| Meeting Date: February 02, 2023 <br> Item Number: $21-16$ | lrom: Pauline Wong, Caltrans HQ <br> Safety Programs |
| :--- | :--- |
| Sponsored By: Yue Wang, PE, Caltrans | Presented By: Jessica Downing, <br> Caltrans HQ Safety Programs |
| Description: Revisions to Speed Limit policy to comply with Assembly Bill AB- <br> 1938 (effective January 1, 2023), which clarifies AB-43's text and intent by <br> revising specific AB-43 provisions now included in Vehicle Code Sections. |  |

## Recommendation:

Motion by committee to recommend inclusion of the proposed change to the California Manual on Uniform Traffic Control Devices (CA MUTCD) Section 2B. 13 text that was part of the motion passed during the November 3, 2022 meeting, recommending to Caltrans to incorporate it into CA MUTCD. This proposed change will revise the text that is being prepared to implement AB-43 provisions, as revised by AB-1938, in compliance with, and based on the two CTCDC motions, one passed during August 4, 2022 meeting and the other one passed during the November 3, 2022 CTCDC meeting.

This recommended motion is specific to only the text revisions shown in CA MUTCD Section 2B. 13 titled "Speed Limit Sign (R2-1)" between paragraphs numbered " $12 y$ " through " $12 z$ " and inclusive of paragraph " $12 y$ ". Refer to page 8 of 26 . The entire text for CA MUTCD Section 2B. 13 and all Tables relevant to Section 2B. 13 that are being finalized are included in this proposal for ease in reviewing and for reference purposes.

This proposal addresses a critical comment that was submitted by Lt. Noah Hawkins, CHP Representative and CTCDC Voting member, after the November 3, 2022 CTCDC meeting, requesting a change to the final text that was part of the approved motion.

## Agency Making Request/Sponsor:

Pauline Wong, Caltrans / Yue Wang, CTCDC Member.

## Background:

Please refer to previous meeting's agenda items and meeting minutes for background and history of this agenda item, which includes the following topics:

- AB-43 provisions, legislative records \& specific CVC revisions
- AB-1938 clarification on AB-43's intent and text, including legislative records
- CalSTA ZTFTF Report \& 7 specific speed-related recommendations
- CTCDC Subcommittee on AB-43 formation and subcommittee meeting discussions and outcomes


## Committee

 Agendaltem Report- Caltrans Management reviews
- CaISTA Reviews
- Caltrans efforts related to CVC 22358.7 - Definitions for Safety Corridor \& Land or Facility Generating High Concentrations of Bicyclists or Pedestrians
- CTCDC August 4, 2022, Meeting Actions on 9 of 16 AB-43 provisions
- CTCDC November 3, 2022 Meeting Actions on 5 of 16 AB-43 provisions
- Caltrans plan on remaining 2 of 16 AB-43 provisions
- Caltrans efforts in pursuing SHSP SM/AD Action Item SM. 11.

This proposal addresses the following critical comment that was submitted on December 21, 2022 by Lt. Noah Hawkins, CHP Representative and CTCDC Voting member to CTCDC Executive Secretary, Johnny Bhullar:

> "Understanding that any fatality is unacceptable, it seems excessive to conclude that one pedestrian or bicyclist related fatality or serious injury within the last three to five years could constitute a land facility that generates high concentrations of bicyclists or pedestrians. This threshold is neither stipulated in Section 22358.7 CVC, nor defined in the Federal MUTCD or FHWA guidelines and could result in speed limits being set arbitrarily low in areas without a high concentration of pedestrians or bicyclists. As such, recommend this language be removed from the CA MUTCD."

Caltrans staff met with Lt. Noah Hawkins and discussed his comment in more detail. As a result of these discussions, Caltrans recommends revising the final text, that was part of the approved motion during the November 3, 2022 meeting, with the changes as shown in this proposal to address Lt. Noah Hawkins comment.

Since this recommended change will result in modifying the final text, that was part of the previously approved CTCDC motion, Caltrans is bringing this agenda item back to the CTCDC for discussion and guidance, and if acceptable, to gain recommendation on revising the previously approved motion.

Lt. Noah Hawkins and Caltrans staff will provide more background and details on the comment and the discussions that led to this change proposal during the meeting.

## Attachments:

Attachment A - Proposed Revisions to CA MUTCD Section 2B. 13 final text, that was part of approved CTCDC motion during November 3, 2022 meeting.
Attachment B - CA MUTCD Chapter 2B revised tables 2B-101 (CA) and 2B-102(CA) and new tables 2B-103(CA) through 2B-106(CA).

## California Traffic Control Devices Committee Agenda Item Report

## ATTACHMENT A

# California Traffic Control Devices Committee <br> Agenda Item Report 

## Attachment A - Proposed Revisions to CA MUTCD Section 2B. 13 final text, that was part of approved CTCDC motion during November 3, 2022 meeting.

