Engineering & Traffic Survey For Hoover Street

Prepared for the

City of Westminster

March 2026

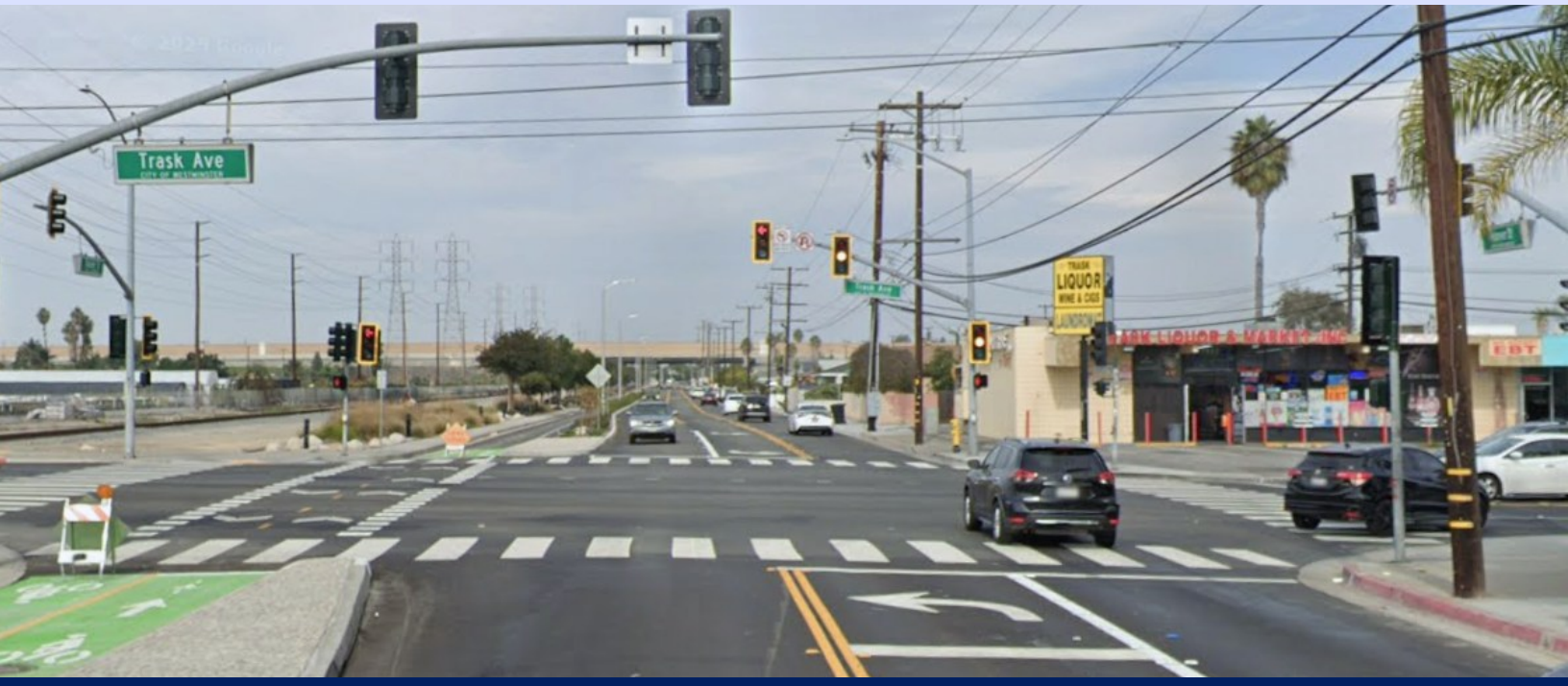

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TABLE OF CONTENTS

CERTIFICATION

I, Ruben Perales, do hereby certify that this Engineering and Traffic Survey for the City of Westminster was performed under my supervision and is accurate and complete. I certify that I am both experienced in performing surveys of this type and duly registered in the State of California as a professional Traffic Engineer.

3/17/2026

Ruben Perales Date
RCE #83169, RTE #2838

Traffic No. 2838

SECTION 1.0 – INTRODUCTION

The purpose of this report is to document the results of an Engineering and Traffic Survey (E&TS) conducted to update the speed limits along Hoover Street in the City of Westminster, which underwent roadway characteristic changes due to the construction of the new Class IV separated bikeway along the west side of Hoover Street.

The overall study was conducted to comply with existing State regulations concerning the increasing or decreasing of speed limits within city boundaries. Roadways within business and residential districts have an established speed limit of 25 miles per hour, while alleys and blind intersections are 15 miles per hour. Both speed limits are designated by California law. As such they are not typically included in the study. Intermediate speed limits between 25 and 65 miles per hour may be established by local authorities based on engineering and traffic surveys.

The California Vehicle Code (CVC) requires that speed limits be established in accordance with appropriate engineering practice and methods. Excerpts from the CVC regarding regulations governing speed limits and definition of terms used in speed zone surveys are detailed in **Appendix A**.

Spot speed surveys were taken at the four (4) segments along Hoover Street in conformance with the State law for conducting engineering and traffic surveys for the purpose of establishing prima facie speed limits. The data was collected per the 2026 California Manual on Uniform Traffic Control Devices (CA MUTCD). Sections of the CA MUTCD detailing regulations for conducting the required "Engineering and Traffic Survey" are presented in **Appendix B**.

The actual spot speed zone surveys were conducted by AGA Engineers, Inc. on March 3, 2026. A California registered traffic engineer from AGA reviewed the streets, the survey data, and the crash statistics to arrive at the recommended speed limits for each segment.

The study involved three categories of data collection and analysis: (1) geometric and characteristic street surveillance; (2) collision rate analysis; and (3) spot speed survey.

The street surveillance process used field observations to determine the existing roadway characteristics, condition and placement of signs and pavement markings, land uses, pedestrian and bicycle activity, and other roadway characteristics that may not be readily apparent to motorists.

Historical collision data was obtained from the Statewide Integrated Traffic Records System (SWITRS) for the period from January 1, 2023, to December 31, 2025 (i.e., three years) for the roadway segments. The collision rate was calculated and considered in recommending the speed limit by using the average daily traffic (ADT) volumes collected by National Data & Surveying (NDS) in March 2026 shown in **Appendix E** and the historical collision data.

Spot speed surveys, utilizing a calibrated radar gun, were conducted at the two segment locations to determine existing vehicular travel speeds. A copy of the "Engineering and Traffic Survey Summary Reports"

and a copy of the "Traffic Radar Certification" is provided in **Appendix C** and **Appendix D**. Typically, a minimum of 100 observations were recorded, 50 for each direction of travel, on all the streets included in the study. This data was used to calculate statistical information such as the 85th percentile travel speed, 10-mile per hour (mph) pace speed, percentage of vehicles within the 10-mph pace, median speed, and other pertinent data for analysis.

SECTION 2.0 – STUDY METHODOLOGY

The study involved three categories of data collection and analysis: (1) geometric and characteristic street surveillance; (2) collision rate analysis; and (3) spot speed survey.

The street surveillance process used field observations to determine the existing roadway characteristics, condition and placement of signs and pavement markings, land uses, pedestrian and bicycle activity, and other roadway characteristics that may not be readily apparent to motorists.

Historical collision data was obtained from the Statewide Integrated Traffic Records System (SWITRS) for the period from January 1, 2023, to December 31, 2025 (i.e., three years) for the roadway segments. The collision rate was calculated and considered in recommending the speed limit by using the average daily traffic (ADT) volumes collected as part of the project.

Spot speed surveys, utilizing a calibrated radar gun, were conducted at four (4) segment locations along Hoover Street to determine existing vehicular travel speeds. A copy of the "Traffic Radar Certification" is provided in **Appendix D**. Typically, a minimum of 100 observations were recorded, 50 for each direction of travel, on all the streets included in the study. This data was used to calculate statistical information such as the 85th percentile travel speed, 10 mile per hour (mph) pace speed, percentage of vehicles within the 10-mph pace, median speed, and other pertinent data for analysis.

SECTION 3.0 – SURVEY RESULTS

3.1 Street Surveillance

Section 2B.21 "Speed Limit Sign" of the CA MUTCD (see **Appendix B**) states that the speed limit should be established at the nearest five mile per hour increment (rounded per standard mathematical practice) to the 85th percentile speed recorded during the spot speed survey. However, in matching existing conditions with the traffic safety needs of the community, engineering judgment may indicate the need for a further change in speed. Whenever such factors are considered to establish the speed limit, they should be documented in the speed survey or in the accompanying engineering report.

The survey streets were reviewed by Mr. Ruben Perales, P.E., T.E, Vice President at AGA Engineers, Inc., who is a registered Traffic Engineer in the State of California. The roadway characteristics, location of speed limit signs, conditions not readily apparent to the driver, land use types adjoining the street (commercial, residential, school zone, parks, etc.), and type of roadway (divided, undivided, number of lanes, etc.) were recorded as part of the study. The roadway characteristics were used to determine if any physical conditions warranted consideration of a five mile per hour reduction of the recommended speed in accordance with CVC Section 627 and if roadway segments have changed since the preparation of the previous E&TS which was completed in 2020. The speed survey segment roadway characteristics for each segment are indicated on the Engineering and Traffic Survey Summary sheets in **Appendix C**.

3.2 Accident Rate Analysis

The collision rate for each speed survey segment was determined using the most recent collision records as required by CVC Section 627. The mid-block collision totals are based on a review of the collision reports from SWITRS from January 1, 2023, to December 31, 2025. Subsequently, these totals were used to calculate the mid-block collision rate, which also uses ADT volume data. The mid-block collision rate for each street surveyed was calculated in terms of "collisions per million vehicle miles traveled" (C/MVM).

The rate was calculated using the following equation:

$$\text{Collision Rate} = \frac{\text{Number of Midblock Collisions} \times 10^6}{\text{24-hour volume} \times 365 \times \text{segment length} \times \text{number of years}}$$

The number of mid-block collisions is based on three years' collision data (January 1, 2023, to December 31, 2025), recent 24-hour traffic volume (for both directions) within the survey segment, and the segment's length given in miles. The results of the collision rate calculations, including the Average Expected Collision Rates for each type of roadway, are shown in **Table 1.** The following Average Expected Collision Rates were obtained from "2023 Collision Data on California State Highways" published by the California Department of Transportation (Caltrans):

- Conventional 2 lanes or less (<45 mph): 1.07 C/MVM

City of Westminster
Table 1. 2026 Accident Survey Analysis

Street	No.	Location	Distance (mile)	Distance (feet)	ADT	Accidents 3 Year Total	Accident Rate	Expected Acc. Rate
Hoover Street	1	Garden Grove Blvd to Trask Ave	0.50	2,660	10,921	0	0.00	1.07
	2	Trask Ave to Westminster Blvd	0.50	2,660	9,877	14	2.57	1.07
	3	Westminster Blvd to Hazard Ave	0.49	2,600	7,226	3	0.77	1.07
	4	Hazard Ave to Bolsa Ave	0.51	2,680	5,990	1	0.30	1.07

3.3 Spot Speed Survey

Spot speed surveys were conducted at each street segment to assess the actual behavior of the majority of motorists. A reasonable and effective speed limit is based on the premise that a speed limit, thus established, conforms to the actual behavior of the majority of motorists. The speed limit should typically be established at the five mph increment nearest the 85th percentile speed recorded for the surveyed segment. However, engineering judgment and other factors such as street surveillance (Section 3.1) and collision rates (Section 3.2) may indicate the need for further reduction in establishing reasonable and effective speed limits.

The criteria used in conducting the radar survey are listed in Appendix B. The information collected and data calculated for the radar speed survey are as follows:

- Date and time of speed survey
- Direction of survey
- Number of vehicles observed
- Pedestrian and bicycle activity
- Road description
- Average Daily Traffic
- Collision history and rate
- Posted speed limit
- Average speed
- Range of speeds
- 50th and 85th Percentile speed
- 10 mph and percent over pace speed

Appendix C contains information about vehicular speed data observed, collision data, street classification, and any unusual conditions at the location.

SECTION 4.0 – SURVEY FINDINGS AND RECOMMENDATIONS

In accordance with the State-imposed speed limit establishment regulation as defined by CVC Section 627 and the recently adopted Assembly Bill No. 43, there are several factors that may be considered to justify setting the prima facie speed limits five miles per hour below the observed 85th percentile speed.

It should be noted that the regulations found in **Appendix B** also state that "the establishment of a speed limit of five mph below the 85th percentile speed should be done with great care".

The factors to be considered are:

- Most recent accident record (mid-block)
- Roadway design speed
- Safe stopping sight distance
- Super-elevation
- Grades
- Shoulder condition
- Profile condition
- Intersection spacing offsets
- Commercial driveway characteristics (land use)
- Pedestrian traffic with and without sidewalks
- Pedestrian and bicycle safety

The above factors for each roadway segment surveyed are listed in the Engineering and Traffic Survey Summary sheets in **Appendix C**. The 85th percentile speed and the above factors were considered in verifying existing speed limits and recommending speed limit changes (increase or decrease). The 2026 Accident Survey Analysis (Table 1) lists the total number of accidents, calculated accident rate, and the expected accident rate. **Table 2** on the next page shows the surveyed road segments with posted and recommended speed limits. California Vehicle Code sections are defined in **Appendix A**.

4.1 Speed Limit Signing

All California motorists are required to know the basic 15, 25, and 65 mph statutory or prima facie speed laws and are tested on the subject when applying for a driver's license. The maximum speed limit on most California highways is 65 mph. However, drivers are permitted to travel 70 mph where posted as such. Unless otherwise posted, the maximum speed limit in California is 55 mph on two-lane undivided highways and for vehicles towing trailers – provided the street is not within a business or residential district. Consequently, speed limit signs covering these prima facie conditions need not be posted on city streets. Although not required by law, speed limit signs for these limits can be posted by a jurisdiction when an engineer determines doing so would enhance public awareness and compliance of the basic speed law.

Typically, such postings occur upon streets that have the following:

- Significant daily vehicular traffic volumes
- Significant grades
- Safe stopping sight distance
- Other unusual characteristics
- Cut-through traffic problems
- Continued violation of 25 mph speed zones
- Commercial driveway characteristics (land use)

Table 2: 2026 Segment Spot Speed Survey - City of Westminster

Street	No	Location	Direction	Date	10-Mile Pace (mph)	% in 10-Mile Pace	50th % Tile (mph)	85th % Tile (mph)	Existing Speed Limit (mph)	Recommended Speed Limit (mph)	Comments
Hoover Street	1	Garden Grove Blvd to Trask Ave	N/S	3/3/2026	33-42	84	36	40	40	35	Decrease, Class IV Bikeway, Uncontrolled Pedestrian Crossing, On-Stret Parking, CVC 22358.6(b)
	2	Trask Ave to Westminster Blvd	N/S	3/3/2026	29-38	88	32	36	40	35	Decrease, Class IV Bikeway, Senior Apartments, CVC 22358.6(a)
	3	Westminster Blvd to Hazard Ave	N/S	3/3/2026	28-37	84	32	37	40	35	Decrease, Class IV Bikeway, School, On-Street Parking, CVC 22358.6(a)
	4	Hazard Ave to Bolsa Ave	N/S	3/3/2026	32-41	87	37	40	40	35	Decrease, Class IV Bikeway, CVC 22358.6(b)

It is standard engineering practice to recommend the posting of speed limit signs only on streets that have specific speed limits enacted by city ordinance or determined to be justified by an engineer who has performed an E&TS.

When an E&TS shows that the statutory or prima facie speed limits are not applicable for the existing conditions, the speed limits can be altered with the posting of a different speed limit, which must be determined according to the findings of the study. CVC Section 22354 covers decreasing highway speeds from 65 mph, and CVC Section 22358 addresses decreasing local speed limits. The CVC does not address decreasing the speed limit below 55 mph on undivided highways; however, the CA MUTCD states that speed zones (other than statutory speed limits) shall only be established based on an E&TS that has been performed in accordance with traffic engineering practices. Even though it is not codified in the CVC, Caltrans has established the practice of using an E&TS for any reduction below a statutory 55 mph speed limit. Law enforcement agencies and courts are accustomed to seeing surveys for these areas and it may be difficult to defend a speed violation citation without one.

Speed limit signs should be installed at approximately every one-half mile on streets which have been speed zoned. Signs are typically installed at the beginning of the speed zone on the departure side of a traffic signal-controlled intersection. It is also advisable to install signs at key intersections where there is high side street vehicle entry. It is important that motorists be given adequate notice of the speed limit without over signing, since doing so increases maintenance costs and rarely results in increased compliance.

