City of Mountain View

MEMORANDUM

Public Works Department

DATE: October 25, 2023

TO: Bicycle/Pedestrian Advisory Committee

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VIA: Dawn S. Cameron, Public Works Director

SUBJECT: **Speed Limit Legislation Overview and Implementation Strategy**

PURPOSE

This memorandum provides background on how speed limits are set, an overview of recent State legislation impacting speed limits, and staff's implementation strategy in applying the new legislation. Staff seeks feedback regarding the implementation strategy.

BACKGROUND

Historically, speed limits are set and maintained either as defined by law or on the premise that the set speed limit is consistent with the free-flow conditions of the majority of motorists. In California, both practices are regulated by the California Vehicle Code (CVC) and the California Manual of Uniform Traffic Control Devices (CAMUTCD).

Speed limits defined by the CVC are typically those most motorists are familiar with, including:

- Local residential roadways, 25 miles per hour
- Local business districts, 25 miles per hour
- School zones, 25 miles per hour
- Senior zones, 25 miles per hour
- Alleyways, 15 miles per hour
- Rail crossings, 15 miles per hour

Speed limits that are not specifically defined by CVC are set consistent with actual free-flow conditions and require rationale that is defensible in traffic court and maintains public confidence. These speed limits are typically set by an Engineering and Traffic Survey (E&TS) which studies existing roadway and traffic conditions to establish and maintain posted speed limits. As part of this study, the speeds of vehicles are measured under free-flow conditions to

determine the speed at or below which 85% of the traffic surveyed is moving (i.e., 85th-percentile speed). Speed limits are then set near the 85th percentile.

LEGISLATIVE OVERVIEW

Under Assembly Bill (AB) 43, several new provisions to the CVC relating to setting speed limits went into effect on January 1, 2022, and other provisions will do so on June 30, 2024. Subsequently, on January 1, 2023, additional legislation under AB 1938 went into effect. The AB 1938 updates primarily provided further clarification on provisions originally introduced as part of AB 43. Table 1 below summarizes provisions pertaining to local jurisdictions, and Attachment 1 provides examples on how these can be applied. These provisions went into effect on January 1, 2022 (AB 43) or January 1, 2023 (AB 1938) unless specified as June 30, 2024 in Table 1.

Table 1: California Vehicle Code (CVC) Update Summary of AB 43* and AB 1938*

CVC	Legislation	Description
627(c)(2)	AB 43	Extends consideration of pedestrian and bicyclist safety for children, seniors, persons with disabilities, and the unhoused.
22358(a)	AB 43	Speed limits of 20 or 15 miles per hour can be established *if justified by an E&TS.*
22358.6	AB 43	Revises CAMUTCD to allow rounding down the speed limit to the nearest five miles per hour when otherwise would have required rounding up.
	AB 1938	Allows lowering the speed limit by five miles per hour, *if justified by an E&TS,* when mathematical rounding to the nearest five-mile-per-hour increment requires rounding down. This section also allows rounding down to the nearest five miles per hour from the 85th percentile when mathematically the nearest five-mile-per-hour increment would have required rounding up. All reductions shall not be more than 12.4 miles per hour from the 85th percentile speed. This revision memorializes a practice previously supported per CAMUTCD.
22358.7	AB 43	Effective June 30, 2024 or when Statewide online infraction violation tool is in place: Authorizes reducing speed limits an **additional** five miles per hour from the 85th-percentile speed under specific conditions: • Designated safety corridors which generally include segments with the highest number of serious injury and fatality crashes. • Roadways adjacent to any land or facility that generates high concentrations of bicyclists or pedestrians. Additional criteria is outlined in CAMUTCD.

CVC	Legislation	Description
22358.8	AB 43	Outlines provisions for reductions from the 85th-percentile speed where needed to retain the existing posted speed limit.
22358.9	AB 43	Section does not apply if speed limits have already been lowered per CVC 22358.7 or 22358.8: Authorizes 25 or 20 miles per hour speed limit contiguous to a business activity district where ALL the following provisions are met: • Four traffic lanes maximum. • Adjacent segments are posted at 30 or 25 miles per hour. • Designated central or neighborhood downtown, urban village, or in a zoning designation that prioritizes commercial land uses at the downtown or neighborhood scale and meets at least three (3) of the following criteria: — At least 50% fronting properties are retail or dining commercial uses that open directly onto sidewalk. — Street parking is present. — Traffic signals or stop signs are in place and located no more than 600' apart. — Marked pedestrian crosswalks at locations not controlled by a traffic signal, yield sign, or stop sign.
	AB 1938	Prohibits the establishment of 25- and 20-mile-per-hour business activity district zones where speed limits have already been established or reduced per CVC 22358.7 or 22358.8
40802	AB 43	Senior zones and business activity districts, as defined in CVC, are exempt from E&TS requirement, updates the definition of a "local street," and extends validity of E&TS up to 14 years under outlined conditions (previously 10 years).
	AB 1938	Speed limits adopted under 22358.7 or 22358.8 are exempt from the E&TS requirement to be revalidated.

