State of California
DEPARTMENT OF TRANSPORTATION

Memorandum

Making Conservation
a California Way of Life

To: DISTRICT DIRECTORS **Date:** December 18, 2020

From: RACHEL CARPENTER
Chief Safety Officer

Subject: **TRAFFIC SAFETY BULLETIN 20-02-R1: INTERIM LOCAL DEVELOPMENT INTERGOVERNMENTAL REVIEW SAFETY REVIEW PRACTITIONERS GUIDANCE**

This bulletin supersedes Traffic Safety Bulletin 20-02. The purpose of the attached Interim Local Development Intergovernmental Review (LDIGR) Safety Review Practitioners Guidance is to provide instructions to district staff and other California Department of Transportation (Caltrans) personnel, lead agencies, developers, and consultants conducting safety reviews for proposed land use projects and plan affecting the State Highway System. This guidance establishes the safety impact review expectations for Caltrans and lead agencies to comply with the California Environmental Quality Act (CEQA). This guidance also can be used by lead agencies, developers, and consultants as a model for analyzing the safety impacts of proposed land use projects and plans on local roadways. This guidance prioritizes vulnerable users and communities; enhances safety for pedestrians, bicycle, transit and vehicular modes; and applies both reactive and systemic perspectives.

This guidance supports the shift away from using Level of Service (LOS) as a metric of analysis under CEQA, in accordance with implementing Senate Assembly Bill 743 (SB 743, Steinberg: Chaptered by Secretary of State, Chapter 386, Statutes of 2013), and complements the "Vehicle Miles Traveled-Focused Transportation Impact Study Guide" (dated May 20, 2020).

This guidance also supports achievement of the Strategic Highway Safety Plan (SHSP) goals. Working in conjunction with other statewide safety plans such as the Highway Safety Improvement Program, the Highway Safety Plan, and the Commercial Vehicle Safety Plan, the SHSP provides guidance that will influence the development of goals, strategies, and performance measures for stakeholders working to improve traffic safety throughout California with a goal to reduce traffic fatalities to zero. These interim LDIGR guidelines address how to increase vehicular, pedestrian and bicycle safety through documented, appropriate and targeted improvements.

This interim guidance eventually will be replaced by the Caltrans Safety Analysis Guide, which will be developed and released in 2022.

If you have questions about this interim LDIGR guidance, please contact Troy Bucko, with the Safety Investigation Branch, Office of Safety Programs, by e-mail sent at <troy.bucko@dot.ca.gov>.

Attachment
Interim LDIGR Safety Review Practitioners Guidelines

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California Department of Transportation (CALTRANS)
INTERIM LOCAL DEVELOPMENT AND INTERGOVERNMENTAL REVIEW (LDIGR)
SAFETY REVIEW PRACTITIONERS GUIDANCE
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PURPOSE

The Caltrans "Vehicle Miles Traveled-Focused Transportation Impact Study Guide" (TISG), dated May 20, 2020 (see the Caltrans SB 743 Implementation webpage), was prepared to provide guidance to Caltrans districts, lead agencies, tribal governments, developers, and consultants regarding Caltrans' review of vehicle miles traveled (VMT) impact analysis for land use projects and land use plans.

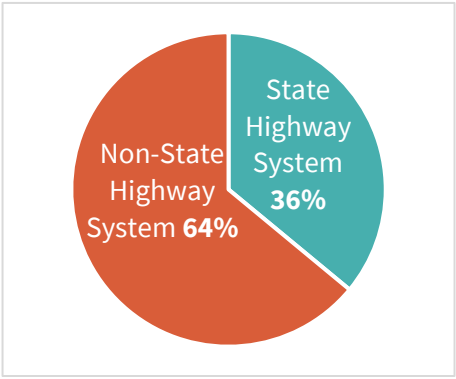
The updated TISG states, "Additional future guidance will include the basis for requesting transportation impact analysis that is not based on VMT. This guidance will include a simplified safety analysis approach that reduces risks to all road users and that focuses on multi-modal conflict analysis as well as access management issues."