The CA MUTCD outlines speed limit sign size specifications based on the type of roadway facility. Sign sizes vary from a minimum of 24-inches by 30-inches on a single lane conventional roadway to 48-inches by 60-inches on a freeway. It is also important to post signs in a manner that they are clearly visible to approaching traffic from a distance. Care should be taken to maintain landscaping and other vegetation, so it does not grow to block the motorist's view of the signs. In certain circumstances, when an engineer has determined that additional motorist awareness of the speed limit is needed, the speed limit can also be painted on the roadway surface immediately adjacent to a speed limit sign.

Enforcement problems can occur when, (a) the highway is posted with inappropriate speed limit signs, (b) the highway is improperly or inadequately posted, or (c) the highway is not posted nor covered by ordinance and therefore falls under the basic speed law. In any of these events, the result is a debatable validity that may be questioned in court cases where citations are issued and contested.

SECTION 5.0 – SUMMARY AND CONCLUSIONS

An engineering speed study was conducted per CVC Section 627 and includes documentation of existing roadway conditions, radar spot speed surveys, and midblock collision analysis. A total of four (4) roadway segments along Hoover Street were surveyed. The collision rate for these segments is well below the expected collision rates published by the State of California for roadways within Orange County unless otherwise noted. Based on the radar speed survey, collision history, and field conditions, it is recommended that the existing speed limits along the Hoover Street segments be decreased from 40 mph to 35 mph as follows.

Speed Limit Decreases

- **Hoover Street between Garden Grove Boulevard and Trask Avenue**, it is recommended that the existing speed limit of 40 mph be decreased to 35 mph. Based on the 85th percentile speed of 40 mph, the existing Class IV separated bikeway, the uncontrolled pedestrian crossing, the presence of on-street parking, and CVC 22358.6(b), it is recommended that the speed limit be set at **35 mph**.

- **Hoover Street between Trask Avenue and Westminster Boulevard**, it is recommended that the existing speed limit of 40 mph be decreased to 35 mph. Based on the 85th percentile speed of 36 mph, the existing Class IV separated bikeway, the senior apartments, and CVC 22358.6(a), it is recommended that the speed limit be set at **35 mph**.

- **Hoover Street between Westminster Boulevard and Hazard Avenue**, it is recommended that the existing speed limit of 40 mph be decreased to 35 mph. Based on the 85th percentile speed of 37 mph, the existing Class IV separated bikeway, being adjacent to Webber Elementary School, the presence of on-street parking, and CVC 22358.6(a), it is recommended that the speed limit be set at **35 mph**.

- **Hoover Street between Hazard Avenue and Bolsa Avenue**, it is recommended that the existing speed limit of 40 mph be decreased to 35 mph. Based on the 85th percentile speed of 40 mph, the existing Class IV separated bikeway, for continuity of speed, and CVC 22358.6(b), it is recommended that the speed limit be set at **35 mph**.

APPENDIX A

Regulations Governing Speed Limits and Definition of Terms

Excerpts from California Vehicle Code
Assembly Bill 43 (AB 43)

RADAR SPEED ZONE SURVEYS

Applicable Vehicle Code Sections

Business District

235. A "business district: is that portion of a highway and the property contiguous thereto (a) upon one side of which highway, for a distance of 600 feet, 50 percent of more of the contiguous property fronting thereon is occupied by buildings in use for business, or (b) upon both sided of which highway, collectively, for a distance of 300 feet, 50 percent or more of the contiguous property fronting thereon is so occupied. A business district may be longer than the distance specified in this section if the above ratio of buildings in use for business to the length of the highway exists.

Business and Residence District: Determination

240. In determining whether a highway is within a business or residence district, the following limitations shall apply and shall qualify the definitions Section 235 and 515:
   a) No building shall be counted unless its entrance faces the highway and the front of the building is within 75 feet of the roadway.
   b) Where a highway is physically divided into two or more roadways, only those buildings facing each roadway separately shall be counted for the purpose of determining whether the roadway is within a district.
   c) All churches, apartments, hotels, multiple dwelling houses, clubs and public buildings, other than schools, shall be deemed to be business structures.
   d) A highway or portion of a highway shall not be deemed to be within a district regardless of the number of buildings upon the contiguous property if there is no right of access to the highway by vehicles from the contiguous property.

Residence District

515. A "residence district" is that portion of a highway and the property contiguous thereto, other than a business district, (a) upon one side of which highway, within a distance of a quarter of a mile, the contiguous property fronting thereon is occupied by 13 or more separate dwelling houses or business structures, or (b) upon both sided of which highway, collectively, within a distance of a quarter of a mile, the contiguous property fronting thereon is occupied by 16 or more separate dwelling housed or business structures. A residence district may be longer than one quarter of a mile if the above ratio of separate dwelling houses or business structures to the length of the highway exists.

Engineering and Traffic Survey

627. (a) "Engineering and traffic survey" as used in this Code, means a survey of highway and traffic conditions in accordance with methods determined by the Department of Transportation for use by the state and local authorities.

(b) An engineering and traffic survey shall include, among other requirements deemed necessary by the department, consideration of all the following:
   1) Prevailing speeds as determined by traffic engineering measurements.

2) Prevailing speeds as determined by traffic engineering measurements.
3) Accident records.
4) Highway, traffic, and roadside conditions not readily apparent to the driver.

(c) When conducting an engineering and traffic survey, local authorities, in addition to the factors set forth in paragraphs (1) to (3), inclusive, of subdivision (b) may consider all of the following:

1) Residential density, if any of the following conditions exist on the particular portion of highway and the property contiguous thereto, other than a business district:
   (A) Upon one side of the highway, within a distance of a quarter of a mile, the contiguous property fronting thereon is occupied by 13 or more separate dwelling houses or business structures.
   (B) Upon both sides of the highway, collectively, within a distance of a quarter of a mile, the contiguous property fronting thereon is occupied by 16 or more separate dwelling houses or business structures.
   (C) The portion of highway is longer than one-quarter of a mile but has the ratio of separate dwelling houses or business structures to the length of the highway described in either subparagraph (A) or (B).
2) Safety of bicyclists and pedestrians, with increased consideration for vulnerable pedestrian groups including children, seniors, persons with disabilities, users of personal assistive mobility devices, and the unhoused.

Rounding Speed Limit to the Nearest 5 mph of the 85th Percentile

21400. (a) The Department of Transportation shall, after consultation with local agencies and public hearings, adopt rules and regulations prescribing uniform standards and specifications for all official traffic control devices placed pursuant to this code, including, but not limited to, stop signs, yield right-of-way signs, speed restriction signs, railroad warning approach signs, street name signs, lines and markings on the roadway, and stock crossing signs placed pursuant to Section 21364.

(b) The Department of Transportation shall, after notice and public hearing, determine and publicize the specifications for uniform types of warning signs, lights, and devices to be placed upon a highway by a person engaged in performing work that interferes with or endangers the safe movement of traffic upon that highway.

(c) Only those signs, lights, and devices as are provided for in this section shall be placed upon a highway to warn traffic of work that is being performed on the highway.

(d) Control devices or markings installed upon traffic barriers on or after January 1, 1984, shall conform to the uniform standards and specifications required by this section.

Maximum Speed Limit

22349. (a) Except as provided in Section 22356, no person shall drive a vehicle upon a highway at a speed greater than 65 miles per hour.

(b) Notwithstanding any other provision of law, no person may drive a vehicle upon a two-lane, undivided highway at a speed greater than 55 miles per hour unless that highway, or portion thereof, has been posted for a higher speed by the Department of Transportation or appropriate local agency upon the basis of an engineering and traffic survey. For purposes of this subdivision, the following apply:

(1) A two-lane, undivided highway is a highway with not more than one through lane of travel in each direction.

(2) Passing lanes may not be considered when determining the number of through lanes.

(c) It is the intent of the Legislature that there be reasonable signing on affected two-lane, undivided highways described in subdivision (b) in continuing the 55 miles-per-hour speed limit, including placing signs at county boundaries to the extent possible, and at other appropriate locations.

Basic Speed Law

22350. No person shall drive a vehicle upon a highway at a speed greater than is reasonable or prudent having due regard for weather, visibility, the traffic on, and surface and width of, the highway, and in no event at a speed which endangers the safety of persons or property.

Speed Law Violations

22351. (a) The speed of any vehicle upon a highway not in excess of the limits specified in Section 22352 or established as authorized in this code is lawful unless clearly proved to be in violation of the basic speed law.

(b) The speed of any vehicle upon a highway in excess of the prima facie speed limits in Section 22352 or established as authorized in this code is prima facie unlawful unless the defendant establishes by competent evidence that the speed in excess of said limits did not constitute a violation of the basic speed law at the time, place and under the conditions then existing.

Prima Facie Speed Limits

22352. The prima facie limits are as follows and the same shall be applicable unless changed as authorized in this code and, if so changed, only when signs have been erected giving notice thereof:

(a) Fifteen miles per hour:
   1) When traversing a railway grade crossing, if during the last 100 feet of the approach to the crossing the driver does not have a clear and unobstructed view of the crossing and of any traffic on the railway for a distance of 400 feet in both directions along such railway. This subdivision does not apply in the case of any railway grade crossing where a human flagman is on duty or a clearly visible electrical mechanical railway crossing signal device is installed but does not then indicate the immediate approach of a railway train or car.
   2) When traversing any intersection of highways if during the last 100 feet of the driver's approach to the intersection the driver does not have a clear and unobstructed view of the intersection and of any traffic upon all of the highways entering the intersection for a distance of 100 feet along all those highways, except at an intersection protected by stop signs or yield right-of-way signs or controlled by official traffic control signals.
   3) On any alley.

(b) Twenty-five miles per hour:
   1) On any highway other than a state highway, in any business or residence district unless a different speed is determined by local authority under procedures set forth in this code.
   2) When approaching or passing a school building or the grounds thereof, contiguous to a highway and posted with a standard "SCHOOL" warning sign, while children are going to or leaving the school either during school hours or during the noon recess period. Such prima facie limit shall also apply when approaching or passing any school grounds which are not separated from the highway by a fence, gate or other physical barrier while the grounds are in use by children and the highway is posted with a standard "SCHOOL" warning sign. For purposes of this subparagraph, standard "SCHOOL" warning signs may be placed at any distance up to 500 feet away from school grounds.

3) When passing a senior center or other facility primarily used by senior citizens, contiguous to a street other than a state highway and posted with a standard "SENIOR" warning sign. A local authority may erect a sign pursuant to this paragraph when the local agency makes a determination that the proposed signing should be implemented. A local authority may request grant funding from the Active Transportation Program pursuant to Chapter 8 (commencing with Section 2380) of Division 3 of the Streets and Highways Code, or any other grant funding available to it, and use that grant funding to pay for the erection of those signs, or may utilize any other funds available to it to pay for the erection of those signs, including, but not limited to, donations from private sources.

Increase of Local Limits

22357. (a) Whenever a local authority determines upon the basis of an engineering and traffic survey that a speed greater than 25 miles per hour would facilitate the orderly movement of vehicular traffic and would be reasonable and safe upon any street other than a state highway otherwise subject to a prima facie limit of 25 miles per hour, the local authority may be by ordinance determine and declare a prima facie limit of 25 miles per hours, the local authority may by ordinance determine and declare a prima facie speed limit of 30, 35, 40, 45, 50, 55, 60 miles per hour or a maximum speed limit of 65 miles per hour, whichever is found most appropriate to facilitate the orderly movement of traffic and is reasonable and safe. The declared prima facie or maximum speed limit shall be effective when appropriate signs giving notice thereof are erected upon the street and shall not thereafter be revised except upon the basis of an engineering and traffic survey. This section does not apply to any 25-mile-per-hour prima facie limit which is applicable when passing a school building or the grounds thereof or when passing a senior center or other facility primarily used by senior citizens.

(b) This section shall become operative on the date specified in subdivision (c) of Section 22366.

Decrease of Local Limits

22358. (a) Whenever a local authority determines upon the basis of an engineering and traffic survey that the limit of 65 miles per hour is more than is reasonable or safe upon any portion of any street other than a state highway where the limit of 65 miles per hour is applicable, the local authority may by ordinance determine and declare a prima facie speed limit of 60, 55, 50, 45,40,35,30, or 25 miles per hours, whichever is found most appropriate to facilitate the orderly movement of traffic and is reasonable and safe, which declared prima facie limit shall be effective when appropriate signs giving notice thereof are erected upon the street.

(b) This section shall become operative on the date specified in subdivision (c) of Section 22366.

Decrease on Narrow Street

22358.3. Whenever a local authority determines upon the basis of an engineering and traffic survey that the prima facie speed limit of 25 miles per hour in a business or residence district or in a public park on any street having a roadway not exceeding 25 feet in width, other than a state highway, is more than is reasonable or safe, the local authority may, by ordinance or resolution, determine and declare a prima facie speed limit of 20 or 15 miles per hour, whichever is found most appropriate and is reasonable and safe. The declared prima facie limit shall be effective when appropriate signs giving notice thereof are erected upon the street.

Decrease on Local Streets Near Schools or Senior Centers

22358.4. (a) (1) Whenever a local authority determines upon the basis of an engineering and traffic survey that the prima facie speed limit of 25 miles per hour established by subdivision (b) of Section 22352 is more than is reasonable or safe, the local authority may, by ordinance or resolution, determine and declare a prima facie speed limit of 20 or 15 miles per hour, whichever is justified as the appropriate speed limit by that survey.

(2) An ordinance or resolution adopted under paragraph (1) shall not be effective until appropriate signs giving notice of the speed limit are erected upon the highway and, in the case of a state highway, until the ordinance is approved by the Department of Transportation and the appropriate signs are erected upon the highway.

(b) (1) Notwithstanding subdivision (a) or any other provision of law, a local authority may, by ordinance or resolution, determine and declare prima facie speed limits as follows:

(A) A 15 miles per hour prima facie limit in a residence district, on a highway with a posted speed limit of 30 miles per hour or slower, when approaching, at a distance of less than 500 feet from, or passing, a school building or the grounds of a school building, contiguous to a highway and posted with a school warning sign that indicates a speed limit of 15 miles per hour, while children are going to or leaving the school, either during school hours or during the noon recess period. The prima facie limit shall also apply when approaching, at a distance of less than 500 feet from, or passing, school grounds that are not separated from the highway by a fence, gate, or other physical barrier while the grounds are in use by children and the highway is posted with a school warning sign that indicates a speed limit of 15 miles per hour.

(B) A 25 miles per hour prima facie limit in a residence district, on a highway with a posted speed limit of 30 miles per hour or slower, when approaching, at a distance of 500 to 1,000 feet from, a school building or the grounds thereof, contiguous to a highway and posted with a school warning sign that indicates a speed limit of 25 miles per hour, while children are going to or leaving the school, either during school hours or during the noon recess period. The prima facie limit shall also apply when approaching, at a distance of 500 to 1,000 feet from, school grounds that are not separated from the highway by a fence, gate, or other physical barrier while the grounds are in use by children and the highway is posted with a school warning sign that indicates a speed limit of 25 miles per hour.

(2) The prima facie limits established under paragraph (1) apply only to highways that meet all of the following conditions:

(A) A maximum of two traffic lanes.

(B) A maximum posted 30 miles per hour prima facie speed limit immediately prior to and after the school zone.

(3) The prima facie limits established under paragraph (1) apply to all lanes of an affected highway, in both directions of travel.

(4) When determining the need to lower the prima facie speed limit, the local authority shall take the provisions of Section 627 into consideration.

(5) (A) An ordinance or resolution adopted under paragraph (1) shall not be effective until appropriate signs giving notice of the speed limit are erected upon the highway and, in the case of a state highway, until the ordinance is approved by the Department of Transportation and the appropriate signs are erected upon the highway.

(B) For purposes of subparagraph (A) of paragraph (1), school warning signs indicating a speed limit of 15 miles per hour may be placed at a distance up to 500 feet away

from school grounds.

(C) For purposes of subparagraph (B) of paragraph (1), school warning signs indicating a speed limit of 25 miles per hour may be placed at any distance between 500 and 1,000 feet away from the school grounds.

(D) A local authority shall reimburse the Department of Transportation for all costs incurred by the department under this subdivision.

Downward Speed Zoning

22358.5 It is the intent of the Legislature that physical conditions such as width, curvature, grade and surface conditions or any other condition readily apparent to a driver, in the absence of other factors, would not require special downward speed zoning, as the basic rule of Section 22350 is sufficient regulation as to such conditions.