## Proposal:

Note:

- Black text is unedited National MUTCD text adopted for use in current CA MUTCD.
- Black strikethrough text is National MUTCD text that is not applicable in California as shown in current CA MUTCD.
- Blue text is California text additions adopted for use in current CA MUTCD.
- Blue text with Teal vertical line in left margin is California text revisions that were part of two approved CTCDC motions, one passed during August 4, 2022 meeting and the other one passed during the November 3, 2022 CTCDC Meeting.
- Red strikethrough text is text that is proposed to be deleted by this proposal from the finalized version which was prepared for inclusion in CA MUTCD based on August 4, 2022 and November 3, 2022 CTCDC meetings' motions.
- Red text is text that is proposed to be included by this proposal from the final text, that was part of approved CTCDC motion during November 3, 2022 meeting.

Modify Section 2B. 13 as shown:

## Section 2B.13 Speed Limit Sign (R2-1)

## Support:

oo 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.
00a The most effective way to reduce speeds is through a combination of using speed related traffic control devices related to speed, roadway design and engineering solutions, 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.

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Standard:
${ }_{01}$ Speed zones (other than statutory speed limits) shall only be established on the basis of an engineering and traffic survey (E\&TS) study that has been performed in accordance with traffic engineering practices. The engineering study shall include an analysis of the current speed distribution of free-flowing vehicles.
${ }_{02}$ The Speed Limit (R2-1) sign (see Figure 2B-3) shall display the limit established by law, ordinance, regulation, or as adopted by the authorized agency based on the engineering study. The speed limits displayed shall be in multiples of 5 mph .
${ }_{03}$ 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.
${ }_{04}$ At the downstream end of the section to which a speed limit applies, a Speed Limit sign showing the next speed limit shall be installed. Additional Speed Limit signs shall be installed beyond major intersections and at other locations where it is necessary to remind road users of the speed limit that is applicable.
${ }_{05}$ 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.
Support:
${ }_{06}$ 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 altered speed zones - based on engineering studies.
${ }_{07}$ State statutory limits might restrict the maximum speed limit that can be established on a particular road, notwithstanding what an engineering study might indicate.
Option:
08 If a jurisdiction has a pelicy 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 momnted 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).
Guidance:
${ }_{09}$ A Reduced Speed Limit Ahead (W3-5 or W3-5a) sign (see Section 2C.38) should be used to inform road users of a reduced speed zone where the speed limit is being reduced by more than 10 mph , or where engineering judgment indicates the need for advance notice to comply with the posted speed limit ahead.
${ }_{10}$ States and local agencies should conduct engineering studies at least once every 5, 7 or 14 years, in compliance with CVC Section 40802 to reevaluate non-statutory speed limits on segments of their roadways that have undergone significant changes since the last review, such as the addition or elimination of parking or driveways, changes in the number of travel lanes, changes in the configuration of bicycle lanes, changes in traffic control signal coordination, or significant changes in traffic volumes.
${ }_{11}$ No more than three speed limits should be displayed on any one Speed Limit sign or assembly.
12 When a speed limit within a speed zone is posted, it should be within 5 mph of the 85 th percentile speed of free flowing traffic.
CVC Section 22358.6 - $85^{\text {th }}$-Percentile, Rounding, 5 mph Increment, 5 mph speed reduction and Maximum Speed Reduction
Standard:
${ }_{12}$ When a speed limit is to be posted, it shall be established at the nearest 5 mph increment of the 85thpercentile speed of free-flowing traffic, except as shown in the two Options below. Refer to CVC Section 22358.6(a).

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Option:

1. For cases in which the nearest 5 mph increment of the $85^{\text {th }}$-percentile speed would require a rounding down, the posted speed may be reduced by 5 mph from the nearest 5 mph increment of the 85 th-percentile speed, in compliance with CVC Sections 627 and 22358.5. CVC Sections 22353, 22353.2, 22353.3, 22353.4, and 22353.5, may also be considered, if applicable. See Standard below for documentation requirements. Refer to CVC Section 22358.6(c).
2. For cases in which the nearest 5 mph increment of the 85 th-percentile speed would require a rounding up, then the speed limit may be rounded down to the nearest 5 mph increment below the 85 th percentile speed, if no further reduction is used. Refer to CVC Section 21400(b). Refer to CVC Section 22358.6(c).

## Standard:

${ }^{12 b}$ If the speed limit to be posted has had the 5 mph reduction applied, then an E\&TS shall document in writing the conditions and justification for the lower speed limit and be approved by a registered Civil or Traffic Engineer. The reasons for the lower speed limit shall be in compliance with CVC Sections 627 and 22358.5. Refer to Section 22358.6(b).
${ }^{12 \mathrm{c}}$ The total reduction in the speed limit using the nearest 5 mph increment and rounding (CVC Section 22358.6), 5 mph speed reduction (in compliance with CVC Sections 627 and 22358.5), safety corridor designation (CVC Section 22358.7) or land or facility adjacent to high concentration of pedestrian and bicyclists (CVC Section 22358.7) shall not exceed 12.4 mph from the $85^{\text {th }}$-percentile speed. Refer to CVC Section 22358.6(e).

