



CITY OF SALINAS COUNCIL STAFF REPORT

DATE: JANUARY 10, 2023

DEPARTMENT: PUBLIC WORKS, TRAFFIC & TRANSPORTATION DIVISION

FROM: DAVID JACOBS, PUBLIC WORKS DIRECTOR

BY: ANDREW EASTERLING, TRAFFIC ENGINEER

TITLE: 2022 ENGINEERING AND TRAFFIC SURVEYS FOR SPEED LIMITS

RECOMMENDED MOTION:

A motion to approve a Resolution to establish speed limits as recommended by the 2022 Engineering and Traffic Survey for speed limits.

EXECUTIVE SUMMARY:

Establishing speed limits and signs are part of state law complying with California Vehicle Code (CVC) and federal law complying with Manual of Uniform Traffic Control Devices (MUTCD). In California, an Engineering & Traffic Survey (E&TS) that establishes a speed limit for any roadway at the 5th mph increment of the 85th percentile speed needs to be conducted to justify posted speed limits. These E&TS need to be conducted every five up to seven or ten years on criteria per CVC. The 2022 E&TS was conducted on forty-four (44) roadways in the City of Salinas where surveys expired in 2022 or will be expired in the first half of 2023. The results are that out of the forty-four (44) segments, three (3) are increasing, six (6) are decreasing, and thirty-five (35) segments posted speed limits will remain the same.

BACKGROUND:

A speed limit sign is a federal device, which a posting authority is authorized to use providing they comply with the law. Article 1 Section 8 of the Constitution's mandate is uniform oversight of regulation of the nation's roadways. The US Constitution, Congress' intent in this field is to establish uniformity in the vehicle code and traffic control devices. In the United States, there are 80,000 posting authorities and about 4 million miles of roads, how would a person know what is expected of them, or the penalties as they go from sign to sign? The Uniform Vehicle Code (UVC) and Manual of Uniform Traffic Control Devices establish the rules for which posting authorities shall conform to when establishing posted speed limits.

Speed limits for most roadways are established by prescribed procedures in accordance with the CVC and the MUTCD. The CVC requires that an Engineering and Traffic Survey be conducted every five years to justify a posted speed limit. Section 40802 of the CVC specifies the time periods within which speed surveys must be performed if the use of radar is to be employed to enforce speed limits. If the E&TS are more than 5 years old, the speed zone is considered to be a "speed trap" under CVC 40802 and courts may reject evidence of speeding obtained through radar

or other electronic devices. E&TS may be up to 7 years old if conditions under CVC 40802(c)(1) related to enforcement training and equipment certification have been met. If an E&TS is not performed within the required time frame, posted speed limits are no longer valid and cannot be enforced properly, which allow for vehicular speeds to gradually rise on given roadway. Local roads with specific characteristics as classified by the Federal Highway Administration (Attachment 2), do not require E&TS and a 25-mph prima facie speed limit is considered legitimate. Local roads provide direct access to adjacent lands and a higher transportation system. Local roads do not carry through traffic movement within the transportation network.

The MUTCD process of establishing a speed zone is built around a spot speed survey that typically consists of measuring speeds with a radar gun or other electronic device of motor vehicles traveling at free-flow speeds. Measured speeds create a data set and the most relevant data point is the 85th percentile speed. The 85th percentile speed is the speed at or below which 85 percent of motor vehicles travel. The 85th percentile is identified as the maximum speed that the majority of drivers who drive a roadway consider reasonable and safe. As a result, posted speeds are a reflection of the speed that most drivers deem to be safe, as opposed to a minority of drivers who do not drive in a reasonable manner.

According to the California MUTCD Section 2B.13 Paragraph 12a, the posted speed limit “shall be established at the nearest 5-mph increment of the 85th percentile speed of free-flowing traffic.” For example, a segment with a measured 85th percentile speed of 37 mph would be rounded down to have a posted speed limit of 35 mph. While another segment with a measured 85th percentile speed of 33 mph would be rounded-up to have a posted speed limit of 35 mph. The California MUTCD allows the posted speed limit to be decreased by no more than 5 mph from a rounded speed, using one of two options described below that depend on whether the 85th percentile speed has been rounded down or up. There are no provisions for increasing the speed limit above the nearest 5-mph increment of the 85th percentile speed.

California MUTCD option 1 is defined in Section 2B.13 which states, “The posted speed may be reduced by 5 mph from the nearest 5-mph increment of the 85th percentile speed, in compliance with CVC Sections 627 and 22358.5.” The cited CVC Section 627 defines an E&TS that is required to consider prevailing speeds, accident records, and conditions not readily apparent to the driver, and optionally consider residential density as well as pedestrian and bicycle safety.