Rounding of Speed Limits to the Nearest 5 mph of the 85th Percentile

22358.6. (a) The Department of Transportation shall, in the next scheduled revision, revise and thereafter maintain the California Manual on Uniform Traffic Control Devices to require the Department of Transportation or a local authority to round speed limits to the nearest five miles per hour of the 85th percentile of the free-flowing traffic.

(b) In cases in which the speed limit needs to be rounded down to the nearest five miles per hour increment of the 85th-percentile speed, the Department of Transportation or a local authority may lower the speed limit by five miles per hour from the nearest five mile per hour increment of the 85th-percentile speed, in compliance with Sections 627 and 22358.5 and the California Manual on Uniform Traffic Control Devices, as it read on March 30, 2021, if the reasons for the lower speed limit are documented in an engineering and traffic survey. The Department of Transportation or a local authority may also take into consideration Sections 22353, 22353.2, 22353.3, 22353.4, and 22353.5, if applicable.

(c) In cases in which the speed limit needs to be rounded up to the nearest five miles per hour increment of the 85th-percentile speed, the Department of Transportation or a local authority may decide to instead round down the speed limit to the lower five miles per hour increment. If the speed limit is rounded down pursuant to this subdivision, the speed limit shall not be reduced any further pursuant to subdivision (b).

(d) In addition to subdivisions (b) and (c), a local authority may additionally lower the speed limit as provided in Section 22358.7.

(e) The total reduction in the speed limit pursuant to subdivisions (a) to (d), inclusive, shall not exceed 12.4 miles per hour from the 85th percentile speed.

(f) Notwithstanding subdivisions (a) to (e), inclusive, a local authority may retain the currently adopted speed limit as provided in Section 22358.8 without further reduction or restore the immediately prior adopted speed limit as provided in Section 22358.8 without further reduction.

Reduction of Additional 5 mph

22358.7. (a) If a local authority, after completing an engineering and traffic survey, finds that the speed limit is still more than is reasonable or safe, the local authority may, by ordinance, determine and declare a prima facie speed limit that has been reduced an additional five miles per hour for either of the following reasons:

(1) The portion of highway has been designated as a safety corridor. A local authority shall not deem more than one-fifth of their streets as safety corridors.

(2) The portion of highway is adjacent to any land or facility that generates high

concentrations of bicyclists or pedestrians, especially those from vulnerable groups such as children, seniors, persons with disabilities, and the unhoused.

(b) (1) As used in this section, "safety corridor" shall be defined by the Department of Transportation in the next revision of the California Manual on Uniform Traffic Control Devices. In making this determination, the department shall consider highways that have the highest number of serious injuries and fatalities based on collision data that may be derived from, but not limited to, the Statewide Integrated Traffic Records System.

(2) The Department of Transportation shall, in the next revision of the California Manual on Uniform Traffic Control Devices, determine what constitutes land or facilities that generate high concentrations of bicyclists and pedestrians, as used in paragraph (2) of subdivision (a). In making this determination, the department shall consider density, road use type, and bicycle and pedestrian infrastructure present on a section of highway.

(c) A local authority may not lower a speed limit as authorized by this section until June 30, 2024, or until the Judicial Council has developed an online tool for adjudicating infraction violations statewide as specified in Article 7 (commencing with Section 68645) of Chapter 2 of Title 8 of the Government Code, whichever is sooner.

(d) A local authority shall issue only warning citations for violations of exceeding the speed limit by 10 miles per hour or less for the first 30 days that a lower speed limit is in effect as authorized by this section.

<u>Retaining the Currently Adopted Speed Limit or Restoring Immediately Prior Adopted Speed Limit</u>

22358.8 (a) If a local authority, after completing an engineering and traffic survey, finds that the speed limit is still more than is reasonable or safe, the local authority may, by ordinance, retain the currently adopted speed limit or restore the immediately prior adopted speed limit if that speed limit was established with an engineering and traffic survey and if a registered engineer has evaluated the section of highway and determined that no additional general purpose lanes have been added to the roadway since completion of the traffic survey that established that speed limit.

(b) This section does not authorize a speed limit to be reduced by any more than five miles per hour from the currently adopted speed limit nor below the immediately prior speed limit.

(c) A local authority shall issue only warning citations for violations of exceeding the speed limit by 10 miles per hour or less for the first 30 days that a lower speed limit is in effect as authorized by this section.

<u>Business Activity District</u>

22358.9 (a) (1) Notwithstanding any other law, a local authority may, by ordinance, determine and declare a 25 or 20 miles per hour prima facie speed limit on a highway contiguous to a business activity district when posted with a sign that indicates a speed limit of 25 or 20 miles per hour.

(2) The prima facie limits established under paragraph (1) apply only to highways that meet all of the following conditions:

(A) A maximum of four traffic lanes.

(B) A maximum posted 30 miles per hour prima facie speed limit immediately prior to and after the business activity district, if establishing a 25 miles per hour speed limit.

(C) A maximum posted 25 miles per hour prima facie speed limit immediately prior to and after the business activity district, if establishing a 20 miles per hour speed limit.

(b) As used in this section, a "business activity district" is that portion of a highway and the property contiguous thereto that includes central or neighborhood downtowns, urban villages,

or zoning designations that prioritize commercial land uses at the downtown or neighborhood scale and meets at least three of the following requirements in paragraphs (1) to (4), inclusive:

(1) No less than 50 percent of the contiguous property fronting the highway consists of retail or dining commercial uses, including outdoor dining, that open directly onto sidewalks adjacent to the highway.

(2) Parking, including parallel, diagonal, or perpendicular spaces located alongside the highway.

(3) Traffic control signals or stop signs regulating traffic flow on the highway, located at intervals of no more than 600 feet.

(4) Marked crosswalks not controlled by a traffic control device.

(c) A local authority shall not declare a prima facie speed limit under this section on a portion of a highway where the local authority has already lowered the speed limit as permitted under Section 22358.7, has retained the currently adopted speed limit under Section 22358.8, or has restored the immediately prior adopted speed limit under Section 22358.8.

(d) A local authority shall issue only warning citations for violations of exceeding the speed limit by 10 miles per hour or less for the first 30 days that a lower speed limit is in effect as authorized by this section.

Boundary Line Streets

22359. With respect to boundary line streets and highways where portions thereof are within different jurisdictions, no ordinance adopted under Sections 22357 and 22358 shall be effective as to any such portion until all authorities having jurisdiction of the portions of the street concerned have approved the same. This section shall not apply in the case of boundary line streets consisting of separate roadways within different jurisdictions.

Multiple-Lane Highways

22361. On multiple-lane highways with two or more separate roadways, different prima facie speed limits may be established for different roadways under any of the procedures specified in Sections 22354 to 22359, inclusive.

Speed Trap Prohibition

40801. No peace officer or other person shall use a speed trap in arresting, or participating or assisting in the arrest of, any person for any alleged violation of this code nor shall any speed trap be used in securing evidence as to the speed of any vehicle for the purpose of an arrest or prosecution under this code.

Speed Trap

40802. (a) A “speed trap” is either of the following:

(1) A particular section of a highway measured as to distance and with boundaries marked, designated, or otherwise determined in order that the speed of a vehicle may be calculated by securing the time it takes the vehicle to travel the known distance.

(2) A particular section of a highway with a prima facie speed limit provided by this code or by local ordinance pursuant to paragraph (1) of subdivision (b) of Section 22352, or established under Section 22354, 22357, 22358, or 22358.3, if that prima facie speed limit is not justified by an engineering and traffic survey conducted within five years prior to the date of the alleged violation, and enforcement of the speed limit involves the use of radar or any other electronic devices which measures the speed of moving objects. This subdivision does not apply to local street, road, school zone, senior zone, business activity district, or speed limit adopted under Section 22358.7 or 22358.8.

(b) (1) For purposes of this section, a local street or road is one that is functionally classified as "local" on the "California Road System Maps," that are approved by the Federal Highway Administration and maintained by the Department of Transportation. It may also be defined as a "local street or road" if it primarily provides access to abutting residential property and meets the following three conditions:

(A) Roadway width of not more than 40 feet.

(B) Not more than one-half mile of uninterrupted length. Interruptions shall include official traffic control devices as defined in Section 445.

(C) Not more than one traffic lane in each direction.

(2) For purposes of this section, "school zone" means that area approaching or passing a school building or the grounds thereof that is contiguous to a highway and on which is posted a standard "SCHOOL" warning sign, while children are going to or leaving the school either during school hours or during the noon recess period. "School zone" also includes the area approaching or passing any school grounds that are not separated from the highway by a fence, gate, or other physical barrier while the grounds are in use by children if that highway is posted with a standard "SCHOOL" warning sign.

(3) For purposes of this section, "senior zone" means that area approaching or passing a senior center building or other facility primarily used by senior citizens, or the grounds thereof that is contiguous to a highway and on which is posted a standard "SENIOR" warning sign, pursuant to Section 22352.

(4) For purposes of this section, "business activity district" means a section of highway described in subdivision (b) of Section 22358.9 in which a standard 25 miles per hour or 20 miles per hour speed limit sign has been posted pursuant to paragraph (1) of subdivision (a) of that section.

(c) (1) When all of the following criteria are met, paragraph (2) of this subdivision shall be applicable and subdivision (a) shall not be applicable:

(A) When radar is used, the arresting officer has successfully completed a radar operator course of not less than 24 hours on the use of police traffic radar, and the course was approved and certified by the Commission on Peace Officer Standards and Training.

(B) When laser or any other electronic device is used to measure the speed of moving objects, the arresting officer has successfully completed the training required in subparagraph (A) and an additional training course of not less than two hours approved and certified by the Commission on Peace Officer Standards and Training.

(C)(i) The prosecution proved that the arresting officer complied with subparagraphs (A) and (B) and that an engineering and traffic survey has been conducted in accordance with subparagraph (B) of paragraph (2). The prosecution proved that, prior to the officer issuing the notice to appear, the arresting officer established that the radar, laser, or other electronic device conformed to the requirements of subparagraph (D).

(ii) The prosecution proved the speed of the accused was unsafe for the conditions present at the time of alleged violation unless the citation was for a violation of Section 223469, 22356, or 22406.

(D) The radar, laser, or other electronic device used to measure the speed of the accused meets or exceeds the minimal operational standards of the National Traffic Highway Safety Administration, and has been calibrated within the three

years prior to the date of the alleged violation by an independent certified laser or radar repair and testing or calibration facility.

(2) A "speed trap" is either of the following:

(A) A particular section of a highway measured as to distance and with boundaries marked, designated, or otherwise determined in order that the speed of a vehicle may be calculated by securing the time it takes the vehicle to travel the known distance.

(B) (i) A particular section of a highway or state highway with a prima facie speed limit that is provided by this code or by local ordinance under paragraph (1) of subdivision (b) of Section 22352, or established under Section 22354, 22357, 22358, or 22358.3, if that prima facie speed limit is not justified by an engineering and traffic survey conducted within one of the following time periods, prior to the date of the alleged violation, and enforcement of the speed limit involves the use of radar or any other electronic device that measures the speed of moving objects:

(I) Except as specified in subclause (II), seven years.

(II) If an engineering and traffic survey was conducted more than seven years prior to the date of the alleged violation, and a registered engineer evaluates the section of the highway and determines that no significant changes in roadway or traffic conditions have occurred, including, but not limited to, changes in adjoining property or land use, roadway width, or traffic volume, 14 years.

(ii) This subparagraph does not apply to a local street, road, or school zone, senior zone, business activity district, or speed limit adopted under Section 22358.7 or 22358.8.

Speed Trap Evidence.

40803. (a) No evidence as to the speed of a vehicle upon a highway shall be admitted in any court upon the trial of any person in any prosecution under this code upon a charge involving the speed of a vehicle when the evidence is based upon or obtained from or by the maintenance or use of a speed trap.

(b) In any prosecution under this code of a charge involving the speed of a vehicle, where enforcement involves the use of radar or other electronic devices which measure the speed of moving objects, the prosecution shall establish, as part of its prima facie case, that the evidence or testimony presented is not based upon a speed trap as defined in paragraph (2) of subdivision (b) of Section 40802.

(c) When a traffic and engineering survey is required pursuant to paragraph (2) of subdivision (b) of Section 40802, evidence that a traffic and engineering survey has been conducted within five years of the date of the alleged violation or evidence that the offense was committed on a local street or road as defined in paragraph (2) of subdivision (b) of Section 40802 shall constitute a prima facie case that the evidence or testimony is not based upon a speed trap as defined in paragraph (2) of subdivision (b) 40802.

Study Method

Speed zones are established to inform drivers of the safe speed limit and to protect the general public from unreasonable and reckless drivers. Research has shown that most drivers travel at speeds that are safe and reasonable, therefore, speed limits are established primarily on the consensus of the majority of those who use the roads. Speed limits are not based on the actions of few. The California Vehicle Code requires the limits to be established on the basis of an engineering and traffic survey rather than by arbitrary methods.
The study is conducted in accordance with the appropriate sections of the California Vehicle Code and the California Manual on Uniform Traffic Control Devices (CA MUTCD), Section 2B-13, Speed Limit Sign (R2-D)

Surveys are conducted on arterial streets, collector streets, and selected local streets. Each of the selected streets was analyzed individually.

The accident analysis was based on a review of the City's Traffic Accident Records (Crossroads). Only non-intersection accidents are included since intersection accidents are considered correctable using conventional intersection traffic controls such as stop signs or traffic signals.

Accident rates were computed using a formula that takes into account the number of accidents in the two-year period, the length of roadway being studied, and the average daily traffic volume. The rate is expressed in accidents per million vehicle miles (Acc/MVM). The formula is:

$$\text{Acc/MM} = \frac{\text{Number of Accidents} \times 1{,}000{,}000}{\text{Distance} \times \text{ADT} \times \text{No. of Days}}$$

Definitions of Terms

Average Daily Traffic	Volume of traffic during a 24-hour period.
ECL	Easterly City Limit (also WCL, NCL and SCL for Westerly, Northerly and Southerly).
85th Percentile (Critical Speed)	The "speed" which 85% of the observed vehicles are not exceeding. This speed is usually within 2 mph of the upper limit of the speed.
Mean Speed	The average speed.
MPH or mph	Miles Per Hour.
MVM or mvm	Million Vehicle Miles. Accident rates are generally expressed as the number of accidents occurring per million vehicle miles traveled during a given time period.
Pace	The 10 mph range of observed vehicle speeds containing the largest number of vehicles. A normal distribution will contain approximately 70% of the sample within the pace, with 15% above and 15% below.

APPENDIX B

Speed Zoning Regulations from Caltrans

California Manual on Uniform Traffic Control Devices

SPEED LIMIT SIGNS AND PLAQUES

Section 2B.21 Speed Limit Sign (R2-1)

Support:

01 In general, the maximum speed limits applicable to rural and urban roads are established:

A. Statutorily – a maximum speed limit applicable to a particular class of road, such as freeways or city streets, that is established by State law; or

B. As speed zones – based on engineering studies.

02 State statutory limits might restrict the maximum speed limit that can be established on a particular road, notwithstanding what an engineering study might indicate.

03 Agencies with designated authorities to set speed limits, which include States, and sometimes local jurisdictions, can establish non-statutory speed limits or ~~designate reduced~~ speed zones using an engineering study. Setting appropriate speed limits is especially important to ensure safety for all road users in varying types of contexts, particularly on roadways where adjacent land use suggests that trips could be served by varied modes. These situations include urban and suburban non-freeway arterials or rural arterials that serve as main streets in smaller communities, consistent with the context classifications of urban core, urban, suburban, and rural towns found in "A Policy on Geometric Design of Highways and Streets," 2018 Edition, AASHTO. When setting a speed limit, a range of factors such as land-use context, pedestrian and bicyclist activity, crash history, intersection spacing, driveway density, roadway geometry, roadside conditions, roadway functional classification, traffic volume, and observed speeds can influence the speed limit determined in the engineering study. The engineering study will determine which of the recommended factors will prevail in setting the speed limit.

04 Jurisdictions can use speed limit setting tools and methods such as expert systems and those consistent with the safe system approach as part of the required engineering study for a non-statutory speed limit. As speed limit setting tools vary, jurisdictions need to be aware of their limitations and advantages, possible variation between the tools and the need to explore gaps or weaknesses of tools, and weigh the output accordingly in consideration of setting speed limits.