Support:
${ }^{12 d}$ Refer to Tables 2B-103(CA) and 2B-104(CA), which provides examples of $855^{\text {th }}$-percentile speed values and the application of the speed limit policies and criteria applicable per CVC 22358.6 and 22358.7.
${ }_{12 \mathrm{e}}$ 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.
CVC Sections 22358.7, 22358.8 and 22358.9 - Applicability on State Highway System \& Local Agency Roadways Standard:
${ }^{12 f}$ CVC Sections 22358.7, 22358.8 and 22358.9 and their related policies shall not be applicable to roadways on the State Highway System.
Support:
${ }_{12 g}$ CVC Sections 22358.7, 22358.8 and 22358.9 and their related policies are applicable on local agency roadways.
${ }_{12 \mathrm{~h}}$ CVC Sections 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 Sections 21100, 21100.1, 21107, 21107.5, 21107.6, and 21107.7.
Standard:
12i The additional 5 mph speed reduction allowed by CVC Section 22358.7 on designated safety corridors or on portions of highway adjacent to any land or facility that generates high concentrations of bicyclists or pedestrians, shall not be applicable on any roadway segment that is on the State Highway System
${ }_{12}$ The option allowed by CVC Section 22358.8 to retain the currently adopted speed limit or restore the immediately prior adopted speed limit, shall not be applicable on any roadway segment that is on the State Highway System.
${ }_{12 \mathrm{k}}$ Declaring prima facie speed limits of 25 mph or 20 mph on a highway contiguous to a business activity district allowed by CVC Section 22358.9 shall not be applicable on any roadway segment that is on the State Highway System.

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CVC Section 22358.7 - Safety corridor and Land or Facilities Generating High Concentrations of Bicyclists and Pedestrians

## Standard:

${ }_{121}$ Additional lowering of the speed limits from those calculated using rounding (up or down) per CVC Section 22358.6(b) and 22358.6(c) and 5 mph speed reduction using CVC Section 22358.6(b), as included in paragraph 12a and Options \#1 and \#2 processes, is prohibited, except for the local agency roadway segments designated as "safety corridor" or "land or facilities that generate high concentrations of bicyclists and pedestrians" in compliance with CVC Sections 22358.6(d) and 22358.7.
Option:
12m Local agencies may additionally lower the speed limits by 5 mph from those calculated using rounding (up or down) per CVC Section 22358.6(b) and 22358.6(c) and 5 mph speed reduction using CVC Section 22358.6(b) if, after completing an E\&TS, find 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 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.

## CVC Section 22358.7(a)(1) - "Safety Corridor" Definition

## Standard:

${ }^{12 n}$ 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.
${ }_{120}$ One or more of the required crash weighting factors listed in the Table 2B-105(CA) shall be used to prioritize the locations of fatal and serious injury crashes in developing the "Safety Corridor".
Option:
12p Data used to determine a safety corridor may be from the most recent Engineering and Traffic Survey (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:
${ }_{12 \mathrm{q}}$ 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.
${ }_{12}$ 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:
12s 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:
${ }_{12 t}$ 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.
${ }^{124}$ To identify logical termini, the geographic extent of a safety corridor may be determined by non-engineering staff. Standard:
${ }^{12 v}$ A licensed professional engineer shall sign off on logical termini identified for a safety corridor using existing E\&TS.
Option:
${ }^{12 w}$ 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.

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CVC Section 22358.7(a)(2) - "Land or facility that generates high concentrations of bicyclists or pedestrians" definition
Standard:
${ }^{12 x}$ Except for the Option in first paragraph below, 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-106(CA) are present within a distance of 1320 feet.
Option:
${ }^{12 y}$ Crash data that demonstrates one or more-a highway segment is within the top twenty percent of pedestrian and/or bicyclist related fatalities or serious injuries have occurred within the last over a three to five years-period may be used in lieu of one of the generators listed in Table 2B-106(CA).
Standard:
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.
Option:
A highway segment may be longer than 1320 feet 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:
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 of the Engineer performing the E\&TS. Option:
${ }_{12 z}$ A high concentration of pedestrians and bicyclists may be longer than 1320 feet provided that a minimum of one generator is present for every 1320 feet.