The purpose of this Interim LDIGR Safety Review Practitioners Guidance is to provide immediate direction about the safety review process while final guidance is being developed. The interim guidance will be used to develop final guidance and will incorporate lessons learned as the new safety review process is utilized statewide.

BACKGROUND

Caltrans has set a goal to reach zero traffic-related fatalities and serious injuries in California by 2050, which is part of the Federal Highway Administration's nationwide zero goal. National data indicates 40-60% of fatalities occur on locally owned roadways. This is also the case in California.

Fatal and Serious Injury Crashes in California (2009-2018)



Nearly two-thirds of all fatalities and serious injuries occur on the local road network indicating a need for local traffic safety planning. Lead agencies should develop Local Roadway Safety Plans (LRSPs), Systemic Safety Analysis Reports (SSARs) or Vision Zero Plans that create a framework to systematically identify and analyze traffic safety issues and recommend traffic safety improvements. While conducting Type Intergovernmental Review (IR) investigations, District traffic safety staff should review available LRSPs, SSARs, and Vision Zero plans, as well as other available traffic safety plans and assessments, to see what traffic safety patterns and improvements may be applicable to the SHS in the study area. Caltrans encourages lead agencies to complete traffic safety impact analysis in the California Environmental Quality Act (CEQA) review process so that, through partnerships and collaboration, California can reach zero fatalities and serious injuries by 2050.

SCOPE

This interim guidance is intended to apply to proposed land use projects and plans affecting the State Highway System (SHS). Specific effects may include but are not limited to adding new automobile, bicycle, or pedestrian trips to state roadways; modifying access to state roadways; or affecting the safety of connections to or travel on state roadways. Local agencies may also use this guidance at their own discretion as a guide for review of local facilities. Caltrans traffic safety and planning staff are available to advise local agency staff, project developers, and consultants on the application of this guidance.

This interim guidance does not establish thresholds of significance for determining safety impacts under the CEQA. The significance of impacts should be determined with careful judgment on the part of a public agency and based, to the greatest extent possible, on scientific and factual data consistent with Caltrans' CEQA guidance contained in Caltrans' Standard Environmental Reference (SER),Chapter 36, "Environmental Impact Report", and CEQA guidelines found in the California Code of Regulations, title 14, division 6, chapter 3, article 5, section 15064, "Determining the Significance of the Environmental Effects Caused by a Project". The substantial evidence for safety impacts should also consider benefits of infill development on safety outcomes as explained in the State of California 2017 General Plan Guidelines, Appendix B, Governor's Office of Planning and Research, 2017.

Specifically, Appendix B states, "infill development, which exhibits low VMT, itself provides safety benefits by reducing motor vehicle collision exposure, lowering speeds, and increasing pedestrian and cyclist volumes leading to

'safety in numbers' (in addition to improving overall health broadly and substantially)."

Compact infill development, in addition to providing livable and vibrant neighborhoods, walkable communities, environmental benefits, land conservation, fiscal benefit and cost reduction for citizens, also improves traffic safety."

CONDUCTING REVIEW

Caltrans Review

Caltrans will review the proposed project for significant traffic safety impacts to the SHS. If significant impacts are identified, consistent with standard CEQA practice, mitigation or alternatives which do not cause the impacts are then considered. For mitigation to be appropriate, the reviewer needs to identify a direct causal connection between the project and the impact, a nexus. If a nexus is identified, appropriate mitigation or alternatives should be considered.

Practitioners should be reminded that if significant safety impacts are identified, any proposed mitigation must be roughly proportional to project specific impacts and should be limited to the project's "fair share". A proposed project should not be required to mitigate for impacts caused by factors such as other projects, existing operational conditions or where economic growth not related to the project is a cause of the traffic safety impact, and should avoid increasing roadway vehicle capacity, which may induce VMT or affect conditions for vulnerable users. The intent is to avoid mischaracterizations of safety issues by taking an overly narrow perspective, that will place a heavier burden on the development than would be necessary to mitigate the development impacts.