04a The setting of speed limits can be controversial and requires a rational and defensible determination to maintain public confidence. Speed limits are normally set near the 85th-percentile speed that statistically represents one standard deviation above the average speed and establishes the upper limit of what is considered reasonable and prudent. As with most laws, speed limits need to depend on the voluntary compliance of the greater majority of motorists. Speed limits cannot be set arbitrarily low, as this would create violators of the majority of drivers and would not command the respect of the public. Artificially low speed limits can lead to poor compliance as well as large variations in speed within the traffic stream. Increased speed variance can also create more conflicts and passing maneuvers.

05 To achieve desired operating speeds, agencies often implement other speed management strategies concurrently with setting speed limits, such as traffic calming measures, geometric design features, speed safety cameras, and increased enforcement.

05a The most effective way to reduce speeds is through a combination of strategies using traffic control devices related to speed management, roadway design and engineering solutions, traffic calming techniques and measures, public education, and enforcement efforts. Effectively managing road user speed relies on numerous factors, which include enforcement, roadway characteristics, surrounding environment, adjacent land use, and traffic control devices. Many studies find that engineering changes, such as change a road's infrastructure, are one of the most important factors in reducing vehicle operating speeds. Engineering changes are also one of the most effective interventions at reducing pedestrian injury and fatality rates. Potential street engineering changes, such as curb extensions, median islands, raised crosswalks, roundabouts, and speed bumps or speed humps, naturally result in lower speeds. It is realized that these engineering changes can be costly and time-consuming to implement.

Standard:

06 **Speed zones (other than statutory speed limits) shall only be established on the basis of an engineering and traffic survey (E&TS), also noted as an engineering study that has been performed in accordance with traffic engineering practices. ~~The engineering study shall consider the roadway context.~~**

Guidance:

07 *The engineering study should consider the roadway context. Among the factors that should be considered when conducting an engineering study for establishing or reevaluating speed limits within speed zones are the following:*

A. Roadway environment not readily apparent to the driver (CVC § 627) (such as roadside development, number and frequency of driveways and access points, and land use), functional classification, public transit volume and

location or frequency of stops, parking practices, and pedestrian and bicycle facilities and activity;

B. *Roadway characteristics not readily apparent to the driver (CVC § 627) (such as lane widths, shoulder condition, grade, alignment, median type, and sight distance);*

C. *Geographic context (such as a~~n urban district, rural town center, non-urbanized rural area, or suburban area~~ residential district, business district, business activity district), ~~and multi-modal trip generation;~~*

D. *Reported crash experience for at least a ~~12~~ 36-month period;*

E. *Speed distribution of free-flowing vehicles including the pace, median (50th-percentile), and 85th- ~~precentile~~ percentile speeds; and*

F. *A review of past speed studies to identify any trends in operating speeds (CVC § 22358.8)*

Support:

07a Refer to FHWA's List of Known Errors for error in Paragraph 7, Item E text. Refer to Section 1A.04 for more details.

Guidance:

08 *When the 85th-percentile speed is appreciably greater than the posted speed limit, and the roadway context does not support setting a higher speed limit, the engineering (not E&TS) study should consider whether changes to geometric features, enforcement, and/or other speed-reduction countermeasures might improve compliance with the posted speed limit. A similar approach should be used if the results of past speed studies indicate that the 85th-percentile speed has consistently increased.*

09 ~~*On urban and suburban arterials, and on rural arterials that serve as main streets through developed areas of communities, the 85th-percentile speed should not be used to set speed limits without consideration of all factors described in Paragraph 7 of this Section.*~~

Standard:

10 **~~On a freeway, expressway, or rural highway (outside urbanized locations or conditions),~~ On a highway, the speed limit that is posted within a speed zone ~~should~~ shall be within ~~5 mph~~ 12.4 mph of the 85th-percentile speed of free-flowing motor-vehicle traffic under the following conditions:**

A. All factors described in Paragraph 7 of this Section have been considered and determined to be non-mitigating.

B. ~~The measures described in Paragraph 8 of this Section have been considered to the extent practicable.~~

Guidance:

11 *State and local agencies should conduct engineering studies to reevaluate non-statutory speed limits on segments of their roadways that have undergone significant changes since the last review (such as changes to roadway context, the addition or elimination of parking or driveways, changes in the number of travel lanes, changes in the configuration of bicycle lanes, changes to road geometrics, changes in traffic control signal coordination, or significant changes in traffic volumes).*

12 *Speed studies for signalized intersection approaches should be taken outside the influence area of the traffic control signal, which is generally considered to be approximately ½ mile, to avoid obtaining skewed results for the speed distribution. If the signal spacing is less than 1 mile, the speed study should be at approximately the middle of the segment.*

Support:

12a Speed limits in California are governed by the CVC, §§ 22348 through 22413; also, pertinent sections are found in §§ 627 and 40802 and others referenced in this section. Refer to Section 1A.05 for information regarding this publication.

12b Refer to Part 6, Section 6B.01 for speed limit signs in temporary traffic control zones. Refer to Part 7 for speed limit signs in school areas.

Basic Speed Law and Prima Facie Speed Limits – Refer to CVC §§ 22350 & 22352

12c The basic speed law states "No person shall drive a vehicle upon a highway at a speed greater than is reasonable or prudent having due regard for weather, visibility, the traffic on, and the surface and width of, the highway, and in no event at a speed which endangers the safety of persons or property."

Standard:

12d **Prima facie speed limits are specific limits and shall apply unless changed based upon an E&TS and signs are posted that display the new speed limit.**

Option:

12e Prima facie speed limits may be preempted by the basic speed law, when roadway, traffic or weather conditions warrant a lower speed.

Legal Authority for Establishing Speed Limits

Support:

12f Delegation of legal authority to set speed limits based on valid E&TS on State highways is given to Caltrans District Directors. The District Director of each transportation district is authorized to issue orders regulating the speed of traffic, up to 70 mph on State highways. The Director of Caltrans retains the authority to approve variable, and minimum speed limits on State freeways.

Standard:

12g **The speed limits shown in Table 2B-101(CA) shall apply, unless changed upon the basis of an E&TS.**

Option:

12h The speed limits shown in Table 2B-102(CA) may apply, unless changed upon E&TS.

Variable Speed Limits on Freeways - Refer to CVC § 22355

12i The following speed limits may apply:

- Whenever Caltrans determines based upon an E&TS that the safe and orderly movement of traffic upon any freeway segment will be facilitated by the establishment of variable speed limits
- Caltrans may erect, regulate, and control signs upon the state highway which is a freeway, or any portion thereof, which, if used, signs shall be designed to permit display of different speeds at various times of the day or night.
- Such signs need not conform to the standards & specifications per CVC § 21400, but if used, shall be of sufficient size and clarity to give adequate notice of the applicable speed limit.

Minimum Speed Limits on State Highways - Refer to CVC § 22400

12j The following speed limits may apply:

- Whenever Caltrans determines based upon an E&TS that slow speeds on any part of a state highway consistently impede the normal and reasonable movement of traffic, Caltrans may determine and declare a minimum speed limit. Appropriate signs giving notice shall then be installed on that segment.
- A motorist can be cited for stopping or impeding the normal and reasonable movement of traffic unless the stop is necessary for safe operation and in compliance with the law.

Engineering and Traffic Survey (E&TS)

Support:

12k CVC § 627 defines the term "Engineering and traffic survey" and lists its requirements.

Standard:

12l **An E&TS shall include, among other requirements deemed necessary by Caltrans, consideration of all of the following:**

A. Prevailing speeds as determined by traffic engineering measurements.
B. Collision records.
C. Highway, traffic, and roadside conditions not readily apparent to the driver.

Guidance:

12m *The E&TS should contain sufficient information to document that the required three items of CVC § 627 are provided and that other conditions not readily apparent to a driver are properly identified.*

12n *Prevailing speeds are determined by a speed zone survey. A speed zone survey should include:*

A. The intent of the speed measurements is to determine the actual speed of unimpeded traffic. The speed of traffic should not be altered by concentrated law enforcement, or other means, just prior to, or while taking the speed measurements.
B. Speeds should be read directly from a radar or other electronic speed measuring devices; or,
C. Devices, other than radar, capable of accurately distinguishing and measuring the unimpeded speed of free flowing vehicles may be used.
D. A location should be selected where prevailing speeds are representative of the entire speed zone section. If speeds vary on a given route, more than one speed zone section may be required, with separate measurements for each section. Locations for measurements should be chosen so as to minimize the effects of traffic signals or stop signs.
E. Speed measurements should be taken during off-peak hours between peak traffic periods on weekdays. If there is difficulty in obtaining the desired quantity, speed measurements may be taken during any period with free flowing traffic.
F. The weather should be fair (dry pavement) with no unusual conditions prevailing.
G. The surveyor and equipment should not affect the traffic speeds. For this reason, an unmarked car is recommended, and the radar speed meter located as inconspicuously as possible.

H. In order for the sample to be representative of the actual traffic flow, the minimum sample should be 100 vehicles in each survey. In no case should the sample contain less than 50 vehicles.

I. Short speed zones of less than 0.5 miles should be avoided, except in transition areas.

J. Speed zone changes should be coordinated with changes in roadway conditions or roadside development.

K. Speed zoning should be coordinated with adjacent jurisdictions.

Support:

12o Physical conditions such as width, curvature, grade and surface conditions, or any other condition readily apparent to the driver, in the absence of other factors, would not require special downward speed zoning. Refer to CVC § 22358.5.

Option:

12p When qualifying an appropriate speed limit, local authorities may also consider all of the following findings:

A. Residential density, if any of the following conditions exist on the particular portion of highway and the property contiguous thereto, other than a business district:

1. Upon one side of the highway, within 0.25 miles, the contiguous property fronting thereon is occupied by 13 or more separate dwelling houses or business structures.
2. Upon both sides of the highway, collectively, within a distance of 0.25 miles the contiguous property fronting thereon is occupied by 16 or more separate dwelling houses or business structures.
3. The portion of highway is larger than 0.25 miles but has the ratio of separate dwelling houses or business structures to the length of the highway described in either subparagraph 1 or 2 above.

B. Safety of bicyclists and pedestrians, with increased consideration for vulnerable pedestrian groups including children, seniors, persons with disabilities, users of personal assistive mobility devices, and the unhoused.

12q The following two forms may be used to document speed zoning based on an E&TS to establish speed limits:

1. State Highways - The E&TS for State highways is made under the direction of the Caltrans District traffic engineer. Long form should be used to document the data and reports including:
   a. One copy of Speed Zone Survey Sheet (Refer to Figure 2B-101(CA)) showing:
      - A north arrow
      - Name and/or highway number of the route to be zoned
      - Post Mile or other distance measurement
      - Limits of the proposed zones for each direction of travel
      - Roads and crossroad names, number and width of lanes, indicate parking restrictions
      - Appropriate notations showing type of roadside development, such as "scattered business," "solid residential," etc. Schools adjacent to the highway are shown, but other buildings need not be plotted unless they are a factor in the speed recommendation or the point of termination of a speed zone.
      - Collision rates for the zones involved
      - Annual average daily traffic volume
      - Location of traffic signals, signs and markings
      - If the highway is divided, the limits of zones for each direction of travel
      - Plotted 85th percentile and pace speeds at location taken showing speed profile
   b. A report to the District Director that includes:
      - The reason for the initiation of speed zone survey.
      - Recommendations and supporting reasons.
      - The enforcement jurisdictions involved and the recommendations and opinions of those officials.
      - The stationing or reference post in mileage at the beginning and ending of each proposed zone and any intermediate equations. Location ties must be given to readily identifiable physical features.
2. Roadways under the jurisdiction of City or County:
   a. Short form may be used for documenting speed zoning (Figure 2B-104(CA)).
   b. Determination of Speed Limits - Figures 2B-103(CA) & 2B-104(CA) show examples of data sheets which may be used to record speed observations. Specific types of vehicles may be tallied by use of letter symbols in appropriate squares.

12r In most situations, the short form for local streets and roads will be adequate; however, the procedure or long form used on State highways may be used at the option of the local agency.

Guidance:

12s *The establishment of a speed limit of more than 5 mph below the 85th percentile speed should be done with great care as studies have shown that establishing a speed limit less than the 85th percentile generally results in an increase in collision rates; in addition, this may make violators of a disproportionate number of the reasonable majority of drivers.*

Support:

12t Generally, the most decisive evidence of conditions not readily apparent to the driver are identified in collision histories.

12u Speed limits are established at or near the 85th percentile speed, which is defined as that speed at or below which 85 percent of the traffic is moving. The 85th percentile speed is often referred to as the critical speed. Pace speed is defined as the 10 mph increment of speed containing the largest number of vehicles (Refer to Figure 2B-102(CA)). The lower limit of the pace is plotted on the Speed Zone Survey Sheets as an aid in determining the proper zone limits. Speed limits higher than the 85th percentile speed are not generally considered reasonable and prudent. Speed limits below the 85th percentile speed does not ordinarily facilitate the orderly movement of traffic and require constant enforcement to maintain compliance. Speed limits established on the basis of the 85th percentile speed conform to the consensus of those who drive highways as to what speed is reasonable and prudent, and are not dependent on the judgment of one or a few individuals.

12v The majority of drivers comply with the basic speed law. Speed limits set at or near the 85th percentile speed provide law enforcement officers with a limit to cite drivers who will not conform to what the majority considers reasonable and prudent. Further studies show that establishing a speed limit at less than the 85th percentile (Critical Speed) generally results in an increase in collision rates.

Option:

12w When roadside development results in traffic conflicts and unusual conditions which are not readily apparent to drivers, as indicated in collision records, speed limits somewhat below the 85th percentile may be justified. Concurrence and support of enforcement officials are necessary for the successful operation of a speed zone.

Guidance:

12x *Speed zones of less than 0.5 miles in rural locations, 0.25 miles for urban locations, and short transition zones should be avoided.*

Support:

12y Any existing E&TS that was performed before January 1, 2022 in accordance with previous traffic control device standards is not required to be updated until it is due for reevaluation per the 5, 7 or 14 year criteria. An E&TS can originally exist for 7 years and may be extended to 14 years if the conditions are met.

CVC § 22358.6 – 85th-Percentile speed, Rounding, 5 mph Increment, 5 mph speed reduction and Maximum Speed Reduction

Standard:

12z **When a speed limit is to be posted, it shall be established at the nearest 5 mph increment of the 85th-percentile speed of free-flowing traffic (CVC § 22358.6(a)), except as shown in the two Options described in paragraphs 12aa and 12ab, or if using additional 5 mph speed reduction for safety corridor designation (CVC § 22358.7(a)(1)) or adjacent to land or facility generating high concentrations of bicyclists and pedestrians (CVC § 22358.7(a)(2)).**

Option:

12aa For cases in which the nearest 5 mph increment of the 85th-percentile speed would require a rounding down, the speed limit may be reduced by 5 mph from the nearest 5 mph increment of the 85th-percentile speed, in compliance with CVC §§ 627 and 22358.5. CVC §§ 22353, 22353.2, 22353.3, 22353.4, and 22353.5, may also be considered, if applicable. Refer to Standard below for documentation requirements. Refer to CVC § 22358.6(b).

12ab For cases in which rounding the 85th-percentile speed to the nearest 5 mph increment would require a rounding up, the speed limit may be rounded down to the nearest 5 mph increment below the 85th percentile speed. Refer to CVC § 21400(b). Refer to CVC § 22358.6(c).

Standard:

12ac **If 5 mph reduction is applied to the 85th percentile speed after it is rounded to the nearest 5 mph increment and the required rounding is a rounding down, to establish posted speed limit, an E&TS shall document in writing the conditions and justification for the 5 mph reduction and be approved by a registered Civil or Traffic Engineer. The reasons for the lower speed limit shall be in compliance with CVC §§ 627 and 22358.5. Refer to § 22358.6(b).**

12ad **If the 85th percentile speed is rounded down to the lower 5 mph increment, in cases in which the 85th percentile speed**

needs to round up to the nearest 5 mph increment, to establish posted speed limit, the speed limit shall not be reduced any further pursuant to CVC § 22358.6(b).

12ae **The total reduction from the 85th percentile speed shall not exceed 12.4 mph. Refer to CVC § 22358.6(e).**

Support:

12af Refer to Table 2B-103(CA), which provides examples of 85th-percentile speed values and the application of the speed limit policies and criteria applicable per CVC §§ 22358.6 and 22358.7.