13aa Data used to determine high concentration locations may be obtained from the most recently performed Engineering and Traffic Survey (E\&TS).
Standard:
136b The provisions of CVC Section 22358.7 to additionally lower the speed limit (by designating safety corridor or on portion of highway is adjacent to any land or facility that generates high concentrations of bicyclists or pedestrians), shall not be applicable until actions required per CVC Section 22358.7 by Department of Transportation and Judicial Council are completed or June 30, 2024, whichever is sooner.
CVC Section 22358.8 (Retain currently adopted or restore immediately prior speed limit)
Option:
13cc Local agency may retain the currently adopted speed limit without further reduction or restore the immediately prior adopted speed limit without further reduction as provided in CVC Section 22358.8.
Standard:
${ }^{13 d d}$ Currently adopted speed limit or immediately prior adopted speed limit shall only be retained, by ordinance, if after completing an E\&TS, local agency 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.
13e If local agency decides to use lower speed limit based on CVC Section 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 not below the immediately prior speed limit. Refer to CVC Section 22358.8(b).

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## CVC Section 22358.9 - Business Activity District

Option:
${ }_{13 \text { If }} \mathrm{A}$ local authority may, by ordinance, determine and declare a 25 or 20 mph 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 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.
${ }_{13 g 9}$ 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 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 crosswalks not controlled by a traffic control device.

## Standard:

${ }_{13 h h}$ A local authority shall not declare a prima facie speed limit on a portion of a highway where the local authority has already lowered the speed limit as permitted for designated safety corridors (CV Section 22358.7) or using the land or facility adjacent to high concentration of pedestrians and bicyclists (CVC Section 22358.7) or retained the currently adopted speed limit (CVC Section 22358.8) or have restored the immediately prior adopted speed limit (CVC Section 22358.8). Refer to CVC Section 22358.9(c).
${ }_{13}$ 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 $1 / 2$ mile, to avoid obtaining skewed results for the 85 th-percentile speed.
Support:
${ }_{14}$ Advance warning signs and other traffic control devices to attract the motorist's attention to a signalized intersection are usually more effective than a reduced speed limit zone.
Guidance:
${ }_{15}$ An advisory speed plaque (see Section 2C.08) 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 situation. Option:

16 Other factors that may be considered when establishing or reevaluating speed limits are the following:
A. Road characteristics, shoulder condition, grade, alignment, and sight distance;
B. The pace;
C. Roadside development and environment;
D. Parking practices and pedestrian activity; and
E. Reported crash experience for at least a 12 -month period.
${ }_{17}$ Two types of Speed Limit signs may be used: one to designate passenger car speeds, including any nighttime information or minimum speed limit that might apply; and the other to show any special speed limits for trucks and other vehicles.

18 A changeable message 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.
${ }_{19}$ A changeable message sign that displays to approaching drivers the speed at which they are traveling may be installed in conjunction with a Speed Limit sign.
Guidance:
${ }_{20}$ If a changeable message sign displaying approach speeds is installed, the legend YOUR SPEED XX MPH or such similar legend should be displayed. The color of the changeable message legend should be a yellow legend on a black background or the reverse of these colors.
Support:
${ }_{21}$ Advisory Speed signs and plaques are discussed in Sections 2C. 08 and 2C.14. 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 6F.12. School Speed Limit signs are discussed in Section 7B.15.
${ }_{22}$ Speed limits in California are governed by the California Vehicle Code (CVC), Sections 22348 through 22413; also, pertinent sections are found in Sections 627 and 40802 and others referenced in this section. See Section 1 A. 11 for information regarding this publication.
${ }_{23}$ Refer to Part 6, Section 6C. 01 for speed limit signs in temporary traffic control zones. Refer to Part 7 for speed limit signs in school areas.

## Engineering and Traffic Survey (E\&TS)

## Support:

${ }_{24}$ CVC Section 627 defines the term "Engineering and traffic survey" and lists its requirements.

## Standard:

${ }_{25}$ An engineering and traffic survey (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:

${ }^{26}$ The E\&TS should contain sufficient information to document that the required three items of CVC Section 627 are provided and that other conditions not readily apparent to a driver are properly identified.
${ }^{27}$ 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. Only one person is required for the field work. 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.

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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 in 10 mph increments except in urban areas where 5 mph increments are preferable.
L. Speed zoning should be coordinated with adjacent jurisdictions.

Support:
${ }_{28}$ 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:
${ }_{29}$ 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.
30 The following two methods of conducting E\&TS may be used to establish speed limits:
4. State Highways - The E\&TS for State highways is made under the direction of the Caltrans District Traffic Engineer. The data includes:
a. One copy of the Example of Speed Zone Survey Sheet (See Figure 2B-101 (CA)) showing:

- A north arrow
- Engineer's station or post mileage
- Limits of the proposed zones
- 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
- 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 $85^{\text {th }}$ 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. City and County Through Highways, Arterials, Collector Roads and Local Streets.
a. The short method of speed zoning is based on the premise that a reasonable speed limit is one that conforms to the actual behavior of the majority of motorists, and that by measuring motorists' speeds, one will be able to select a speed limit that is both reasonable and effective. Other factors that need to be considered include but are not limited to: the most recent two-year collision record, roadway design speed, safe stopping sight distance, superelevation, shoulder conditions, profile conditions, intersection spacing and offsets, commercial driveway characteristics, and pedestrian traffic in the roadway without sidewalks.
b. Determination of Existing 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.
${ }_{31}$ In most situations, the short form for local streets and roads will be adequate; however, the procedure used on State highways may be used at the option of the local agency.
32 Any agency may lower the speed limit below the prima facie speed limit after performing, and based on the results of an E\&TS.