California MUTCD option 2 is defined in Section 2B.13 which states, “For cases in which the nearest 5-mph increment of the 85th percentile speed would require a rounding up, then the speed limit may be rounded down to the nearest 5-mph increment below the 85th percentile speed, if no further reduction is used.” An option 2 round-down, which became available when CVC Section 21400(b) went into effect January 1, 2012, requires no engineering and traffic survey to post the speed limit sign. The E&TS is required nevertheless, however, to allow radar or similar devices to be used for enforcement.

Why is this method used for establishing speed limits?

The Federal Highway Administration has conducted numerous studies on the practice of establishing speed zones. The conclusions found in these studies states, “the speed limit should be set at the speed driven by 85 to 90 percent of the free-moving vehicles rounded up to the next

5 mph increment. This method results in speed limits that are not only acceptable to a majority of the motorist, but also fall within the speed range where accident risk is lowest.” (Report No. FHWA/RD-85/096 Technical Summary, "Synthesis of Speed Zoning Practice"). Like other traffic laws, it is based upon the assumption that the majority of drivers will behave in a reasonable manner. Laws that arbitrarily restrict the majority of motorist encourage wholesale violations, lack of public support, and usually fail to bring about desirable changes in driving behavior. This is especially true of speed limits.

Public Work staff identified forty-four (44) roadway segments where the posted speed limit expired in 2022 or will expire in the first half of 2023. Public Work staff prepared the 2022 Engineering and Traffic Survey for Speed Limits Technical Report (Attachment 1), which details the methodology and findings of the speed survey. The report details the CVC regulations and California MUTCD policies. Of the forty-four (44) roadway segments three (3) are increasing, six (6) are decreasing, and thirty-five (35) segments posted speed limits will remain the same. All other roadway segments not evaluated in the 2022 E&TS Technical Report will remain the same per previous City Council Resolutions. All existing school zones contained within these segments will remain the same. Highlighted are those street segments where speed limits are required to change in accordance with the MUTCD.

Table 1: 2022 Speed Limit Survey Locations

Street Segment	Limits	Posted Speed Limit	
		Existing	Proposed
Abbott Street	Front Street to South Sanborn Road/East Blanco Road	35	35
Abbott Street	Harkins Road to Eastern City Limits	*45/55	45
Adams Street	West Laurel Drive to Navajo Drive	25	25
Alisal Street, East	Sanborn Road to John Street/Williams Road	30	30
Alisal Street, East	Front Street to Sanborn Road	30	25
Alisal Street, West	College Drive to West Blanco Road	35	35
Alvin Drive, East	North Main Street to Natividad Road	35	35
Alvin Drive, West	Cherokee Drive to North Main Street	35	35
Bardin Road	East Alisal Street to Williams Road	35	30
Beacon Hill Drive	Constitution Boulevard to Constitution Boulevard	30	25
Blanco Road, West	South Main Street to westerly City Limits	45	45
East Boronda Road	North Main Street to Natividad Road	45	45
East Boronda Road	Natividad Road to Constitution Boulevard	45	45
Casentini Street	North Main Street to Rico Street	35	35
Central Avenue	Villa Street to South Davis Road	30	25
Central Avenue	Villa Street to Salinas Street	25	25
Constitution Boulevard	Independence Boulevard to East Laurel Drive	45	45
North Davis Road	West Rossi Street to Larkin Street	45	45
Del Monte Avenue	Rider Avenue to Williams Road	25	25
Freedom Parkway	Constitution Boulevard to Williams Road	35	35
Harkins Road	Hansen Street/Schilling Place to southerly City Limits	35	35
Iverson Street	Clay Street/Homestead Avenue to West Blanco Road	25	25