District traffic safety staff will use available data to determine if the proposed project may influence or contribute significant impacts to locations identified by traffic safety investigations generated by network screening or initiated by the district within the latest three-year period available. District traffic safety staff are not expected to review local roadways unless requested to do so by the local lead agency.

The lead agency is encouraged to review safety-related local planning documents to determine if the proposed project would significantly affect locations identified for traffic safety improvements in these plans or would otherwise interfere with completion of remedial actions or projects identified in these plans. Examples of relevant plans are provided below. The lead

agency is also encouraged to consider mitigation for significant impacts.

This interim guidance does not preclude, prevent, or exempt any other traffic safety review. This review should not include Level of Service (LOS), vehicular delay, or other traffic operations analyses unrelated to safety. If the review identifies potentially significant impacts to safety, justification must be explicitly provided to support and explain the specific safety concern.

In addition, mitigation strategies for these safety impacts should not be capacity-increasing. Other mitigation strategies should not degrade safety, mobility or accessibility for vulnerable road users.

Well planned, development projects located close to transit, bike and pedestrian facilities have proximity benefits to employment centers, services and goods; reduce vehicle travel demand on the entire transportation system; and generally, reduce crash exposure, leading to a reduction in crash occurrence and crash severity[1]. Smart mobility place types, as defined in "Smart Mobility 2010", February 2010, are useful when considering potential impacts of a land use plan or project on traffic safety.

Highway Safety Improvement Program Guidelines for LDIGR Reviews

District traffic safety staff should use Caltrans' latest "Highway Safety Improvement Program Guidelines", from the Division of Local Assistance's Highway Safety Improvement Program webpage, to identify traffic safety impacts based on traffic safety investigations generated by network screening, or initiated by the district. Locations with safety impacts that may be significantly affected by the proposed project or plan, should be reviewed for additional or alternate traffic safety improvements to mitigate potential conflicts, or significant impacts to remedial measures.

Guidance on conducting an intergovernmental (Type IR) traffic safety review is provided below. Traffic investigation reports (TIRs) for intergovernmental reviews will use Type IR to distinguish the unique requirements for these reviews and the content required for the associated TIR. Type IR investigations should be stand-alone reviews of an identified location or locations as part of an intergovernmental review. If a prior traffic safety investigation has not been completed for the project site and surrounding area, then a new traffic safety review shall be conducted.

Locations that have completed traffic safety investigations generated by network screening, or initiated by the District, may be used to gain insight of needed safety improvements for Type IR investigations. These prior traffic safety investigations are not to be included in the documentation provided to the Division of Transportation Planning. If a Type IR traffic safety investigation has

been completed and additional reviews change the proposed traffic safety improvements, a new Type IR traffic safety investigation shall be initiated, and the proposed traffic safety improvements documented in the new Type IR review.

Generally, mitigated Negative Declaration submittals will not require a traffic safety review. Projects submitted as part of the Environmental Impact Report Notice of Preparation should have a traffic safety review completed within two weeks of receiving the Environmental Impact Report Notice of Preparation. Type IR traffic safety reviews should largely focus on identifying locations where traffic safety improvements have already been identified or will be as part of an intergovernmental safety review of the project study area and should be based on the safety data outlined below.

Traffic safety reviews should be based on, but are not limited to, traffic safety investigations generated from the following:

- Traffic Accident Surveillance and Analysis System (TASAS) Table C— "All" Crashes. The most recent report should be reviewed to determine locations in the study area with significantly higher concentrations of crashes that are statistically significant.

- TASAS Table C— "Wet" Crashes. The most recent report should be reviewed to determine locations in the study area with significantly higher concentrations of wet crashes.

- Monitoring Program Reports. The most recent reports for each monitoring program should be reviewed to determine if any of the identified locations fall within the study area.