## Guidance:

${ }_{33}$ The establishment of a speed limit of more than 5 mph below the $85^{\text {th }}$ percentile speed should be done with great care as studies have shown that establishing a speed limit at less than the 85 th 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:
${ }_{34}$ Generally, the most decisive evidence of conditions not readily apparent to the driver surfaces in collision histories.
${ }_{35}$ Speed limits are established at or near the $85^{\text {th }}$ percentile speed, which is defined as that speed at or below which $85^{\text {th }}$ percent of the traffic is moving. The $85^{\text {th }}$ 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 (See 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 $85^{\text {th }}$ percentile are not generally considered reasonable and prudent. Speed limits below the $85^{\text {th }}$ percentile do not ordinarily facilitate the orderly movement of traffic and require constant enforcement to maintain compliance. Speed limits established on the basis of the $85^{\text {th }}$ percentile 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.
${ }_{36}$ The majority of drivers comply with the basic speed law. Speed limits set at or near the $85^{\text {th }}$ 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 $85^{\text {th }}$ percentile (Critical Speed) generally results in an increase in collision rates.
Option:
${ }_{37}$ 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 $85^{\text {th }}$ percentile may be justified. Concurrence and support of enforcement officials are necessary for the successful operation of a restricted speed zone.
Guidance:
${ }_{38}$ Speed zones of less than 0.5 miles and short transition zones should be avoided.

## Signs

## Standard:

${ }^{39}$ The Speed Limit (R2-1) sign shall be used to give notice of a prima facie or maximum speed limit except as provided under Prima Facie Speed Limits in CVC 22352.
${ }_{40}$ When used, the TRUCKS, 3 AXLES OR MORE 55 MAXIMUM (R6-3(CA)) sign shall be installed approximately 750 feet following each R2-1 sign.
${ }_{41}$ The ALL VEHICLES WHEN TOWING 55 MAXIMUM (R6-4(CA)) sign shall be installed approximately 750 feet following the R6-3(CA) sign.

## Guidance:

${ }_{42}$ The R6-3(CA) and R6-4(CA) signs should be placed on highway segments where speeds in excess of 55 mph are permitted.
Option:
${ }_{43}$ 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.
44 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:
${ }_{45}$ Refer to CVC Section 22406 for types of vehicles subject to the 55 mph maximum speed limit. Option:
${ }_{46}$ The Speed Zone Ahead (R2-4(CA)) sign (see Figure 2B-3(CA)) may be used to inform the motorist of a reduced speed zone.
Standard:
${ }_{47}$ The R2-4(CA) sign shall always be followed by a Speed Limit (R2-1) sign installed at the beginning of the zone where the reduced speed limit applies.

48 The End Speed Limit (R3(CA)) sign shall only be used to mark the end of a speed zone.
${ }_{49}$ The R3(CA) sign shall not be used at a transition into a change in speed limits within a reduced zone.
Option:
${ }_{50}$ The R3(CA) sign (see Figure 2B-3(CA)) may be used with the TRUCK (M4-4) plaque to mark the end of truck speed zones on descending grades.

## Standard:

${ }_{51}$ Speed limit signs shall be placed at the beginning of all restricted speed zones.
Option:
${ }_{52}$ Where speed zones are longer than 1 mile, intermediate signs may be placed at approximate 1 mile intervals. For three or more lanes in each direction, dual installation may be used.

## Standard:

${ }_{53}$ The Speed Limit (R2-1) and End Speed Limit (R3(CA)) signs, as appropriate shall be placed at the end of all restricted speed zones.
${ }^{54}$ Freeways with 65 mph and those segments where a speed limit of 70 mph has been approved by Caltrans, with approval by the California Highway Patrol, shall be posted as follows:

- At the segment entrance, R2-1 signs shall be installed right of traffic off of the right shoulder.
- R2-1 signs shall also be installed off of the right shoulder only, throughout the segment, at a maximum of 25 mile intervals.
Option:
- The 25 mile interval may be modified to include locations following entrance ramps.


## Standard:

- The R6-3(CA) sign (see Figure 2B-3(CA)) shall be installed approximately 750 feet following each R2-1 sign, both at the beginning and throughout each 60,65 or 70 mph segment.
- The R6-4(CA) sign (see Figure 2B-3(CA)) shall be installed approximately 750 feet following each R6-3(CA) sign.
Option:
- 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.