* Provisions specific only to the State Department of Transportation and those that are primarily editorial revisions are not shown in this table. The final legislation as of January 1, 2023 can be found in Attachment 2.

While AB 43 and AB 1938 give local jurisdictions more flexibility in setting speed limits, one key element remains unchanged: **the requirement for E&TS as the basis to establish speed limits on several types of roadways**. Therefore, the majority of posted speed limits must still be established in correlation with actual free-flow traffic conditions as determined by an E&TS. Attachment 2 provides full CVC code references, including those that still require an E&TS.

The business activity districts designation provides the ability to lower speed limits to 20 or 25 miles per hour in some areas; however, reductions are limited to streets with specific land uses and roadway characteristics that meet the criteria listed in Table 1—CVC 22358.9. Staff

performed a general review of the City's existing land uses and roadways, and based on this, staff anticipates there will be limited segments that meet the criteria to be designated as business activity districts.

Since the adoption of AB 43 and AB 1938, the State has released CAMUTCD, Revision 7 (March 2023), which includes additional guidance on allowable reductions, such as clarification that the reduction and rounding requirements need not apply to existing E&TS before January 1, 2022 and can simply be incorporated when an E&TS is due for reevaluation. The update also includes additional criteria to establish safety corridors and such crash-guiding factors that may be used to determine the rating and prioritization of segments. The revision also includes guidance on defining business activity districts and high pedestrian or bicyclist generators (additional details are included in Attachment 3).

IMPLEMENTATION STRATEGY

Establishing speed limits and any allowable reductions is a multi-faceted task that is part of general traffic operations but also requires long-term vision during roadway planning and design. Therefore, an implementation approach that incorporates various strategies is most practical. Staff recommends the following four implementation approaches: project-based, safety corridors, traffic operations, and other evaluations. The following outlines each of the strategies.

Project-Based

The most effective way to reduce speeds is through speed management strategies and roadway design. Therefore, the City is proactively incorporating speed management strategies into projects. Roadway design elements have been incorporated into upcoming projects, including road diets, bike lane improvements, speed feedback signs, speed humps, and curb extensions at corners. Some examples of recent or upcoming projects are Calderon Avenue Bicycle Improvements, Miramonte Resurfacing (includes a road diet), Villa Street Prometheus Apartment Project (included speed humps), Leong/Fairchild Resurfacing (includes speed humps), El Monte Corridor Study (includes a road diet), and the California Street Pilot project (includes a road diet and parking protected bike lanes). As projects with these improvements and speed management strategies are completed and have been in place for several months, staff then conducts new E&TS to determine if the project segments are eligible for speed reductions per CVC and CAMUTCD. An example of a successful application of speed management strategies is the Calderon Avenue Bicycle Improvement project, where the posted/85th percentile was 30 mph prior to the improvements, and after the installation of the buffered bike lanes, a new E&TS was performed, justifying a speed limit reduction to 25 mph.

Safety Corridors

As noted in Table 1, provisions under CVC 22358.7 allows an additional five miles per hour reduction from the 85th-percentile speed for safety corridors as defined in the same code. However, this provision for additional reductions does not go into effect until June 30, 2024. Once the reductions are permitted by CVC, staff will apply it where allowable and as justified by an E&TS. In preparation for CVC 22358.7 going into effect in 2024, staff will work to identify safety corridors in conjunction with the Vision Zero Action Plan and Local Road Safety Plan which parallels the City's high-injury network with the "safety corridors" as defined by CAMUTCD (see Attachment 3). Once the safety corridors are identified and these CVC provisions are in effect, staff will begin reassessing the three safety corridors with highest prioritization score in the high-injury network, including new E&TS, to determine which segments of these corridors may be eligible for speed limit reductions. Upon completion of the reassessment of these three high-priority corridors and implementation of any speed limit reductions, staff will assess the other safety corridors for prioritization of E&TS evaluation. The Vision Zero Action Plan and Local Road Safety Plan is expected to be presented to Council in early 2024.

Traffic Operations

As engineering and traffic surveys reach the end of their initial seven-year renewal period, staff will reevaluate to determine if roadways are eligible for any speed limit reductions; future renewal periods will conform to the new 14-year resurvey date as applicable per CVC 40802. Any warranted speed limit reductions will be implemented by changing posted signs to the revised speed limits.

Additionally, the provisions under CVC 22358.7 also allow an additional five miles per hour reduction from the 85th-percentile speed for segments which may generate high concentrations of bicyclists or pedestrians, specifically for children, seniors, persons with disabilities, or the unhoused. Once this provision goes into effect on June 30, 2024, staff will consider the allowable reductions as part of E&TS updates.