    - Type (MW): Wrong-Way Collision Monitoring Program
    - Type (MX): Cross-Over Collision Monitoring Program
    - Type (MR): Run-Off-Road Program
    - Type (MP): Pedestrian Monitoring Program
    - Type (B1 and B2): Bicycle Monitoring Program

- Systemic Review. Safety staff should review existing systemic safety programs covering the study area and consider those programs when developing comments. The FHWA Systemic Approach to Safety seeks blanket improvements that can be implemented at locations throughout the road system, based on specific roadway features that are associated with a crash type (in advance of a location experiencing many-- or any-- crashes).

    - Pedestrian Systemic Safety Improvement Program
    - Wrong-Way Drivers Preventative Countermeasures Program
    - Any other available systemic safety analysis based on the latest

research or state and local practices.

- District-Initiated Traffic Safety Investigations. Investigations initiated by Districts outside the network screening process should be reviewed.

District traffic safety staff should consider the development's potential influence on traffic safety on the (SHS) including, but not limited to, the following factors:

- Degradation of the walking and bicycling environment and experience.
- New pedestrian and bicyclist desire lines.
- Multimodal conflict points, especially at intersections and project access locations.
- Change in traffic composition, such as an increase in bicyclists or pedestrians, where features such as shoulders or sidewalks may not exist or are inconsistent with facility design (sidewalks, bicyclist and multi-user paths, multimodal roadways, etc.).
- Increased vehicular speeds.
- Transition between free flow and metered flow.

Freeway congestion-related crashes should not be the focus of any safety Type IR investigation. The intent of the Interim Safety Review is to provide an outline for when queuing should be reviewed for traffic safety impacts. A review does not necessitate the need for traffic safety mitigation, but is to evaluate if a significant safety impact based on speed differential may occur, and then the significance of that traffic safety impact by the project must be determined on a case by case basis.

The Interim Safety Review Guidance realizes the fluid nature of freeway exit ramp queuing, and the difficulty in developing a nexus to any one project. Therefore, no methodology for fair share mitigation, as it relates to freeway exit ramp queuing is provided.

See Appendix A-Freeway Queuing Analysis for additional information based on the City of Los Angeles Interim Guidance for Freeway Safety Analysis.

Automobile congestion or delay itself does not constitute a significant environmental impact (Public Resources Code, §21099(b)(2)), and traffic safety should not be used as a proxy for road capacity.

When developing mitigation measures, avoid actions that would lead to induced VMT or would worsen conditions for vulnerable users including pedestrians, bicyclists, and micro-mobility users. It is not the intent of the traffic safety review to recommend increasing capacity on conventional highway segments. A traffic

safety review should be conducted at intersections where a project generated safety impact occurs. If project generated trips cause queuing to exceed turn pocket or turn lane storage lengths, mitigation may be proposed if a nexus can be made between the project and a safety impact. In these cases, typical suggested traffic safety mitigation may be the addition of turn pockets or lanes, lengthening the turn pocket or turn lane lengths, adding additional turning lanes for storage capacity when justified, and traffic signal modifications to accommodate turning movements. Pedestrian and bicyclist traffic safety mitigation should be proposed at intersections where a project will negatively impact these modes of travel.

District traffic safety staff should also review the site design for access management. Staff should determine site access meets applicable design standards, referencing the Caltrans *Highway Design Manual* and the National Association of City Transportation Officials bicycle and pedestrian design guides, when applicable. Examples of access management include the following:

- Sight distance constraints caused by placement of a driveway.
- Driveway or intersection spacing.
- Queuing onto roadways caused by project access design features such as driveway placement near ramp intersections or missing left turn pockets.
- Multimodal conflict points caused by turning vehicles.
- Pedestrian and bicycle connections from the state highway to the entrance(s) of the new land use that are incomplete.

District traffic safety staff recommendations will be submitted to the LDIGR contact for the project or plan review to be integrated with the other LDIGR comments. Traffic safety-related comments should classify locations for traffic safety improvements into two types:

1. General, which apply whether the proposed project or plan is implemented or not.
2. Project/plan specific, which will not apply unless the proposed project or plan is implemented.

