | Beat 113 | Type | CalTrans Dist | Badge SD7390 | Crash Date 20210909 | Time 1200 | Day THU
Primary Crash Factor UNSAFE SPEED | Violation 22350 | Crash Type REAR END | Severity INJURY | # Killed 0 | # Injured 1 | Tow Away? N | Process Date 20210928
Weather1 CLEAR | Weather2 | Rdwy Surface DRY | Rdwy Cond1 NO UNUSL CND | Rdwy Cond2 | Spec Cond 0
Hit and Run | Motor Veh Involved With OTHER MV | Lighting DAYLIGHT | Ped Action | Cntrl Dev FNCTNG | Loc Type | Ramp/Int
Latitude | Longitude | Local Rpt # 21205995 | Case ID 9327543

| PARTY INFO | | | | | | | | | | | | | | | | | VICTIM INFO | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Party | Type | Age | Sex | Race | Sobriety1 | Sobriety2 | Move Pre Crash | Dir | SW Veh | Chp Veh | Make | Year | Sp Info | OAF1 Viol | OAF2 | Safety Equip | Role | Ext Of Inj | Age | Sex | Seat Pos | Safety Equip | Ejected |
| 1F | DRVR | 49 | M | A | HNBD | | PROC ST | N | A | 0700 | - | 2007 | - | - | A 22350 | E | M G | | | | | | | |
| 2 | DRVR | 49 | M | W | HNBD | | STOPPED | N | D | 2200 | - | 2018 | - | - | E | - | M G | DRVR | COMP PN | 49 | M | 1 | M G | 0 |

Primary Rd BALBOA | Distance(ft) I | Direction | Secondary Rd MORENA BL | NCIC 3711 | State Hwy? N | Route | Postmile Prefix | Postmile | Side of Hwy
City SAN DIEGO | County SAN DIEGO | Population 7 | Rpt Dist | Beat 113 | Type | CalTrans Dist | Badge SD1529 | Crash Date 20220603 | Time 0830 | Day FRI
Primary Crash Factor LANE CHANGE | Violation 21658A | Crash Type HIT OBJECT | Severity INJURY | # Killed 0 | # Injured 1 | Tow Away? Y | Process Date 20220629
Weather1 CLOUDY | Weather2 | Rdwy Surface DRY | Rdwy Cond1 NO UNUSL CND | Rdwy Cond2 | Spec Cond 0
Hit and Run | Motor Veh Involved With FIXED OBJ | Lighting DAYLIGHT | Ped Action | Cntrl Dev FNCTNG | Loc Type | Ramp/Int
Latitude | Longitude | Local Rpt # 22203205 | Case ID 9460344

| PARTY INFO | | | | | | | | | | | | | | | | | VICTIM INFO | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Party | Type | Age | Sex | Race | Sobriety1 | Sobriety2 | Move Pre Crash | Dir | SW Veh | Chp Veh | Make | Year | Sp Info | OAF1 Viol | OAF2 | Safety Equip | Role | Ext Of Inj | Age | Sex | Seat Pos | Safety Equip | Ejected |
| 1F | DRVR | 24 | F | W | HNBD | | RGT TURN | E | A | 0100 | - | 2014 | - | - | - | - | L G | DRVR | OTH VIS | 24 | F | 1 | L G | 0 |

Primary Rd BALBOA AV | Distance(ft) I | Direction | Secondary Rd MORENA BL | NCIC 3711 | State Hwy? N | Route | Postmile Prefix | Postmile | Side of Hwy
City SAN DIEGO | County SAN DIEGO | Population 7 | Rpt Dist | Beat 113 | Type | CalTrans Dist | Badge SD1666 | Crash Date 20231112 | Time 1450 | Day SUN
Primary Crash Factor TOO CLOSE | Violation 21703 | Crash Type REAR END | Severity INJURY | # Killed 0 | # Injured 1 | Tow Away? N | Process Date 20240131
Weather1 CLEAR | Weather2 | Rdwy Surface DRY | Rdwy Cond1 NO UNUSL CND | Rdwy Cond2 | Spec Cond 0
Hit and Run | Motor Veh Involved With | Lighting DAYLIGHT | Ped Action | Cntrl Dev NT PRS/FCTR | Loc Type | Ramp/Int
Latitude | Longitude | Local Rpt # 23206602 | Case ID 9642721

| PARTY INFO | | | | | | | | | | | | | | | | | VICTIM INFO | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Party | Type | Age | Sex | Race | Sobriety1 | Sobriety2 | Move Pre Crash | Dir | SW Veh | Chp Veh | Make | Year | Sp Info | OAF1 Viol | OAF2 | Safety Equip | Role | Ext Of Inj | Age | Sex | Seat Pos | Safety Equip | Ejected |
| 1F | DRVR | 24 | F | W | HNBD | | PROC ST | W | A | 0100 | - | 2012 | - | 3 | A 21703 | E | M C | | | | | | | |
| 2 | BICY | 47 | M | W | | | PROC ST | W | L | 0400 | - | | - | - | E | F | - - | BICY | SEVERE | 47 | M | 1 | P A | 0 |