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## Standard:

- Signs shall be placed in protected locations.
- At the end of the 70/65 mph segment, R2-1 signs shall be installed off of the right shoulder.
${ }_{55}$ Freeway segments where a 55 mph speed limit has been approved by Caltrans, with the approval of the California Highway Patrol, shall be posted as follows:
- The beginning of the segment shall be posted with an R2-1 sign installed on the right shoulder and left shoulder where the median is of sufficient width to permit sign maintenance without lane closures.


## Guidance:

- Subsequent signs should then be posted on the right shoulder, on approximate 3 mile intervals, with no more than 3 interchanges between signs.
- At the end of the segment, an R2-1 sign with the appropriate number for the next speed limit should be posted on the right shoulder.
${ }_{56}$ Conventional highways with 55 mph speed limits should be posted as follows:


## Standard:

- The beginning of the segment shall be posted with an R2-1 sign installed on the right shoulder.

Guidance:

- Subsequent signs should then be posted on approximate 5 to 10 mile intervals and immediately after locations where significant volumes of traffic enter the segment.
- At the end of the segment, an R2-1 sign with the appropriate number for the next speed limit should be posted on the right shoulder.
Conventional highways with 65 mph speed limits should be posted as follows:
- The beginning of the segment should be posted with an R2-1 sign installed on the right shoulder.
- Subsequent signs should then be posted at 5 to 10 mile intervals and after locations where significant volumes of traffic enter the segment.
- At the end of the segment, an R2-1 sign with the appropriate number for the next speed limit should be posted on the right shoulder.
Option:
${ }_{57}$ Pavement markings with appropriate numerals (see Section 3B.21) may be used to supplement speed limit signs.


## Standard:

${ }_{58}$ The R2-1 and R6-3(CA) and R6-4(CA) signs giving maximum statewide speed limits for various types of vehicles shall be installed on all State highways near the points of entrance into California.
Guidance:
${ }_{59}$ The R2-1 and R6-3(CA) and R6-4(CA) signs should be placed in a location to be most effectively viewed by the approaching motorists.

## Standard:

${ }^{60}$ Speed Limit (R2-1) signs shall be installed throughout segments of freeway with posted speed limits of 65 mph or 70 mph at a maximum of 25 mile intervals.
Option:
61 The 25 mile interval may be modified to include locations following entrance ramps.

## Standard:

${ }_{62}$ Speed Limit (R2-1) signs shall be installed throughout segments of conventional highways with a posted speed limit of 65 mph at 5 mile to 10 mile intervals.
${ }_{63}$ Speed Limit (R2-1) signs shall be installed throughout segments of freeway with a posted speed limit of 55 mph at approximately 3 mile intervals with no more than 3 interchanges between signs.
${ }_{64}$ Speed Limit (R2-1) signs shall be installed throughout segments of conventional highways with a posted speed limit of 55 mph at 5 mile to 10 mile intervals.

## Speed Enforced Signs

Option:
${ }_{65}$ The SPEED ENFORCED BY RADAR (R48(CA)) sign (see Figure 2B-3(CA)) may be used where the California Highway Patrol has received authority to use radar and requests such signs.
Guidance:
${ }_{66}$ 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:
${ }_{67}$ 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:
${ }_{68}$ The RADAR ENFORCED (R48-1 (CA)) sign (see 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:
${ }_{69}$ When used, the R48-1(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:
70 The SPEED ENFORCED BY AIRCRAFT (R48-2(CA)) sign (see Figure 2B-3(CA)) may be placed, when requested by the California Highway Patrol, on sections of highway regularly patrolled by aircraft.
Standard:
${ }^{71}$ The R48-2(CA) sign shall be used for both directions of travel.
Guidance:
72 The R48-2(CA) sign should be placed at the beginning of the section and spaced at 25 mile intervals. See Figure 3B105(CA).

## Vehicle Speed Feedback Signs

Option:
${ }_{73}$ A Vehicle Speed Feedback sign that displays to approaching drivers the speed at which they are traveling may be installed in conjunction with a Speed Limit (R2-1) sign.
Standard:
74 If a Vehicle Speed Feedback sign displaying approach speeds is installed, the legend shall be YOUR SPEED XX. The numerals displaying the speed shall be white, yellow, yellow-green or amber color on black background. When activated, lights shall be steady-burn conforming to the provisions of CVC Sections 21466 and 21466.5. Vehicle Speed Feedback signs shall not alternatively be operated as variable speed limit signs.

## Guidance:

${ }_{75}$ To the degree practical, numerals for displaying approach speeds should be similar font and size as numerals on the corresponding Speed Limit (R2-1) sign.
Option:
${ }_{76}$ When used, the Vehicle Speed Feedback sign may be mounted on either a separate support or on the same support as the Speed Limit (R2-1) sign.
${ }_{77}$ In lieu of lights, legend may be retroreflective film for flip-disk systems.
78 The legend YOUR SPEED may be white on black plaque located above the changeable speed display.
Support:
${ }_{79}$ Driver comprehension may improve when the Vehicle Speed Feedback Sign is mounted on the same support below the Speed Limit (R2-1) sign.
${ }_{80}$ Vehicle Speed Feedback Signs are appropriate for use with advisory speed signs and with temporary signs in temporary traffic control zones.