Market Street, East	North Sanborn Road to Williams Road	30	30
McKinnon Street	East Boronda Road to East Alvin Drive	35	35
Nantucket Boulevard	Independence Boulevard to Constitution Boulevard	35	35
South Sanborn Road/ East Blanco Road	US 101 to City Limit	45	50
Iris Drive	North Main Street to Tyler Street	25	25
Laurel Drive, East	Natividad Road to North Sanborn Road	45	45
Laurel Drive, West	North Davis Road to North Main Street	35	30
Linwood Drive	East Laurel Drive to East Alvin Drive	25	30
Main Street, North	Laurel Drive to Bernal Drive	35	35
Main Street, North	Laurel Drive to Alvin Drive	35	35
Rossi Street, West	North Davis Road to North Main Street	40	40
Acacia Street, West	Iverson Street to West Alisal Street	25	25
Alisal Street, East	John Street/Williams Road to Bardin Road	35	35
Natividad Road	East Laurel Drive to East Boronda Road	40	40
Acacia Street, West	Iverson Street to South Main Street	25	25
Arcadia Way	Natividad Road to El Dorado Drive	25	25
El Dorado Drive	East Alvin Drive to East Boronda Road	25	25
Rider Avenue	Del Monte Avenue to Freedom Parkway	25	25
Rider Avenue	Del Monte Avenue to Gee Street	25	25
San Miguel Avenue	Pajaro Street to San Mateo Drive	25	25
Main Street, North	Alvin Drive to Boronda Road	35	35
Rossi Street, East	North Main Street to Sherwood Drive	25	30

Highlighted are segments where speed limits are proposed to change.

**Segment contained two different speed limits.*

It is important to note that using the Engineering and Traffic Survey to establish speed zones is not only a federal requirement, but it also lowers the risk of accidents. However, it should be acknowledged this practice is only good for lowering the risk of collision and accident severity tends to increase with higher speeds which is not a factor when establishing speed limits. The California MUTCD process is required to be able to conduct speed enforcement by radar. Otherwise, speeding citations cannot be justified in court. Without enforcement drivers traveling at unreasonable speeds, over the 85th percentile speed, cannot be cited for speeding using radar and may continue to go unenforced.

Why not keep the existing speed limit signs arbitrarily low to slow the speed of traffic?

This is a misconception. Many before and after studies have found that changing the speed limit signs does not change how fast Americans drive. The best-known study is the “Parker Report”, (Report No. FHWA-RD-92-084: The Effects of Raising and Lowering the Speed Limit). The federal Department of Transportation hired a consultant to prove that low speed limits slowed traffic and improved safety. The study looked at data from 100 sites in 22 states where speed limits were either raised or lowered. Counter to the hypothesis of the federal DOT, the study found low speed limits had no effect on traffic speed. Posting the appropriate speed limit not only lowers collision potential, but it also enables law enforcement to effectively issue speeding citations.

Staff recommends the Traffic and Transportation Commission recommend that the City Council receive the 2022 Engineering and Traffic Survey and adopt a Resolution establishing speed limits in accordance with federal regulations.

TRAFFIC AND TRANSPORTATION COMMISSION:

The 2022 Engineering and Traffic Survey for speed limits was presented to the Traffic and Transportation Commission at its December 8, 2022, meeting. The Commission voted unanimously (4-0) to recommend City Council approve a Resolution to establish the 2022 Engineering and Traffic Survey for speed limits.

CEQA CONSIDERATION:

Not a Project. The City of Salinas has determined that the proposed action is not a project as defined by the California Environmental Quality Act (CEQA) (CEQA Guidelines Section 15378). In addition, CEQA Guidelines Section 15061 includes the general rule that CEQA applies only to activities which have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA. Because the proposed action and this matter have no potential to cause any effect on the environment, or because it falls within a category of activities excluded as projects pursuant to CEQA Guidelines section 15378, this matter is not a project. Because the matter does not cause a direct or foreseeable indirect physical change on or in the environment, this matter is not a project. Any subsequent discretionary projects resulting from this action will be assessed for CEQA applicability.

STRATEGIC PLAN INITIATIVE:

The establishment of legitimate speed limits support the City Council's goal of "Public Safety".

DEPARTMENTAL COORDINATION:

The Public Works Department survey, recommend and monitor posted speed limits. Established speed zones allow the Salinas Police Department to enforce posted speed limits. Public Works provides the Police Department and the Traffic Court with updates and changes to the established speed zones for proper enforcement.

FISCAL AND SUSTAINABILITY IMPACT:

The City must replace or install existing speed limit signage and school zone signage on the nine (9) changing roadway segments. Additionally, some speed zones are missing required speed limit signs which need to be installed. The estimated labor and material cost to replace and install missing signs is \$31,499. Sufficient funding is available in the CIP 9162, which funds the replacement of regulatory signs to meet national retro reflectivity standards.

ATTACHMENTS:

Resolution

Attachment 1: 2022 Engineering and Traffic Survey for Speed Limits Technical Report

Attachment 2: FHWA Functional Classification Maps

Attachment 3: Speed Limit Informational Brochure