Primary Rd MORENA BL | Distance(ft) 0 | Direction | Secondary Rd BALBOA AV | NCIC 3711 | State Hwy? Y | Route | Postmile Prefix | Postmile | Side of Hwy
City SAN DIEGO | County SAN DIEGO | Population 7 | Rpt Dist | Beat 114 | Type | CalTrans Dist | Badge SD1605 | Crash Date 20241101 | Time 2018 | Day FRI
Primary Crash Factor IMPROP TURN | Violation 22107 | Crash Type OTHER | Severity INJURY | # Killed 0 | # Injured 1 | Tow Away? N | Process Date 20241121
Weather1 CLEAR | Weather2 | Rdwy Surface DRY | Rdwy Cond1 NO UNUSL CND | Rdwy Cond2 | Spec Cond 0
Hit and Run | Motor Veh Involved With NON-CLSN | Lighting DARK - NO ST LTS | Ped Action | Cntrl Dev FNCTNG | Loc Type | Ramp/Int
Latitude | Longitude | Local Rpt # 24206647 | Case ID 9753257

| PARTY INFO | | | | | | | | | | | | | | | | | VICTIM INFO | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Party | Type | Age | Sex | Race | Sobriety1 | Sobriety2 | Move Pre Crash | Dir | SW Veh | Chp Veh | Make | Year | Sp Info | OAF1 Viol | OAF2 | Safety Equip | Role | Ext Of Inj | Age | Sex | Seat Pos | Safety Equip | Ejected |
| 1F | DRVR | 55 | M | W | HBD-NUI | | RGT TURN | E | C | 0200 | - | 1957 | - | - | E | - | P W | DRVR | OTH VIS | 55 | M | 1 | P W | 0 |

Report run on: 7/24/2025
Total Count: 1

# 252382 Jun 1, 2020 - Av. 2023/2024/2025 Crashes within 200 ft of Morena Bl and Jutland Dr, City of San Diego, San Diego Co.

Case Listing


| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Primary Rd | MORENA BL | Distance(ft) | 30 | Direction | S | Secondary Rd | JUTLAND DR | | | NCIC | 3711 | State Hwy? | N | Route | | Postmile Prefix | | Postmile | | Side of Hwy | | | | |
| City | SAN DIEGO | County | SAN DIEGO | | | Population | 7 | Rpt Dist | | Beat | 113 | Type | | CalTrans Dist | | Badge | SD7795 | Crash Date | 20200907 | Time | 0155 | Day | MON | |
| Primary Crash Factor | IMPROP TURN | | | | | Violation | 22107 | Crash Type | HIT OBJECT | | | Severity | INJURY | # Killed | 0 | # Injured | 1 | Tow Away? | Y | Process Date | 20210121 | | | |
| Weather1 | CLEAR | Weather2 | | | | Rdwy Surface | DRY | | | Rdwy Cond1 | NO UNUSL CND | | | Rdwy Cond2 | | | | | | Spec Cond | 0 | | | |
| Hit and Run | | Motor Veh Involved With | | FIXED OBJ | | | | Lighting | DARK - ST LTS | | | Ped Action | | | | Cntrl Dev | NT PRS/FCTR | | | Loc Type | | Ramp/Int | | |
| Latitude | | Longitude | | Local Rpt # | 20044486 | | | Case ID | 9151570 | | | | | | | | | | | | | | | |

**PARTY INFO**

| Party | Type | Age | Sex | Race | Sobriety1 | Sobriety2 | Move Pre Crash | Dir | SW | Veh Chp | Veh Make | Year | Sp Info | OAF1 | Viol | OAF2 | Safety Equip |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1F | DRVR | 998 | M | H | HBD-UI | PHYS | PROC ST | N | A | 0100 | - | 2003 | - | - | E | M | L - |

**VICTIM INFO**

| Role | Ext Of Inj | Age | Sex | Seat Pos | Safety Equip | Ejected |
|---|---|---|---|---|---|---|
| DRVR | SEVERE | 998 | M | 1 | L G | 0 |