Other Evaluations

Staff will be conducting a more detailed analysis to identify any segments that qualify as business activity districts and senior zones. Once any eligible segments are identified under this provision, staff will change posted signs accordingly by prioritizing higher activity roadways, such as any that may be within the Downtown Precise Plan Area. Implementation at other qualifying roadway segments will follow.

Table 2 below provides a summary of the four strategies previously mentioned and the high-level prioritization approach for each.

Table 2: Summary of Implementation Strategy and Prioritization Approach

Implementation Approach	Task and Prioritization Notes
Project-Based	• Where feasible, implement speed management elements as part of projects currently in design. • Reevaluate improved segments after June 30, 2024 and approximately six months after acceptance of improvements to determine if speed limit reduction is appropriate and justified by an E&TS. Some locations might include: — Villa Street — Miramonte Avenue — Fairchild Drive — Leong Drive — California Street
Safety Corridors	• Identify "safety corridors" as part of Vision Zero Action Plan and Local Road Safety Plan. • After June 30, 2024: — Reevaluate the top three high-injury network prioritization scores corridors to determine eligibility for speed limit reduction. — Upon completion of the reassessment of these three high-priority corridors and implementation of any speed limit reductions, staff will assess the other safety corridors for prioritization of E&TS evaluation.
Traffic Operations	• Ongoing: — Forgo allowable extensions for E&TS to 14 years and instead reassess at seven-year renewal period. — Prioritize school areas. • After June 30, 2024: — Implement allowable reductions to areas of high pedestrian generators.
Other	• Identify Business Activity Districts and implement any allowable speed limit reductions with priority to higher-activity roadways.

NEXT STEPS

Staff will be presenting this information to the Council Transportation Committee on November 28, 2023, including a summary of feedback received from the Bicycle/Pedestrian Advisory Committee.

CO-LL-EA/6/PWK
937-10-25-23M

Attachments:
1. Sample Scenarios of Speed Limit Reductions from 85th-Percentile Speeds
2. California Vehicle Code Provisions Amended by AB 43 and AB 1938
3. Safety Corridor and High Pedestrian and Bicyclist Generator Definitions

cc: PWD, APWD—Arango, CTE, STE—Ochoa

ATTACHMENT 1
Sample Scenarios of Speed Limit Reductions from the 85th-Percentile Speeds

The chart below includes examples showing applicability of rounding and additional speed reductions *if justified by an engineering and traffic survey*:

				Effective June 30, 2024
Free-flow 85th Percentile Speed (mph)	Rounded to nearest 5 mph increment (CVC 22358.6a)	If rounding to nearest is up, may round down (CVC 22358.6c)	If rounding to nearest is down, may additionally lower by 5 mph (CVC 22358.6b)	If safety corridor or adjacent to high concentration of bicyclists and pedestrians, may additionally lower by 5 mph (CVC 22358.7)*
42.5-45.0	45	40	N/A	35
40.1-42.4	40	N/A	35	30
37.5-40.0	40	35	N/A	30
35.1-37.4	35	N/A	30	25
32.5-35.0	35	30	N/A	25
30.1-32.4	30	N/A	25	20
27.5-30.0	30	25	N/A	20
25.1-27.4	25	N/A	20	15
22.5-25.0	25	20	N/A	15
20.1-22.4	20	N/A	15	-
17.5-20.00	20	15	N/A	-

ATTACHMENT 2
California Vehicle Code Provisions Amended by AB 43 and AB 1938

The table below includes links to the most current language of the codes amended by AB 43 and AB 1938. The full California Vehicle Code can be found here: https://leginfo.legislature.ca.gov/faces/codesTOCSelected.xhtml?tocCode=VEH&tocTitle=+Vehicle+Code+-+VEH.

CVC Code	Link
627	https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=VEH&sectionNum=627.
21400	https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=VEH&sectionNum=21400.
22352	https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=VEH&sectionNum=22352.
22354	https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=VEH&sectionNum=22354.
22358	https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=VEH&sectionNum=22358.
22358.6	https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=VEH&sectionNum=22358.6.
22358.7	https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=VEH&sectionNum=22358.7.
22358.8	https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=VEH&sectionNum=22358.8.
22358.9	https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=VEH&sectionNum=22358.9.
40802	https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=VEH&sectionNum=40802.

ATTACHMENT 3
Safety Corridor and High Pedestrian and Bicyclist Generator Definitions

The charts below are directly from the California Manual of Uniform Traffic Control Devices (CAMUTCD), Revision 7, released March 2023. The tables summarize the considerations of safety corridors and potential generators of high concentrations of bicyclists or pedestrians, especially those from vulnerable groups, such as children, seniors, persons with disabilities, and the unhoused. These tables mostly summarize the considerations of roadway characteristics; however, CAMUTCD and CVC include additional quantitative requirements.

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: ▪ 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
Crash Density	Each roadway segment block can be converted into ~ 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.

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