CVC § 22358.7 – Safety corridor and Land or Facilities Generating High Concentrations of Bicyclists and Pedestrians

Standard:

12ag **Additional lowering of the speed limits from standards, as included in paragraph 12z and Options as described in paragraphs 12aa, and 12ab, is prohibited, except for the roadway segments designated as "safety corridor" or "land or facilities that generate high concentrations of bicyclists and pedestrians" in compliance with CVC §§ 22358.6(d) and 22358.7.**

Option:

12ah Caltrans or local authority may additionally lower the speed limits by 5 mph from the final value determined based on paragraphs 12z, 12aa and 12ab if, after completing an E&TS, it finds that the speed limit is still more than is reasonable or safe, for either of the following reasons:

1. The portion of a highway has been designated as a safety corridor.
2. The portion of highway meets the definition of land or facility that generates high concentrations of bicyclists or pedestrians.

CVC § 22358.7(a)(1) – "Safety Corridor" Definition

Standard:

12ai **A safety corridor shall be defined as a roadway segment within an overall roadway network where the highest number of serious injury and fatality crashes occur.**

12aj **One or more crash weighting factors as provided in paragraph 12ak of this section shall be used to prioritize the locations of fatal and serious injury crashes in developing the "Safety Corridor".**

Option:

12ak The crash weighting factors to prioritize the locations of fatal and serious injury crashes in developing the "Safety Corridor" may include, but are not limited to, the factors included in Table 2B-104(CA).

12al Data used to determine a safety corridor may be from the most recent E&TS performed. The crash data source may include, but is not limited to, California Highway Patrol's (CHP) Statewide Integrated Traffic Records System (SWITRS).

Standard:

12am **The prioritized subset of safety corridors shall:**

1. **Identify specific locations with high crash occurrences.**
2. **Identify corridor-level segments with a pattern of crash reoccurrence.**
3. **Be able to be stratified by mode.**

12an **Safety corridors shall represent a prioritized subset of the overall roadway network within an authority's responsibilities and shall not exceed one-fifth of the overall roadway network.**

Guidance:

12ao *A jurisdiction should use three to five years of the most recent crash data to determine a safety corridor based on Fatal and Serious Injury data.*

Option:

12ap For crash coverage, safety corridors may identify the subset of the overall roadway network where a minimum of 25% of the Fatal + Serious Injury (F+SI) crashes occur.

12aq To identify logical termini, the geographic extent of a safety corridor may be determined by non-engineering staff.

Standard:

12ar **A licensed professional engineer shall sign off on logical termini identified for a safety corridor using existing E&TS.**

Option:

12as Crash/Volume rate may be used to provide additional locations to be included in the safety corridor. Local agencies may use proactive measures as indicators.

CVC § 22358.7(a)(2) – "Land or facility that generates high concentrations of bicyclists or pedestrians" definition

Standard:

12at **A land or facility that generates high concentrations of bicyclists or pedestrians shall be defined as the portion of the highway where one or more of any of the generators listed in Table 2B-105(CA) are present within a distance of 1320 feet longitudinally of highway, and meets condition specified in paragraph 12au.**

12au **Crash data demonstrates the highway segment is within the top twenty percent of pedestrian and/or bicyclist fatalities or serious injuries over a three-to-five-year.**

12av **A highway segment shall be defined as the portion of the highway where a location that meets the aforementioned criteria is present within a distance of 1320 feet longitudinally of highway.**

Option:

12aw A highway segment may be longer than 1320 feet longitudinally of highway provided that a minimum of one location within the top twenty percent of fatal and serious injury pedestrian and/or bicyclist crashes within a three-to-five-year period is present for every 1320 feet.

Standard:

12ax **The top twenty percent of pedestrian and/or bicyclist fatalities or serious injury crashes within a three to five year period shall be based on the geographic area within the jurisdiction.**

Option:

12ay A high concentration of pedestrians and bicyclists may be longer than 1320 feet longitudinally of highway provided that a minimum of one generator is present for every 1320 feet.

12az Data used to determine high concentration locations may be obtained from the most recently performed E&TS.

CVC § 22358.8 (Retain currently adopted or restore immediately prior speed limit)

12ba Caltrans or a local authority may retain the currently adopted speed limit without further reduction or restore the immediately prior adopted speed limit on a highway that is not a freeway without further reduction as provided in CVC § 22358.8.

Standard:

12bb **Currently adopted speed limit or immediately prior adopted speed limit shall only be retained, by Caltrans Director's Order for SHS or local ordinance for highways under local jurisdiction, if after completing an E&TS, Caltrans or a local authority finds that the speed limit is still more than reasonable or safe, and that speed limit was established with an E&TS and if a registered engineer has evaluated the section of highway and determined that no additional general purpose lanes have been added to the roadway since completion of the traffic survey that established the prior speed limit.**

12bc **If Caltrans or a local authority decides to use lower speed limit based on CVC § 22358.8, after completing an E&TS and finding that the speed limit is still more than is reasonable or safe, it shall not be reduced by any more than 5 mph from the currently adopted speed limit nor below the immediately prior speed limit. Refer to CVC § 22358.8(b).**

12bd **CVC § 22358.8 shall not be applicable to a roadway that is a freeway.**

CVC § 22358.9 – Business Activity District

Option:

12be Caltrans or a local authority may, by Caltrans Director's Order for SHS or local ordinance for highways under local jurisdiction, determine and declare a 25 or 20 mph prima facie speed limit on a highway that is not a freeway and that is contiguous to a business activity district when posted with a sign that indicates a speed limit of 25 or 20 mph if the highway segment meets all of the following conditions:

1. A maximum of four traffic lanes.
2. A maximum posted 30 mph prima facie speed limit immediately prior to and after the business activity district, if establishing a 25 mph speed limit.
3. A maximum posted 25 mph prima facie speed limit immediately prior to and after the business activity district, if establishing a 20 mph speed limit.

12bf A "business activity district" is that portion of a highway that is not a freeway and the property contiguous thereto that includes central or neighborhood downtowns, urban villages, or zoning designations that prioritize commercial land uses at the downtown or neighborhood scale and meets a least three of the following four requirements:

4. No less than 50 percent of the contiguous property fronting the highway consists of retail or dining commercial uses, including outdoor dining, that open directly onto sidewalks adjacent to the highway.
5. Parking, including parallel, diagonal, or perpendicular spaces located alongside the highway.

6. Traffic control signals or stop signs regulating traffic flow on the highway, located at intervals of no more than 600 feet.
7. Marked crosswalk(s) not controlled by a traffic control device.

Standard:

12bg **Caltrans or a local authority shall not declare a prima facie speed limit on a portion of a highway where it has already lowered the speed limit as permitted for designated safety corridors (CVC § 22358.7) or using the land or facility adjacent to high concentration of pedestrians and bicyclists (CVC § 22358.7) or retained the currently adopted speed limit (CVC § 22358.8) or have restored the immediately prior adopted speed limit (CVC § 22358.8). Refer to CVC § 22358.9(c).**

12bh **CVC § 22358.9 shall not be applicable to a roadway that is a freeway.**

Support:

12bi CVC §§ 22358.7, 22358.8 and 22358.9 and their related policies are also applicable on any privately owned and maintained roads or commercial establishments, if the private road or private property has been subjected to the CVC application by the private property owner or a particular city or county enacts an ordinance or resolution to this effect. Refer to CVC §§ 21100, 21100.1, 21107, 21107.5, 21107.6, and 21107.7.

Truck Speed Zone on Descending Grades

Guidance:

12bj *Highway descending grades, if used for posting TRUCK Speed Limit signs (R2-1 and M4-4P) for trucks travelling downhill, should have recorded incident history of runaway commercial vehicles. Descending grades shorter than 1 mile should be avoided for posting signs because deceleration of vehicles due to braking action can generally provide sufficient control on descending grades of less than 1 mile.*

Support:

12bk To establish a downhill truck speed limit, a physical profile showing length and gradient and a downhill speed profile for three or more axle commercial vehicles with a gross rating of 10,000 lbs. or more will be provided.

Standard:

12bl **Speed profiles for truck speed limits shall be prepared on the same form as other speed surveys and remain valid for up to 7 years and may be extended to 14 years if conditions are met. An analysis of collisions involving trucks shall be prepared.**

Speed Traps

Support:

12bm Refer to CVC § 40802 for Speed Traps.

Standard:

12bn **A speed trap shall not apply to a local street, road, school zone, senior zone, or business activity district.**

Support:

12bo Senior zone is an area approaching or passing a senior center building or other facility primarily used by senior citizens, or the grounds thereof that is contiguous to a highway and on which is posted a standard "SENIOR" warning sign pursuant to CVC § 22352.

12bp Business activity district is a section of highway described in CVC § 22358.9(b) in which a standard 25 mph or 20 mph speed limit sign has been posted pursuant to CVC § 22358.9(a)(1).

Standard:

12bq **A section of highway shall be defined as a speed trap if the prima facie speed limit is not justified by an E&TS within five years, and the enforcement of the speed limit involves the use of radar or any other electronic device that measures the speed of moving objects, or seven years when using radar and all of the criteria specified in Paragraph 12bn are met.**

12br **This time provision shall be extended to seven years if the existing speed limit is initially valid for 5 years, when using radar and all of the following criteria are met:**

- **The arresting officer has successfully completed a minimum of 24 hours of radar operator course. Approved and certified by the Commission on Peace Officer Standards and Training.**
- **The radar used to measure the speed meets or exceeds the minimal operational standards of the National Traffic Highway Safety Administration, and has been calibrated within three years of the alleged violation.**

12bs **This time provision shall be extended to seven years if the existing speed limit is initially valid for 5 years, when using laser or other electronic device (other than radar) and all of the following criteria are met:**

- **The arresting officer has successfully completed a minimum of 24 hours of radar operator course. Approved and certified by the Commission on Peace Officer Standards and Training.**
- **The arresting officer has successfully completed a minimum of 2 hours of additional training. Course approved and certified by the Commission on Peace Officer Standards and Training .**
- **The laser or other electronic device used to measure the speed meets or exceeds the minimal operational standards of the National Traffic Highway Safety Administration, and has been calibrated within three years of the alleged violation.**

Option:

12bt This time provision for an E&TS may be extended to fourteen years when all of the above conditions are met and no significant changes in roadway or traffic conditions have occurred, including changes in adjoining property or land use, roadway width, or traffic volume as determined by a registered engineer.

Standard:

13 **The Speed Limit (R2-1) sign (see Figure 2B-3) shall display the limit established by law, ordinance, resolution, regulation, or as adopted by the authorized agency based on an engineering study. The speed limits displayed shall be in multiples of 5 mph.**

14 **Speed Limit (R2-1) signs, indicating speed limits for which posting is required by law, shall be located at the points of change from one speed limit to another.**

Guidance:

14a *Sections 2A.13 and 2A.16 provide guidance provisions on the location and lateral offset for signs.*

Option:

14b Where speed zones are longer than 1-mile, intermediate signs may be placed at approximate 1 mile intervals.

14c For three or more lanes in each direction, dual installation on both the left-side and right-side of the roadway may be used.

Standard:

14d **Freeways with a speed limit, 65 mph or 70 mph, Speed Limit (R2-1) signs shall be posted as follows:**

- **At the beginning of the segment, on the right-hand side of the roadway.**
- **Subsequently throughout the segment, at a maximum of 10-mile interval and immediately after locations where significant volumes of traffic enter the segment, on the right-hand side of the roadway.**

Option:

- The 10-mile interval may be modified to include locations following entrance ramps.

Standard:

14e **Freeways segment where with a speed limit 55 mph, Speed Limit (R2-1) signs shall be posted as follows:**

- **The beginning of the segment on the right-hand side of the roadway.**
- **Subsequently throughout the segment, at maximum 3-mile interval and immediately after locations where significant volumes of traffic enter the segment with no more than 3 interchanges between signs, on the right-hand side of the roadway.**

14f **Expressways with a speed limit 55 mph or 65 mph, Speed Limit (R2-1) signs shall be posted as follows:**

- **At the beginning of the segment, on the right-hand side of the roadway.**
- **Subsequently throughout the segment, at 3- to 5-mile intervals and immediately after locations where significant volumes of traffic enter the segment, on the right-hand side of the roadway.**

14g **Conventional highways with a speed limit 55 mph or 65 mph, Speed Limit (R2-1) signs shall be posted as follows:**

- **At the beginning of the segment, on the right-hand side of the roadway.**
- **Subsequently throughout the segment, at maximum 5- to 10-mile intervals and immediately after locations where significant volumes of traffic enter the segment, on the right-hand side of the roadway.**

Option:

14h Pavement markings with appropriate numerals (refer to Section 3B.20) may be used to supplement speed limit signs.

Standard:

15 **At the downstream end of the section to which a particular speed limit applies, a Speed Limit sign showing the next speed limit shall be installed.**

16 **Speed Limit signs indicating the statutory speed limits shall be installed at entrances to the State and, where**

appropriate, at jurisdictional boundaries in urban areas.

Guidance:

17 *Additional Speed Limit signs should be installed beyond interchanges and major intersections and at other locations where it is necessary to remind road users of the speed limit that is applicable.*

Standard:

17a **The Speed Zone Ahead (R2-4(CA)) sign shall always be followed by a Speed Limit (R2-1) sign installed at the beginning of the zone where the speed limit applies.**

17b **The End Speed Limit (R3(CA)) signs, shall be placed at the end of the final speed zone, before the highway reverts to maximum statutory speed limit.**

17c **The End Speed Limit (R3(CA)) sign shall only be used to mark the end of a speed zone.**

17d **The End Speed Limit (R3(CA)) sign shall not be used at a transition into a change in speed limits within a reduced zone.**

17e **The End Speed Limit (R3(CA)) signs, shall be placed at the end of all speed zones and within a reasonable distance of no greater than 1000 ft from the next Speed Limit (R2-1) sign.**

Option:

17f The Speed Zone Ahead (R2-4(CA)) sign (refer to Figure 2B-3(CA)) may be used to inform the motorist of a speed zone.

17g The End Truck Speed Limit (R2-14) sign or the R3(CA) sign (refer to Figure 2B-3(CA)) with the TRUCK (M4-4P) plaque may be used to mark the end of truck speed zones on descending grades.

17h The SLOWER TRAFFIC KEEP RIGHT (R4-3) signs may be installed at locations where there is a tendency of the motorists to drive in the left-hand lane(s) below the normal speed of traffic.

Truck and Bus Speed Limit Signs

Standard

17i **The TRUCKS, 3 AXLES OR MORE 55 (R6-3B(CA)) sign, the ALL VEHICLES WHEN TOWING 55 (R6-4B(CA)) sign, or the Speed Limit (R2-1) sign and the TRUCK SPEED LIMIT(R2-2P) plaque, shall be placed to indicate the truck speed limit in all truck speed zones.**

17j **The Speed Limit (R2-1) sign and the BUS SPEED LIMIT (R2-2aP(CA)) plaque shall be placed to indicate bus speed limit in all bus speed zones.**

Support:

17k Refer to Section 2B.22 for TRUCK and BUS speed zone signs.

Support:

18 The "Traffic Control Devices Handbook" contains suggested criteria on the spacing of speed limit signs.

18a Refer to FHWA's List of Known Errors for error in Paragraph 18 text. Refer to Section 1A.04 for more details.

Guidance:

18b *The Speed Limit (R2-1) signs and R6-3B(CA) and R6-4B(CA) signs should be placed in a location to be most effectively viewed by the approaching motorists.*

Standard:

18c **When used, the TRUCKS, 3 AXLES OR MORE 55 (R6-3B(CA)) sign shall be installed approximately 750 feet following each R2-1 sign, both at the beginning and throughout each 60, 65 or 70 mph segment.**

18d **The ALL VEHICLES WHEN TOWING 55 (R6-4B(CA)) sign shall be installed approximately 750 feet following the R6-3B(CA) sign.**

Guidance:

18e *The R6-3B(CA) and R6-4B(CA) signs should be placed on highway segments where speeds in excess of 55 mph are permitted.*

Option:

18f The existing AUTOS WITH TRAILERS, TRUCKS 55 MAXIMUM (R6-1(CA)) sign may remain in place until it is knocked down, damaged, stolen, vandalized, or otherwise reaches the end of its useful life.

18g The local California Highway Patrol office may be consulted to identify highway segments where enforcement is an issue. On these segments early replacement of existing R6-1(CA) signs may be necessary.

Support:

18h Refer to CVC § 22406 for types of vehicles subject to the 55 mph maximum speed limit.