## Basic Speed Law and Prima Facie Speed Limits - See CVC 22350 \& 22352

Support:
81 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:

${ }_{82}$ Prima facie speed limits are specific limits and shall apply unless changed based upon an engineering and traffic survey (E\&TS) and signs are posted that display the new speed limit.
Option:
${ }_{83}$ Prima facie speed limits may be preempted by the basic speed law, when roadway, traffic or weather conditions warrant a lower speed.

## Use of Metric System Designations - See CVC 21351.3

## Option:

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

## Guidance:

${ }_{85}$ If used, dual unit speed limits should be rounded to the nearest $10 \mathrm{~km} / \mathrm{h}$ for Metric and 5 mph for English units for posting on signs on local streets and roads.
Support:
${ }_{86}$ Refer to AASHTO's Traffic Engineering Metric Conversion Factors. See Section 1A. 11 for information regarding this publication.
Standard:
${ }_{87}$ Metric speed limits shall not be placed on State highways. For use in this California MUTCD, 70 mph shall be shown as a metric equivalent of $110 \mathrm{~km} / \mathrm{h}$, neither of which shall be used on any local street or road.

## Legal Authority for Establishing Speed Limits

## Support:

88 Delegation of legal authority to set speed limits 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 65 mph on State highways. The Director of Caltrans retains the authority to approve variable, minimum, and maximum speeds up to 70 mph on State freeways.

## Standard:

${ }^{89}$ The speed limits shown in Table 2B-101(CA) shall apply, unless changed upon the basis of an engineering and traffic survey (E\&TS).
Option:
${ }_{90}$ The speed limits shown in Table 2B-102(CA) may apply, unless changed upon E\&TS.

## Variable Speed Limits on Freeways - See CVC 22355

Option:
91 The following speed limits may apply:

- Whenever Caltrans determines based upon an engineering and traffic survey (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.


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## Minimum Speed Limits on State Highways - See CVC 22400

Option:
${ }_{92}$ The following speed limits may apply:

- Whenever Caltrans determines based upon an engineering and traffic survey (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.


## Speed Traps

Support:
${ }_{93}$ Refer to CVC 40802 for Speed Traps.
Standard:
${ }_{94}$ A speed trap shall not apply to a local street, road, school zone, senior zone, or business activity district.
Support:
${ }_{95}$ 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 Section 22352.
${ }_{96}$ Business activity district is a section of highway described in CVC Section 22358.9(b) in which a standard 25 mph or 20 mph speed limit sign has been posted pursuant to CVC Section 22358.9(a)(1).
Standard:
${ }_{97}$ A section of highway shall be defined as a speed trap if the prima facie speed limit is not justified by an engineering and traffic survey (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.
${ }_{98}$ This time provision shall be extended to seven years when using radar and all of the following criteria are met:

- The arresting officer has successfully completed a minimum of 24 hours of certified radar operator course 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.
${ }_{99}$ This time provision shall be extended to seven 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 certified radar operator course training.
- The arresting officer has successfully completed a minimum of 2 hours of additional approved certified 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. Option:

100 This time provision for an E\&TS may be extended to ten 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:

101 The option to extend E\&TS to 14 years shall not be used on a local street, road, school zone, senior zone or business activity district, since they do not require an E\&TS; and prima facie speed limits are applicable.

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## Truck Speed Zone on Descending Grades

Guidance:
102 Highway descending grades, if used for posting TRUCK Speed Limit signs (R2-1 and M4-4) 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:
${ }_{103}$ 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 $10,000 \mathrm{lbs}$. or more will be provided.

## Standard:

${ }_{104}$ Speed profiles for truck speed limits shall be prepared on the same form as other speed surveys. An analysis of collisions involving trucks shall be prepared.
Guidance:
${ }_{105}$ Posted speeds should be on the low side of the scale, generally within the pace of loaded commercial vehicles.
Standard:
106 If warranted, the Caltrans District Director shall issue a standard speed zone order.
Support:
${ }_{107}$ Posting of the regulation will be by placement of a standard $36 \times 45$ inch Speed Limit (R2-1) sign with a TRUCK (M4-
4) plate above.

## Standard:

108 A standard End Speed Limit (R3(CA)) sign with TRUCK (M4-4) plate shall be posted at the end of the truck zone when appropriate.
Speed Zones in Temporary Traffic Control Areas
Support:
${ }_{109}$ For signing and establishing speed zones in temporary traffic control areas, refer to Section 6C. 01 in Part 6 .
Speed Zones and Traffic Signals
Standard:
${ }_{110}$ 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:
111 Changing the signal timing and adjusting the advance detector loops based on the revised speed limits can enhance the operations of the traffic signal.