District traffic safety staff should also identify and report any planned Caltrans improvements that would affect or otherwise modify these locations. Safety input will be integrated into the formal Caltrans LDIGR comments at each step in the CEQA process. The intergovernmental safety review is intended to be prepared early in the project review process to provide comments to the lead agency on the Environmental Impact Report Notice of Preparation.

District traffic safety staff will also be expected to review the published draft environmental document's traffic safety impact(s) and provide comments

about the adequacy, or lack thereof, of the traffic safety impacts related to the SHS.

This guidance does not replace the Encroachment Permit process or requirements contained in the Caltrans *Encroachment Permit Manual* or the required approval of an Encroachment Permit or Permit Engineering Evaluation Report document.

District traffic safety Type IR reviews should be charged to 0000001062 along with the TIR number or 0000001063 along with the TIR number.

APPENDIX A–-FREEWAY QUEUING ANALYSIS

If the Project adds two or more car lengths to the ramp queue in the peak hour that will extend into the freeway mainline, then the location must be reviewed for traffic safety impacts which include a review for speed differential between the off-ramp queue and the mainline of the freeway during the same peak hour.

The review for traffic safety impacts should be done to determine if traffic safety mitigation is necessary, not that it defaults to automatic traffic safety mitigation.

Traffic safety mitigation shall not be requested under conditions where queuing already exists on a freeway exit ramp. This includes:

- Conditions where freeway exit-ramp queuing currently spills back onto the mainline;
- Where queuing currently exceeds a freeway auxiliary lane length; or
- Where freeway traffic volumes currently cause freeway exit ramp turning lanes to exceed capacity.

Traffic safety mitigation may be requested if freeway exit ramp queuing does not occur under the existing condition, but project-generated traffic volumes will cause a queue to exist onto the freeway mainline, creating a speed differential of 30 mph or greater. Speed differentials in congestion related rear-end collisions that are 30 mph or greater have shown the potential to increase severe injury and fatal injuries exponentially as the speed differential increases above the 30-mph speed differential[2].

The speed differential should be determined by identifying the operating speed of the freeway mainline lanes during the peak hour that corresponds to the peak hour during which the ramp is expected to experience project-related queue overflow. To determine the speed differential using a data-based approach, Caltrans Performance Measurement System (PeMS) data should be used to identify freeway operating speed(s) during the peak hour being analyzed.

If reliable PeMS data are not available at the subject location(s), other sources of speed data including location-based data collection services from available sources could be used. If no reliable data can be obtained to determine speed differentials, then no traffic safety impact mitigation shall be requested.

If the speed differential between the mainline lane speeds and the ramp traffic is below 30 mph, the project would be considered to cause a less-than-significant safety impact and no traffic safety impact mitigation shall be requested.

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1 General Plan Guidelines and Technical Advisories, Appendix B: Transportation Safety

2 Current Understanding of the Effects of Congestion on Traffic Accidents, Angus Eugene Retallack and Bertram Ostendorf, 2019, and Relationships Between Crash Casualties and Crash Attributes, SAE International, 1997.

If the speed differential is 30 mph or more, then there is a potential safety impact. To offset this potential condition, the traffic safety review should consider requesting the following preferred traffic safety impact mitigation:

- Transportation demand management program(s) to reduce the project's trip generation, which may include increased transit access, commute trip reductions such as rideshare programs, shared mobility facilities (bicycle or vehicular), increased bicycle and pedestrian infrastructure;
- Investments to existing active transportation infrastructure, or transit system amenities (or expansion) to reduce the project's trip generation; and/or
- Potential change(s) to the ramp terminal operations including, but not limited to lane reassignment, traffic signalization, signal phasing or timing modifications, turn lane extensions to accommodate the additional project traffic.

These traffic safety mitigations require Caltrans and the lead agency to coordinate early in the project development review process to discuss options, potential traffic safety mitigation, and agreement between Caltrans and the lead agency of the proposed traffic safety impact mitigation measure(s).