~~Option:~~

19 ~~If a jurisdiction has a policy of installing Speed Limit signs in accordance with statutory requirements only on the~~

~~streets that enter a city, neighborhood, or residential area to indicate the speed limit that is applicable to the entire city, neighborhood, or residential area unless otherwise posted, a CITYWIDE (R2- 5aP), NEIGHBORHOOD (R2-5bP), or RESIDENTIAL (R2-5cP) plaque may be mounted above the Speed Limit sign and an UNLESS OTHERWISE POSTED (R2-5P) plaque may be mounted below the Speed Limit sign (see Figure 2B-3).~~

~~Support:~~

20 Section 2C.40 contains information about the use of speed zone signs to inform road users of a reduced or variable speed zone to provide advance notice to comply with the posted speed limit ahead.

Option:

21 If a W3-5b sign is posted to provide notice of a variable speed zone, an END VARIABLE SPEED LIMIT (R2-13) sign (see Figure 2B-3) may be installed at the downstream end of the zone to provide notice to road users of the termination of the speed zone.

Standard:

22 **If a W3-5c sign is posted to provide notice of a truck speed zone, an END TRUCK SPEED LIMIT (R2-14) sign (see Figure 2B-3) shall be installed at the downstream end of the zone to provide notice to road users of the termination of the speed zone.**

Guidance:

23 *An advisory speed plaque (see Section 2C.59) mounted below a warning sign should be used to warn road users of an advisory speed for a roadway condition. A Speed Limit sign should not be used for this purpose.*

24 *Advance traffic control warning signs (see Section 2C.35), intersection warning signs (see Section 2C.41), and/or other traffic control devices are appropriate warning prior to a signalized intersection. A Speed Limit sign should not be used for this purpose.*

Option:

25 Two types of Speed Limit signs may be used: one to designate passenger car speeds, including any nighttime information or maximum or minimum speed limit that might apply; and the other to show any special speed limits for trucks and other vehicles.

Guidance:

26 *No more than three speed limits should be displayed on any one Speed Limit sign or assembly.*

Speed Enforced Signs

Option:

26a The SPEED ENFORCED BY RADAR (R48(CA)) sign (refer to Figure 2B-3(CA)) may be used where the California Highway Patrol has received authority to use radar and requests such signs.

Guidance:

26b *One sign should be used in each direction at the beginning of the segment of roadway, and at intervening major route intersections, where radar enforcement is in effect.*

Support:

26c The R48(CA) sign is a stand-alone sign intended to alert motorists that speed is enforced by radar on a particular segment of roadway.

Option:

26d The RADAR ENFORCED (R48-1P(CA)) sign (refer to Figure 2B-3(CA)) may be used in combination with the Speed Limit (R2-1) sign on any roadway where law enforcement has the authority to use radar.

Guidance:

26e *When used, the R48-1P(CA) sign should be placed below the R2-1 sign, at the beginning of the segment of roadway and at intervening major intersections, where radar enforcement is in effect.*

Option:

26f The SPEED ENFORCED BY AIRCRAFT (R48-2(CA)) sign (refer to Figure 2B-3(CA)) may be placed, when requested by the California Highway Patrol, on sections of highway regularly patrolled by aircraft.

Standard:

26g **The R48-2(CA) sign shall be used for both directions of travel.**

Guidance:

26h *The R48-2(CA) sign should be placed at the beginning of the section and spaced at 25-mile intervals.*

Speed Zones in Temporary Traffic Control Areas

Support:

26i For signing and establishing speed zones in temporary traffic control areas, refer to Section 6B.01 in Part 6.

Traffic Signals within Speed Zones

Standard:

26j **An agency changing the speed limits within its jurisdiction shall report the speed limit change to the agency operating and maintaining traffic signals within the speed zone no later than 30 days before changing the posted speed limit.**

Support:

26k Changing the signal timing and adjusting the advance detector loops based on the revised speed limits can enhance the operations of the traffic signal.

Use of Metric System Designations – Refer to CVC § 21351.3

Option:

26l Dual units for speed limits on signs may be placed on local streets and roads in both Metric and English units.

Guidance:

26m *If used, dual unit speed limits should be rounded to the nearest 10 km/h for Metric and 5 mph for English units for posting on signs on local streets and roads.*

Support:

26n Refer to AASHTO's Traffic Engineering Metric Conversion Factors. Refer to Section 1A.05 for information regarding this publication.

Standard:

26o **Metric speed limits shall not be placed on State highways.**

Option:

27 A variable speed limit sign that changes the speed limit for traffic and ambient conditions may be installed provided that the appropriate speed limit is displayed at the proper times and locations in accordance with Paragraphs 9 and 10 of this Section.

Standard:

28 **The variable speed limit sign legend "SPEED LIMIT" shall be a black legend on a white retroreflective background. The variable speed limit legend shall be displayed in white LEDs on an opaque black background.**

Support:

29 Section 2C.13 contains information about the use of a Vehicle Speed Feedback plaque mounted below a Speed Limit sign that displays to approaching drivers the speed at which they are traveling.

30 Advisory speed signs and plaques are discussed in Sections 2C.12 and 2C.59. Temporary traffic control zone speed signs are discussed in Part 6. The WORK ZONE (G20-5aP) plaque intended for installation above a Speed Limit sign is discussed in Section 6G.08. School Speed Limit signs are discussed in Section 7B.05.

Section 2B.22 Vehicle Speed Limit Plaques (R2-2P Series)

Standard:

01 **Where a special speed limit applies to certain classes of vehicles, the Truck Speed Limit (R2-2P) plaque, Bus Speed Limit (R2-2aP) plaque, Truck-Bus Speed Limit (R2-2bP) plaque, or Vehicles over X Tons Speed Limit (R2-2cP) plaque (see Figure 2B-3) shall be displayed below the Speed Limit (R2-1) sign, except as provided in Paragraph 2 of this Section.**

Option:

01a Where a special speed limit applies to certain classes of vehicles, the TRUCKS, 3 AXLES OR MORE 55 (R6-3B(CA)) sign followed by the ALL VEHICLES WHEN TOWING 55 (R6-4B(CA)) sign may be used. Refer to Section 2B.21 and CVC § 22406.

02 The legend of a Vehicle Speed Limit (R2-2P series) plaque may be combined in a single sign and displayed below the SPEED LIMIT XX legend, similar to the Combined Maximum and Minimum Speed Limits (R2-4a) sign (see Section 2B.24).

A different vehicle class legend may be substituted on the R2-2P series plaque for other classes of vehicles not included in Paragraph 1 of this Section.

Section 2B.23 Night Speed Limit Plaque (R2-3P)

Table 2B-101(CA). Standard Application of Speed Limits per California Vehicle Code

Speed	Determined by	Roadway Facility	CVC Section
15 mph	State or local authority	▪ Railroad grade crossing with obstructed view ▪ Uncontrolled highway intersection with obstructed view ▪ An alley	22352.a.1
15 & 20 mph	State or local authority	Where the prima facie speed of 25 mph is more than is reasonable or safe ▪ Narrow street not exceeding 25 feet other than a State Highway in a business or residential area or in a public park ▪ Road near a school or senior center facility	22358.3 & 22358.4
25 mph	State or local authority	▪ Any highway in any business or residential district ▪ A street contiguous to a senior citizen facility other than a State highway ▪ Adjacent to a children's playground in a public park, but only during particular hours or days when children are expected to use the facilities	22352.b & 22357.1

Table 2B-102(CA). Standard Application of Speed Limits per California Vehicle Code

Speed	Determined by	Roadway Facility	CVC Section
15 to 60 mph	Caltrans	State highway, based on an E&TS where the limit of 65 mph is more than reasonable or safe	22354
15 to 60 mph	Local city council or county board of supervisors for Caltrans	State highway, local entities may conduct a public hearing on proposed increases or decreases, and the State Department of Transportation shall take into consideration the results of the public hearing	22354.5
30 to 65 mph	Local authority	Any street other than a state highway, by ordinance, may post a prima facie speed limit based on an E&TS where a speed > 25 mph would facilitate the orderly movement of vehicular traffic and would be reasonable and safe	22357
15 to 60 mph	Local authority	Any street other than a state highway, by ordinance, may post a prima facie speed limit based on an E&TS where the limit of 65 mph is more than is reasonable and safe	22358
20 to 50 mph for Trucks	State or local authority	Highways under their respective jurisdiction where 55 mph is more than is reasonable or safe for vehicles mentioned in CVC 22406 (Trucks and other large vehicles)	22407
Maximum Speed 55 mph	State or local authority	▪ Two-lane, undivided highway ▪ Any highway when driving any of the following vehicles: a. Motortruck or truck tractor with > 3 axles b. Passenger vehicle or bus towing any other vehicle c. School bus transporting any school pupil d. A farm labor vehicle when transporting passengers e. A vehicle transporting explosives f. A trailer bus	22349.b & .c and 22406
Maximum Speed Limit of 65 mph	State or local authority	Any highway, posted at 65 mph based upon an E&TS, for vehicles not subject to CVC 22406	22349(a) & 22349
Maximum Freeway Speed Limit of 70 mph	Caltrans	Freeways, after consultation with the California Highway Patrol, based upon an E&TS, or upon the basis of appropriate design standards and projected traffic volumes in the case of newly constructed freeway segments, for vehicles not subject to CVC 22406	22356

Table 2B-103(CA). Examples Showing the Applicability of Rounding and Additional Speed Reduction

85th-Percentile Speed (mph)	Rounding to the nearest 5 mph increment (CVC 22358.6(a))	If rounding to the nearest is up, may round down (CVC 22358.6(c))	If rounding to the nearest is down, it may additionally be lowered by 5 mph (CVC 22358.6(b))	If safety corridor or adjacent to high concentration of bicyclists & pedestrians, may additionally lower by 5 mph (CVC 22358.7)
47.5-50.0	50	45	N/A	40
45.1-47.4	45	N/A	40	35
42.5-45.0	45	40	N/A	35
40.1-42.4	40	N/A	35	30

Table 2B-104(CA). Safety Corridor Factors

Category	Factors
Crash Weighting Factors to Develop One Serious/Fatal Injury Safety Corridor	▪ Crash severity: Fatal Crashes, Serious Injury Crashes ▪ Mode: Pedestrian-bicycle related crashes, vehicle/other ▪ Disadvantaged Community Status: MPO/RTPA or locally defined disadvantaged community status based on most current version of CalEnviroScreen ▪ Vulnerable Populations: Seniors (age 65 and older) and Youth (under age 15) based on the American Community Survey ▪ School proximity (within 0.25 miles) based on the California School Campus Database ▪ Systemic or Predicted Crashes
Crash Density	Each roadway segment block may be converted into ~ 0.25-mile overlapping or contiguous "corridor" segments to create a consistent unit of measurement and assess the concentration of linear patterns of crashes within a defined distance. The highest scoring (i.e., most fatal and serious injury crashes per mile) "corridor" segments within a street need to be identified and an appropriate threshold set to determine safety corridor eligibility.
Maintenance	The jurisdiction may establish a review and re-evaluation frequency for safety corridors. However, such frequency need not exceed seven years.

Table 2B-105(CA). Generators of High Concentrations of Bicyclists or Pedestrians

Category	Generator
Land Use	Employment centers
	Presence of retail
	Parks, multi-use trails, and recreational destinations
	Schools/universities
	Senior Centers
	Cultural areas, entertainment space areas, or areas of community significance
	Religious facilities
	Health/medical facilities
Transit Factors	Transit stops
	Transit-Oriented Developments/Transit Priority Areas
Presence of Pedestrian/Bicyclist Infrastructure	Sidewalk presence
	Crosswalk presence
	Bikeway presence
	Nearby signalized intersections on four-way intersections
	Presence of micromobility devices such as bicycles or scooters
Demographic Factors	Presence of vulnerable groups, including children, seniors, persons with disabilities, users of personal assistive mobility devices, and the unhoused
	MPO/RTPA or locally defined disadvantaged community status
	Presence of students (all levels)
Local Data	Need identified in a safety analysis, such as a road safety audit or a formalized planning document, such as a local road safety plan

APPENDIX C

Engineering and Traffic Survey Summary Reports

CITY OF WESTMINSTER ENGINEERING AND SPEED SURVEY

Speed (mph)	VEHICLES SURVEYED NORTHBOUND	VEHICLES SURVEYED SOUTHBOUND	Total Vehicles	Pace
75			0	
74			0	
73			0	
72			0	
71			0	
70			0	
69			0	
68			0	
67			0	
66			0	
65			0	
64			0	
63			0	
62			0	
61			0	
60			0	
59			0	
58			0	
57			0	
56			0	
55			0	
54			0	
53			0	
52			0	
51			0	
50			0	
49			0	
48			0	
47			0	
46			0	
45			0	
44			0	
43			2	
42			10	
41			10	
40			9	
39			10	PACE
38			15	PACE
37			16	PACE
36			14	PACE
35			24	PACE
34			10	PACE
33			10	PACE
32			7	
31			4	
30			2	
29			4	
28			2	
27			3	
26			1	
25			0	
24			0	
23			0	
22			0	
21			0	
20			0	
19			0	
18			0	
17			0	
16			0	
15			0	
		GRAND TOTAL	153	

ROADWAY: **Hoover Street**

LOCATION: **Garden Grove Bouelvard to Trask Avenue**

DATE: 3/3/2026 **TIME START** 12:20 **TIME STOP:** 12:42

SURVEY ADDRESS: 13252 Hoover St.

ROAD CONDITION: Good

WEATHER: Sunny

ROAD DESCRIPTION: Section of Residential with on-street parking (east side), RR Tracks on west side

ROAD GEOMETRICS: 1 lane each direction, two-way left turn lane, Class IV bikeway on west side of street

CONDITIONS NOT READILY APPARENT: Multiple driveways, uncontrolled pedestrian crossing at Benton Ave.

AVERAGE DAILY TRAFFIC: 10,921 **SEGMENT LENGTH:** 0.50

ACCIDENT HISTORY: 0 midblock collisions in 3 years (1/1/2023 TO 12/31/2025)

ACCIDENT RATE: 0.00 acc/mvm **EXPECTED RATE:** 1.07 acc/mvm

85TH %:	40 mph
50TH %:	36 mph
15TH %:	33 mph
AVERAGE SPEED:	36 mph
10 MPH PACE:	33 - 42 mph
% IN PACE:	84%
% OVER PACE:	1%
% UNDER PACE:	15%

Justification for Proposed Speed Limit:

Based on the 85th percentile speed, Class IV bikeway, existing uncontrolled pedestrian crossing and CVC 22358.6(b), it is recommended to post the speed limit on this segment at 35 mph.

REGISTERED PROFESSIONAL ENGINEER
RUBEN PERALES
No. 83169
CIVIL
STATE OF CALIFORNIA

TRAFFIC No. 2838

EXISTING SPEED LIMIT: 40 **PROPOSED SPEED LIMIT:** **35**

OBSERVED BY: Ruben Perales

REVIEWED BY: Ruben Perales

I HEREBY CERTIFY THAT THIS IS A TRUE AND CORRECT COPY OF A SPEED ZONE SURVEY AS ON FILE IN THE OFFICE OF THE CITY TRAFFIC ENGINEER OF THE CITY OF WESTMINSTER, CALIFORNIA.

DATE

CITY OF WESTMINSTER ENGINEERING AND SPEED SURVEY

Speed (mph)	VEHICLES SURVEYED NORTHBOUND	VEHICLES SURVEYED SOUTHBOUND	Total Vehicles	Pace
75			0	
74			0	
73			0	
72			0	
71			0	
70			0	
69			0	
68			0	
67			0	
66			0	
65			0	
64			0	
63			0	
62			0	
61			0	
60			0	
59			0	
58			0	
57			0	
56			0	
55			0	
54			0	
53			0	
52			0	
51			0	
50			0	
49			0	
48			0	
47			0	
46			0	
45			0	
44			0	
43			0	
42			1	
41			1	
40			2	
39			2	
38			6	
37			5	
36			11	
35			15	PACE
34			15	
33			15	
32			15	
31			16	
30			20	
29			11	
28			6	
27			3	
26			2	
25			1	
24			0	
23			0	
22			0	
21			0	
20			0	
19			0	
18			0	
17			0	
16			0	
15			0	
		GRAND TOTAL	147	

ROADWAY: Hoover Street

LOCATION: Trask Avenue to Westminster Boulevard

DATE: 3/3/2026 **TIME START** 10:27 **TIME STOP:** 10:51

SURVEY ADDRESS: 13837 Hoover St.