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## ATTACHMENT B

## California Traffic Control Devices Committee Agenda Item Report

## Attachment B - CA MUTCD Chapter 2B revised tables 2B-101(CA) and 2B-102(CA) and new tables 2B-103(CA) through 2B-106(CA).

## Proposal:

Note:

- This proposal does not make any changes to the CA MUTCD Chapter 2B Tables that were part of approved CTCDC motions during August 4, 2022 and November 3, 2022 meetings.
- These table revisions (2B-101 (CA) and 2B-102(CA)) and new tables (2B103(CA) through 2B-106(CA)) were developed in response to the approved CTCDC motions during August 4, 2022 and November 3, 2022 meetings.
- These revised and new tables are being included only as a reference.

CA MUTCD Chapter 2B revised and new tables are as shown on the following pages:

## California Traffic Control Devices Committee Agenda Item Report

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 grad crossing with obstructed view <br> - Uncontrolled highway intersection with obstructed view <br> - 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 <br> - Narrow street not exceeding 25 feet other than a State Highway in a business or residential area or in a public park <br> - Road near a school or senior center facility | $\begin{gathered} 22358.3 \& \\ 22358.4 \end{gathered}$ |
| 25 mph | State or local authority | - Any highway in any business or residential district <br> - A street contiguous to senior citizen facility other than a State highway <br> - Adjacent to a children's playground in a public park, but only during particular hours or days when children are expected to use facilities | $\begin{gathered} 22352 . b \& \\ 22357.1 \end{gathered}$ |

## California Traffic Control Devices Committee <br> Agenda Item Report

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 ethe 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 | 22358.8(a) |
| 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 <br> - Any highway if driving any of the following vehicles: <br> a. Motortruck or truck tractor with $>3$ axles <br> b. Passenger vehicle or bus towing any other vehicle <br> c. School bus transporting any school pupil <br> d. A farm labor vehicle when transporting passengers <br> e. A vehicle transporting explosives <br> f. A trailer bus | $\begin{gathered} 22349 . b \& . c \\ \text { and } 22406 \end{gathered}$ |
| 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 | $\begin{gathered} 22349(a) \& \\ 22349 \end{gathered}$ |
| Maximum <br> Freeway Speed Limit 70 mph | Caltrans | Freeways, after consultation with the California Highway Patrol, based upon an E\&TS, or upon the basis of appropriate designs standards and project traffic volumes in the case of newly constructed freeway segments, for vehicles not subject to CVC 22406 | 22356 |

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Table 2B-103(CA). Examples showing applicability of rounding and additional speed reduction on State

$\left.$| Highway System |
| :--- |
| 85th_Percentile <br> Speed (mph) |
| Rounding to <br> nearest 5 5ph <br> increment (CVC <br> $22358.6(a))$ | | If rounding to |
| :---: |
| nearest is up, |
| may round down |
| (CVC 22358.6(c)) |$\quad$| If rounding to |
| :---: |
| nearest if down, |
| may additionally |
| lower by 5 mph |
| (CVC 22358.6(b)) | \right\rvert\,

Note - CVC Sections 22358.7, 22358.8 \& 22358.9 are applicable to local agency roadways and public properties subjected to CVC, they are not applicable to the State Highway System. Refer to Section 2B. 13 for more details.

## California Traffic Control Devices Committee Agenda Item Report

Table 2B-104(CA). Examples showing applicability of rounding and additional speed reduction on Local Agency's Roadways \& Private Property Subjected to CVC

| 85th_Percentile | Rounding to <br> nearest 5 mph <br> increment (CVC <br> 22358.6(a)) | If rounding to <br> nearest is up, <br> may round down <br> (CVC 22358.6(c)) | If rounding to <br> nearest if down, <br> may additionally <br> lower by 5 mph <br> (CVC 22358.6(b)) | If safety corridor or <br> adjacent to high <br> concentration of <br>  <br> pedestrians, may <br> additionally lower by <br> 5 mph (CVC 22358.7)* |
| :---: | :---: | :---: | :---: | :---: |
| $47.5-50.0$ | 50 | 45 | No | 40 |
| $45.1-47.4$ | 45 | No | 40 | 35 |
| $42.5-45.0$ | 45 | 40 | No | 35 |
| $40.1-42.4$ | 40 | No | 35 | 30 |

* Note - CVC Sections 22358.7, 22358.8 \& 22358.9 are applicable to local agency roadways and private properties subjected to CVC, they are not applicable to the State Highway System. Refer to Section 2B. 13 for more details.


## California Traffic Control Devices Committee Agenda Item Report

Table 2B-105(CA). Safety Corridor Definition Requirements

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

## California Traffic Control Devices Committee Agenda Item Report

Table 2B-106(CA). Requirements to determine Land or Facility that Generates 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 formalized planning document such as a local road safety plan |

