

# DRISI

CALTRANS DIVISION OF RESEARCH,  
INNOVATION AND SYSTEM INFORMATION

TRANSFORMING IDEAS INTO SOLUTIONS

# Research

# Notes

Safety

MAY 2024

Project Title:  
Strategies for Reducing Pedestrian  
and Bicyclist Injuries at the Corridor  
Level

Task Number: 4057

Start Date: June 1, 2023

Completion Date: May 31, 2026

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## Phase 4: Pedestrian Safety Improvement Program

To identify and address problems regarding pedestrian safety in California with the goal of reducing fatalities and injuries.

### WHAT IS THE NEED?

Pedestrian and bicyclist fatalities in California increased 67 percent and 43 percent, respectively, between 2010 and 2019. As part of its 5 priorities, Caltrans wants to increase mode share of pedestrians and bicyclists, while also moving Towards Zero Deaths. To do so, Caltrans must work to improve safety for these nonmotorized road users. This study builds on the pedestrian exposure modeling and pedestrian safety monitoring program work from Pedestrian Safety Improvement Program (PSIP)- Phase 3. It will help Caltrans understand risk to pedestrians on the state highway system (SHS) and continue implementation of the monitoring programs to prioritize selection of sites for safety investigations.

### WHAT ARE WE DOING?

This research has three primary objectives: 1) update the statewide pedestrian exposure model that was built under PSIP2 and enhanced under PSIP3 with more recently collected pedestrian count data to produce more accurate estimates for current and future years; 2) continue enhancements of the pedestrian and bicycle safety monitoring report tools, by incorporating updated data, improving the workflow for running the safety monitoring reports, and responding to functional needs that arise; and 3) refine the systemic analysis towards a more proactive approach to safety.

### WHAT IS OUR GOAL?

The goal of this project is to improve safety for all road users along the SHS. Reduction in crashes that can be achieved through proper countermeasures will benefit not only pedestrian but also automobile users, cyclists, and other road users affected by crashes along the SHS. This will result in improving a multi-modal transportation system across the state.



DRISI provides solutions and  
knowledge that improves  
California's transportation system

## WHAT IS THE BENEFIT?

Identifying sites for pedestrian safety investigations under these programs will enable Caltrans to utilize investigative resources more efficiently and allocate resources to the most critical locations of pedestrian safety concern. This will provide opportunities for safety investigators to recommend countermeasures that reduce crashes and save lives. In addition, preventing crashes can lead to significant reduction in non-recurring congestion costs for road users.

## WHAT IS THE PROGRESS TO DATE?

The following tasks have been accomplished within this period:

Task 2.1:

- Processed data from Miovision counters. Removed long term counters that represented activities on trails only. Started work on creating expansion factors based on clean data from the long-term counters.

Task 4:

- Refined and updated the functionality of the spreadsheet-based tool.

Task 5.1:

- Conducted a comprehensive literature review to understand and document the state-of-the-art in systemic safety analyses.