ROAD CONDITION: Good

WEATHER: Sunny

ROAD DESCRIPTION: RR Tracks on west side, all way stop on 21st St.

ROAD GEOMETRICS: 1 lane each direction, two-way left turn lane, Class IV bikeway on west side of street

CONDITIONS NOT READILY APPARENT: Senior apartments, DMV

AVERAGE DAILY TRAFFIC: 9,877 **SEGMENT LENGTH:** 0.50

ACCIDENT HISTORY: 14 midblock collisions in 3 years (1/1/2023 TO 12/31/2025)

ACCIDENT RATE: 2.57 acc/mvm **EXPECTED RATE:** 1.07 acc/mvm

85TH %:	36 mph
50TH %:	32 mph
15TH %:	29 mph
AVERAGE SPEED:	33 mph
10 MPH PACE:	29 - 38 mph
% IN PACE:	88%
% OVER PACE:	4%
% UNDER PACE:	8%

Justification for Proposed Speed Limit:

Based on the 85th percentile speed, and CVC 22358.6(a), it is recommended to post the speed limit on this segment at 35 mph.

REGISTERED PROFESSIONAL ENGINEER
RUBEN PERALES
No. 83169
CIVIL
STATE OF CALIFORNIA

TRAFFIC No. 2838

EXISTING SPEED LIMIT: 40 **PROPOSED SPEED LIMIT:** 35

OBSERVED BY: Ruben Perales

REVIEWED BY: Ruben Perales

I HEREBY CERTIFY THAT THIS IS A TRUE AND CORRECT COPY OF A SPEED ZONE SURVEY AS ON FILE IN THE OFFICE OF THE CITY TRAFFIC ENGINEER OF THE CITY OF WESTMINSTER, CALIFORNIA.

DATE

CITY OF WESTMINSTER ENGINEERING AND SPEED SURVEY

Speed (mph)	VEHICLES SURVEYED NORTHBOUND	VEHICLES SURVEYED SOUTHBOUND	Total Vehicles	Pace
75			0	
74			0	
73			0	
72			0	
71			0	
70			0	
69			0	
68			0	
67			0	
66			0	
65			0	
64			0	
63			0	
62			0	
61			0	
60			0	
59			0	
58			0	
57			0	
56			0	
55			0	
54			0	
53			0	
52			0	
51			0	
50			0	
49			0	
48			0	
47			0	
46			0	
45			0	
44			0	
43			0	
42			1	
41			2	
40			2	
39			4	
38			4	
37			7	
36			8	
35			13	
34			11	PACE
33			9	
32			11	
31			21	
30			11	
29			7	
28			11	
27			2	
26			4	
25			2	
24			0	
23			0	
22			0	
21			0	
20			0	
19			0	
18			0	
17			0	
16			0	
15			0	
		GRAND TOTAL	130	

ROADWAY: Hoover Street

LOCATION: Westminster Boulevard to Hazard Avenue

DATE: 3/3/2026 **TIME START** 9:45 **TIME STOP:** 10:13

SURVEY ADDRESS: 14272 Hoover St.

ROAD CONDITION: Good

WEATHER: Sunny

ROAD DESCRIPTION: Webber Elementary School (east side), RR Tracks on west side, school speed limit of 25mph, on-street parking, all way stop on Main St.

ROAD GEOMETRICS: 1 lane each direction, two-way left turn lane, Class IV bikeway on west side of street

CONDITIONS NOT READILY APPARENT: Multiple driveways

AVERAGE DAILY TRAFFIC: 7,226 **SEGMENT LENGTH:** 0.49

ACCIDENT HISTORY: 3 midblock collisions in 3 years (1/1/2023 TO 12/31/2025)

ACCIDENT RATE: 0.77 acc/mvm **EXPECTED RATE:** 1.07 acc/mvm

85TH %:	37 mph
50TH %:	32 mph
15TH %:	29 mph
AVERAGE SPEED:	33 mph
10 MPH PACE:	28 - 37 mph
% IN PACE:	84%
% OVER PACE:	10%
% UNDER PACE:	6%

Justification for Proposed Speed Limit:

Based on the 85th percentile speed, and CVC 22358.6(a), it is recommended to post the speed limit on this segment at 35 mph.

REGISTERED PROFESSIONAL ENGINEER
RUBEN PERALES
No. 83169
CIVIL
STATE OF CALIFORNIA

TRAFFIC No. 2838

EXISTING SPEED LIMIT: 40 **PROPOSED SPEED LIMIT:** 35

OBSERVED BY: Ruben Perales

REVIEWED BY: Ruben Perales

I HEREBY CERTIFY THAT THIS IS A TRUE AND CORRECT COPY OF A SPEED ZONE SURVEY AS ON FILE IN THE OFFICE OF THE CITY TRAFFIC ENGINEER OF THE CITY OF WESTMINSTER, CALIFORNIA.

DATE

CITY OF WESTMINSTER ENGINEERING AND SPEED SURVEY

Speed (mph)	VEHICLES SURVEYED NORTHBOUND	VEHICLES SURVEYED SOUTHBOUND	Total Vehicles	Pace
75			0	
74			0	
73			0	
72			0	
71			0	
70			0	
69			0	
68			0	
67			0	
66			0	
65			0	
64			0	
63			0	
62			0	
61			0	
60			0	
59			0	
58			0	
57			0	
56			0	
55			0	
54			0	
53			0	
52			0	
51			0	
50			0	
49			0	
48			0	
47			0	
46			0	
45			0	
44			0	
43			4	
42			4	
41			10	
40			12	
39			11	
38			18	PACE
37			14	
36			12	
35			11	
34			15	
33			8	
32			8	
31			4	
30			2	
29			1	
28			0	
27			2	
26			0	
25			0	
24			0	
23			0	
22			1	
21			0	
20			0	
19			0	
18			0	
17			0	
16			0	
15			0	
		GRAND TOTAL	137	

ROADWAY: **Hoover Street**

LOCATION: **Hazard Avenue to Bolsa Avenue**

DATE: 3/3/2026 **TIME START** 9:03 **TIME STOP:** 9:39

SURVEY ADDRESS: 14821 Hoover St.

ROAD CONDITION: Good

WEATHER: Sunny

ROAD DESCRIPTION: RR Tracks on west side

ROAD GEOMETRICS: 1 lane each direction, two-way left turn lane, Class IV bikeway on west side of street

CONDITIONS NOT READILY APPARENT:

AVERAGE DAILY TRAFFIC: 5,990 **SEGMENT LENGTH:** 0.51

ACCIDENT HISTORY: 1 midblock collisions in 3 years (1/1/2023 TO 12/31/2025)

ACCIDENT RATE: 0.30 acc/mvm **EXPECTED RATE:** 1.07 acc/mvm

85TH %:	40 mph
50TH %:	37 mph
15TH %:	33 mph
AVERAGE SPEED:	36 mph
10 MPH PACE:	32 - 41 mph
% IN PACE:	87%
% OVER PACE:	6%
% UNDER PACE:	7%

Justification for Proposed Speed Limit:

Based on the 85th percentile speed, the existing Class IV bikeway, and CVC 22358.6(b), it is recommended to post the speed limit on this segment at 35 mph.

REGISTERED PROFESSIONAL ENGINEER
RUBEN PERALES
No. 83169
CIVIL
STATE OF CALIFORNIA

TRAFFIC No. 2838

EXISTING SPEED LIMIT: 40 **PROPOSED SPEED LIMIT:** **35**

OBSERVED BY: Ruben Perales

REVIEWED BY: Ruben Perales

I HEREBY CERTIFY THAT THIS IS A TRUE AND CORRECT COPY OF A SPEED ZONE SURVEY AS ON FILE IN THE OFFICE OF THE CITY TRAFFIC ENGINEER OF THE CITY OF WESTMINSTER, CALIFORNIA.

DATE

APPENDIX D

Traffic Radar Certifications

Traffic Radar Equipment Certification

Traffic Radar Operator Certification

Decatur

Decatur Electronics, LLC.

920 S. Andreasen Dr. Suite 103
San Diego, Ca. 92029

CERTIFICATE of ACCURACY

I hereby certify the following Speed Measuring Radar Device has been checked for accuracy and correctness of operation under my supervision. This Speed Measuring Radar Device is certified accurate within +/- 1 mph (+/- 1 kph) in moving mode, using equipment with accuracy traceable to the National Institute of Standards and Technology. The transmitter frequency of this Speed Measuring Radar Device has been tested and found to be within the prescribed limits as established by the Federal Communications Commission, NHTSA and IACP

Model **SCOUT2** Serial Number **SHD2-05870** Transmitter Frequency **24.119**

Decatur electronics

7/24/24
Date

Quality Technitian

CERTIFICATE OF COMPLETION

THIS IS TO CERTIFY THAT –

1. Ruben Perales of Albert Grover and Associates has successfully completed a Radar /Laser Operator course. This was based upon the national standards as outlined by the National Highway Traffic Safety Administration, and the national text "Understanding Police Traffic Radar and Laser" by Les Langford. His instructor is Steve Chauncey, a police officer since 1981 and a California P.O.S.T. certified Radar and Laser Instructor since 1991.

2. Ruben Perales completed the classroom instruction on operation and theory of Radar and Laser/Lidar devices, case law, traffic and engineering surveys, FCC regulations, the California Vehicle Code and California case law as well as the test, set-up, operation and identification of erroneous readings.

3. Ruben Perales demonstrated competence in test and set-up of the Radar and Laser devices and for making visual speed estimations and identifying erroneous readings in field settings.

4. Ruben Perales of Albert Grover and Associates is hereby certified as having completed a course of instruction for the purposes of Radar/Laser operation for determining car counts and raw data for traffic and engineering surveys as out lined in sections 627 and the 40800 series of the California Vehicle Code, Chapter 8 of the former Cal Trans Manual and applicable sections of Chapter 2 of MUTCD up to and including Revision 09-04 issued June 29, 2009. This certification is awarded on this 10th Day of November, 2009.

Steve Chauncey
California P.O.S.T. Certified Radar/Laser Instructor

APPENDIX E

Average Daily Traffic (ADT) Counts

Prepared by National Data & Surveying Services

VOLUME

Hoover St Bet Garden Grove Blvd & Trask Ave

Day: Wednesday
Date: 3/4/2026

City: Westminster
Project #: CA26_010026_001

DAILY TOTALS	NB	SB	EB	WB	Total
	5,707	5,214	0	0	10,921

15-Minutes Interval

TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
0:00	4	16			20	12:00	77	68			145
0:15	3	7			10	12:15	65	87			152
0:30	7	8			15	12:30	90	94			184
0:45	5	9			14	12:45	74	80			154
1:00	2	9			11	13:00	88	75			163
1:15	1	2			3	13:15	100	60			160
1:30	3	3			6	13:30	102	79			181
1:45	1	3			4	13:45	98	98			196
2:00	1	2			3	14:00	104	95			199
2:15	0	4			4	14:15	106	91			197
2:30	1	0			1	14:30	104	91			195
2:45	2	5			7	14:45	131	95			226
3:00	1	6			7	15:00	130	76			206
3:15	4	3			7	15:15	135	99			234
3:30	2	5			7	15:30	135	85			220
3:45	2	3			5	15:45	138	91			229
4:00	4	6			10	16:00	170	127			297
4:15	5	1			6	16:15	134	111			245
4:30	4	6			10	16:30	151	104			255
4:45	8	12			20	16:45	155	106			261
5:00	6	12			18	17:00	152	92			244
5:15	13	15			28	17:15	170	106			276
5:30	19	21			40	17:30	177	101			278
5:45	19	28			47	17:45	166	116			282
6:00	20	33			53	18:00	170	93			263
6:15	19	42			61	18:15	123	83			206
6:30	34	46			80	18:30	100	78			178
6:45	41	45			86	18:45	89	73			162
7:00	36	74			110	19:00	78	61			139
7:15	45	97			142	19:15	60	60			120
7:30	57	113			170	19:30	63	58			121
7:45	85	133			218	19:45	59	38			97
8:00	85	100			185	20:00	42	42			84
8:15	65	96			161	20:15	49	45			94
8:30	70	106			176	20:30	46	32			78
8:45	75	114			189	20:45	43	26			69
9:00	57	89			146	21:00	59	45			104
9:15	65	83			148	21:15	38	30			68
9:30	80	88			168	21:30	25	33			58
9:45	60	60			120	21:45	20	35			55
10:00	56	47			103	22:00	20	17			37
10:15	71	57			128	22:15	18	23			41
10:30	67	76			143	22:30	16	23			39
10:45	76	59			135	22:45	10	17			27
11:00	73	70			143	23:00	11	14			25
11:15	88	57			145	23:15	15	14			29
11:30	73	64			137	23:30	7	12			19
11:45	69	91			160	23:45	10	9			19
TOTALS	1584	2026	0	0	3610	TOTALS	4123	3188	0	0	7311
SPLIT %	44%	56%	0%	0%	33%	SPLIT %	56%	44%	0%	0%	67%

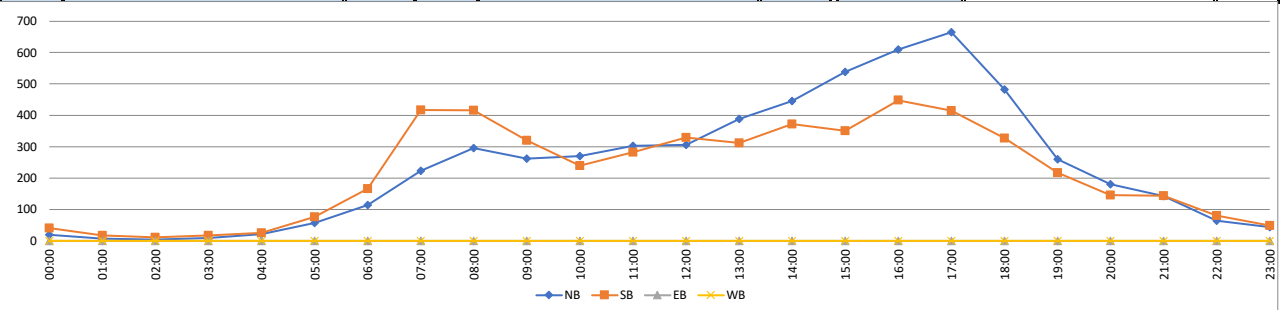
DAILY TOTALS

Hourly Intervals

TIME		NB	SB	EB	WB	TOTAL
00:00	01:00	19	40			59
01:00	02:00	7	17			24
02:00	03:00	4	11			15
03:00	04:00	9	17			26
04:00	05:00	21	25			46
05:00	06:00	57	76			133
06:00	07:00	114	166			280
07:00	08:00	223	417			640
08:00	09:00	295	416			711
09:00	10:00	262	320			582
10:00	11:00	270	239			509
11:00	12:00	303	282			585
12:00	13:00	306	329			635
13:00	14:00	388	312			700
14:00	15:00	445	372			817
15:00	16:00	538	351			889
16:00	17:00	610	448			1058
17:00	18:00	665	415			1080
18:00	19:00	482	327			809
19:00	20:00	260	217			477
20:00	21:00	180	145			325
21:00	22:00	142	143			285
22:00	23:00	64	80			144
23:00	00:00	43	49			92

STATISTICS

	NB	SB	EB	WB	TOTAL
Peak Period	00:00	to	12:00		
Volume	1584	2026			3610
Peak Hour	10:45	7:15			7:45
Peak Volume	310	443			740
Peak Hour Factor	0.881	0.833			0.849
Peak Period	12:00	to	00:00		
Volume	4123	3188			7311
Peak Hour	17:15	16:00			17:15
Peak Volume	683	448			1099
Peak Hour Factor	0.965	0.882			0.974
Peak Period	07:00	to	09:00		
Volume	518	833			1351
Peak Hour	7:45	7:15			7:45
Peak Volume	305	443			740
Peak Hour Factor	0.897	0.833			0.849
Peak Period	16:00	to	18:00		
Volume	1275	863			2138
Peak Hour	17:00	16:00			17:00
Peak Volume	665	448			1080
Peak Hour Factor	0.939	0.882			0.957



Prepared by National Data & Surveying Services

VOLUME

Hoover St Bet Trask Ave & Westminster Blvd

Day: Wednesday
Date: 3/4/2026

City: Westminster
Project #: CA26_010026_002

DAILY TOTALS	NB	SB	EB	WB	Total
	5,071	4,806	0	0	9,877

DAILY TOTALS

15-Minutes Interval

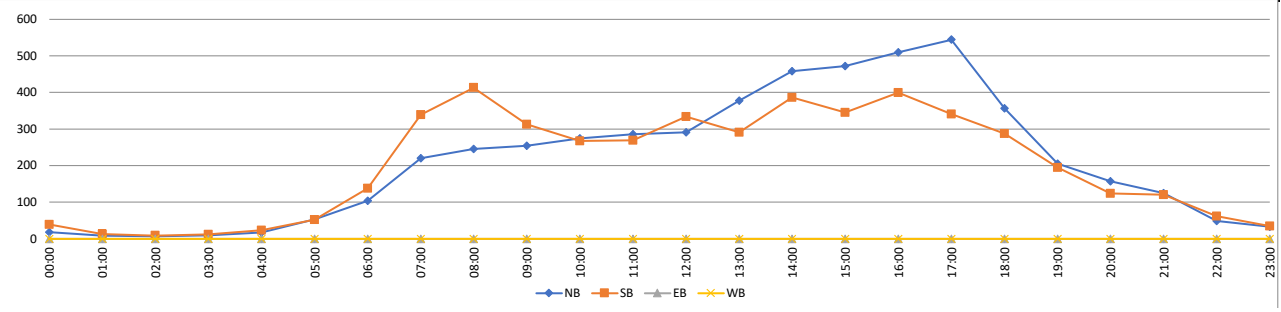
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
0:00	6	14			20	12:00	74	73			147
0:15	4	8			12	12:15	62	76			138
0:30	5	12			17	12:30	85	98			183
0:45	3	5			8	12:45	70	87			157
1:00	1	7			8	13:00	86	67			153
1:15	2	2			4	13:15	104	60			164
1:30	5	2			7	13:30	94	71			165
1:45	0	2			2	13:45	93	93			186
2:00	1	3			4	14:00	115	98			213
2:15	1	2			3	14:15	102	95			197
2:30	3	0			3	14:30	108	92			200
2:45	2	4			6	14:45	133	101			234
3:00	0	4			4	15:00	120	71			191
3:15	4	3			7	15:15	119	100			219
3:30	3	4			7	15:30	123	86			209
3:45	2	1			3	15:45	110	88			198
4:00	2	4			6	16:00	138	112			250
4:15	6	1			7	16:15	125	97			222
4:30	2	9			11	16:30	123	102			225
4:45	7	9			16	16:45	123	88			211
5:00	5	7			12	17:00	137	71			208
5:15	14	11			25	17:15	125	90			215
5:30	19	12			31	17:30	155	90			245
5:45	15	22			37	17:45	127	90			217
6:00	16	31			47	18:00	112	80			192
6:15	23	29			52	18:15	85	74			159
6:30	29	39			68	18:30	86	65			151
6:45	36	39			75	18:45	73	68			141
7:00	42	59			101	19:00	53	58			111
7:15	44	74			118	19:15	55	50			105
7:30	55	82			137	19:30	41	49			90
7:45	79	124			203	19:45	56	38			94
8:00	56	101			157	20:00	32	36			68
8:15	54	106			160	20:15	48	37			85
8:30	69	94			163	20:30	41	27			68
8:45	66	112			178	20:45	36	24			60
9:00	65	95			160	21:00	58	39			97
9:15	56	79			135	21:15	33	29			62
9:30	76	89			165	21:30	24	25			49
9:45	57	50			107	21:45	10	27			37
10:00	56	61			117	22:00	17	14			31
10:15	74	68			142	22:15	12	17			29
10:30	68	75			143	22:30	12	16			28
10:45	76	63			139	22:45	8	15			23
11:00	65	73			138	23:00	9	9			18
11:15	79	54			133	23:15	11	9			20
11:30	70	61			131	23:30	7	11			18
11:45	72	81			153	23:45	6	6			12
TOTALS	1495	1887	0	0	3382	TOTALS	3576	2919	0	0	6495
SPLIT %	44%	56%	0%	0%	34%	SPLIT %	55%	45%	0%	0%	66%

Hourly Intervals

TIME		NB	SB	EB	WB	TOTAL
00:00	01:00	18	39			57
01:00	02:00	8	13			21
02:00	03:00	7	9			16
03:00	04:00	9	12			21
04:00	05:00	17	23			40
05:00	06:00	53	52			105
06:00	07:00	104	138			242
07:00	08:00	220	339			559
08:00	09:00	245	413			658
09:00	10:00	254	313			567
10:00	11:00	274	267			541
11:00	12:00	286	269			555
12:00	13:00	291	334			625
13:00	14:00	377	291			668
14:00	15:00	458	386			844
15:00	16:00	472	345			817
16:00	17:00	509	399			908
17:00	18:00	544	341			885
18:00	19:00	356	287			643
19:00	20:00	205	195			400
20:00	21:00	157	124			281
21:00	22:00	125	120			245
22:00	23:00	49	62			111
23:00	00:00	33	35			68

STATISTICS

	NB	SB	EB	WB	TOTAL
Peak Period	00:00	to	12:00		
Volume	1495	1887			3382
Peak Hour	10:45	7:45			7:45
Peak Volume	290	425			683
Peak Hour Factor	0.918	0.857			0.841
Peak Period	12:00	to	00:00		
Volume	3576	2919			6495
Peak Hour	17:00	15:45			16:00
Peak Volume	544	399			908
Peak Hour Factor	0.877	0.891			0.908
Peak Period	07:00	to	09:00		
Volume	465	752			1217
Peak Hour	7:45	7:45			7:45
Peak Volume	258	425			683
Peak Hour Factor	0.816	0.857			0.841
Peak Period	16:00	to	18:00		
Volume	1053	740			1793
Peak Hour	17:00	16:00			16:00
Peak Volume	544	399			908
Peak Hour Factor	0.877	0.891			0.908



Prepared by National Data & Surveying Services

VOLUME

Hoover St Bet Westminster Blvd & Hazard Ave

Day: Wednesday
Date: 3/4/2026

City: Westminster
Project #: CA26_010026_003

DAILY TOTALS	NB	SB	EB	WB	Total
	3,793	3,433	0	0	7,226

15-Minutes Interval

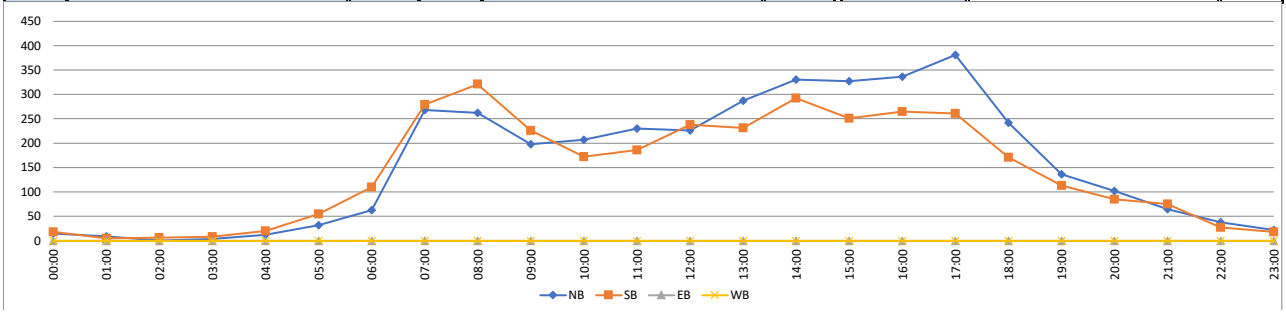
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
0:00	5	4			9	12:00	56	56			112
0:15	4	4			8	12:15	48	51			99
0:30	1	5			6	12:30	61	67			128
0:45	5	5			10	12:45	61	64			125
1:00	2	0			2	13:00	82	67			149
1:15	3	1			4	13:15	71	60			131
1:30	3	3			6	13:30	67	49			116
1:45	1	1			2	13:45	67	55			122
2:00	1	1			2	14:00	89	76			165
2:15	0	0			0	14:15	70	75			145
2:30	0	1			1	14:30	83	76			159
2:45	0	4			4	14:45	88	65			153
3:00	0	1			1	15:00	81	62			143
3:15	1	4			5	15:15	82	63			145
3:30	3	2			5	15:30	76	55			131
3:45	0	1			1	15:45	88	71			159
4:00	0	1			1	16:00	80	78			158
4:15	3	5			8	16:15	85	55			140
4:30	2	5			7	16:30	80	63			143
4:45	7	9			16	16:45	91	69			160
5:00	7	11			18	17:00	110	61			171
5:15	7	10			17	17:15	93	61			154
5:30	11	18			29	17:30	96	69			165
5:45	7	16			23	17:45	82	70			152
6:00	10	20			30	18:00	73	52			125
6:15	13	23			36	18:15	73	42			115
6:30	12	29			41	18:30	54	36			90
6:45	28	38			66	18:45	42	41			83
7:00	25	46			71	19:00	42	28			70
7:15	41	56			97	19:15	34	29			63
7:30	91	84			175	19:30	30	34			64
7:45	111	93			204	19:45	30	22			52
8:00	66	90			156	20:00	24	29			53
8:15	70	62			132	20:15	23	19			42
8:30	56	85			141	20:30	32	20			52
8:45	70	84			154	20:45	23	17			40
9:00	47	58			105	21:00	15	23			38
9:15	52	67			119	21:15	23	16			39
9:30	54	52			106	21:30	18	17			35
9:45	45	49			94	21:45	9	19			28
10:00	46	37			83	22:00	12	15			27
10:15	50	41			91	22:15	15	3			18
10:30	57	54			111	22:30	8	4			12
10:45	54	40			94	22:45	3	5			8
11:00	64	37			101	23:00	6	3			9
11:15	55	45			100	23:15	10	4			14
11:30	54	51			105	23:30	1	5			6
11:45	57	53			110	23:45	5	6			11
TOTALS	1301	1406	0	0	2707	TOTALS	2492	2027	0	0	4519
SPLIT %	48%	52%	0%	0%	37%	SPLIT %	55%	45%	0%	0%	63%

Hourly Intervals

TIME		NB	SB	EB	WB	TOTAL
00:00	01:00	15	18			33
01:00	02:00	9	5			14
02:00	03:00	1	6			7
03:00	04:00	4	8			12
04:00	05:00	12	20			32
05:00	06:00	32	55			87
06:00	07:00	63	110			173
07:00	08:00	268	279			547
08:00	09:00	262	321			583
09:00	10:00	198	226			424
10:00	11:00	207	172			379
11:00	12:00	230	186			416
12:00	13:00	226	238			464
13:00	14:00	287	231			518
14:00	15:00	330	292			622
15:00	16:00	327	251			578
16:00	17:00	336	265			601
17:00	18:00	381	261			642
18:00	19:00	242	171			413
19:00	20:00	136	113			249
20:00	21:00	102	85			187
21:00	22:00	65	75			140
22:00	23:00	38	27			65
23:00	00:00	22	18			40

STATISTICS

	NB	SB	EB	WB	TOTAL
Peak Period	00:00	to	12:00		
Volume	1301	1406			2707
Peak Hour	7:30	7:45			7:30
Peak Volume	338	330			667
Peak Hour Factor	0.761	0.887			0.817
Peak Period	12:00	to	00:00		
Volume	2492	2027			4519
Peak Hour	16:45	14:00			16:45
Peak Volume	390	292			650
Peak Hour Factor	0.886	0.961			0.950
Peak Period	07:00	to	09:00		
Volume	530	600			1130
Peak Hour	7:30	7:45			7:30
Peak Volume	338	330			667
Peak Hour Factor	0.761	0.887			0.817
Peak Period	16:00	to	18:00		
Volume	717	526			1243
Peak Hour	16:45	16:00			16:45
Peak Volume	390	265			650
Peak Hour Factor	0.886	0.849			0.950



Prepared by National Data & Surveying Services

VOLUME

Hoover St Bet Hazard Ave & Bolsa Ave

Day: Wednesday
Date: 3/4/2026

City: Westminster
Project #: CA26_010026_004

DAILY TOTALS	NB	SB	EB	WB	Total
	3,010	2,980	0	0	5,990

15-Minutes Interval

TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
0:00	1	3			4	12:00	35	46			81
0:15	3	4			7	12:15	43	50			93
0:30	1	7			8	12:30	42	47			89
0:45	6	0			6	12:45	46	54			100
1:00	1	1			2	13:00	53	59			112
1:15	3	0			3	13:15	60	50			110
1:30	3	1			4	13:30	51	51			102
1:45	0	0			0	13:45	64	47			111
2:00	1	2			3	14:00	58	62			120
2:15	0	1			1	14:15	57	51			108
2:30	0	0			0	14:30	72	71			143
2:45	0	4			4	14:45	61	56			117
3:00	2	2			4	15:00	68	56			124
3:15	0	4			4	15:15	58	52			110
3:30	0	2			2	15:30	55	53			108
3:45	1	3			4	15:45	61	63			124
4:00	2	1			3	16:00	76	78			154
4:15	5	4			9	16:15	70	44			114
4:30	5	5			10	16:30	61	59			120
4:45	8	11			19	16:45	91	61			152
5:00	5	6			11	17:00	83	60			143
5:15	5	7			12	17:15	86	57			143
5:30	5	15			20	17:30	81	43			124
5:45	10	21			31	17:45	70	44			114
6:00	8	13			21	18:00	76	46			122
6:15	15	18			33	18:15	55	28			83
6:30	14	25			39	18:30	53	33			86
6:45	26	38			64	18:45	36	24			60
7:00	26	48			74	19:00	43	25			68
7:15	38	53			91	19:15	43	18			61
7:30	41	81			122	19:30	31	21			52
7:45	53	70			123	19:45	25	14			39
8:00	39	88			127	20:00	18	15			33
8:15	58	69			127	20:15	21	11			32
8:30	49	69			118	20:30	31	19			50
8:45	51	84			135	20:45	17	18			35
9:00	32	68			100	21:00	11	21			32
9:15	39	60			99	21:15	17	11			28
9:30	35	47			82	21:30	8	8			16
9:45	38	43			81	21:45	8	10			18
10:00	38	43			81	22:00	12	8			20
10:15	39	37			76	22:15	12	5			17
10:30	47	42			89	22:30	7	4			11
10:45	44	48			92	22:45	2	5			7
11:00	43	36			79	23:00	6	1			7
11:15	40	33			73	23:15	7	2			9
11:30	38	42			80	23:30	2	5			7
11:45	45	51			96	23:45	4	4			8
TOTALS	963	1310	0	0	2273	TOTALS	2047	1670	0	0	3717
SPLIT %	42%	58%	0%	0%	38%	SPLIT %	55%	45%	0%	0%	62%

Hourly Intervals

TIME		NB	SB	EB	WB	TOTAL
00:00	01:00	11	14			25
01:00	02:00	7	2			9
02:00	03:00	1	7			8
03:00	04:00	3	11			14
04:00	05:00	20	21			41
05:00	06:00	25	49			74
06:00	07:00	63	94			157
07:00	08:00	158	252			410
08:00	09:00	197	310			507
09:00	10:00	144	218			362
10:00	11:00	168	170			338
11:00	12:00	166	162			328
12:00	13:00	166	197			363
13:00	14:00	228	207			435
14:00	15:00	248	240			488
15:00	16:00	242	224			466
16:00	17:00	298	242			540
17:00	18:00	320	204			524
18:00	19:00	220	131			351
19:00	20:00	142	78			220
20:00	21:00	87	63			150
21:00	22:00	44	50			94
22:00	23:00	33	22			55
23:00	00:00	19	12			31

STATISTICS

	NB	SB	EB	WB	TOTAL
Peak Period	00:00	to	12:00		
Volume	963	1310			2273
Peak Hour	7:45	8:00			8:00
Peak Volume	199	310			507
Peak Hour Factor	0.858	0.881			0.939
Peak Period	12:00	to	00:00		
Volume	2047	1670			3717
Peak Hour	16:45	15:15			16:45
Peak Volume	341	246			562
Peak Hour Factor	0.937	0.788			0.924
Peak Period	07:00	to	09:00		
Volume	355	562			917
Peak Hour	7:45	8:00			8:00
Peak Volume	199	310			507
Peak Hour Factor	0.858	0.881			0.939
Peak Period	16:00	to	18:00		
Volume	618	446			1064
Peak Hour	16:45	16:00			16:45
Peak Volume	341	242			562
Peak Hour Factor	0.937	0.776			0.924