

**Design /
Construction****MAY 2026**

Project Title: Development of a Worker Safety Performance Estimation Tool to identify the most effective countermeasures to eliminate roadside worker fatalities and serious injury accidents while in the line of duty

Task Number: 4322

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

Development of a Worker Safety Performance Estimation Tool to Identify the Most Effective Countermeasures to Eliminate Roadside Worker Fatalities and Serious Injury Accidents While in the Line of Duty

This project will develop a worker safety performance estimation tool for evaluation of worker safety measures in work zones.

WHAT IS THE NEED?

The California Department of Transportation (Caltrans) is adopting a proactive approach to enhance worker safety in its work zones. To achieve the goal outlined in its 2020-2024 Strategic Management Plan of eliminating employee fatalities and serious injuries, Caltrans aims to develop an accurate worker safety performance tool. This tool will assess the effectiveness of safety measures implemented in highway work zones, helping to ensure the highest level of protection for employees on duty.

WHAT ARE WE DOING?

In this research, the Advanced Highway Maintenance and Construction Technology (AHMCT) Research Center at the University of California (UC) Davis will conduct a literature review of existing practices to determine the most accurate crash reduction factor (CRF) that will help determine the effectiveness of safety countermeasures. AHMCT will propose methods on how to enhance the Safety Performance Estimation Tool. This will be accomplished by partnering with Division of Safety Programs' Office of Safe System Approach Integration and Division of Design's Landscape Architecture Program to understand their needs. The results



will be compiled in a final report, along with training materials for Caltrans to distribute to end users.

WHAT IS OUR GOAL?

The goal of this research project is to improve the accuracy of the Safety Performance Estimation Tool which will help Caltrans personnel determine the effectiveness of safety countermeasures in eliminating worker fatalities and serious injuries.

WHAT IS THE BENEFIT?

The results of this project will help improve the safety for roadside workers by identifying the appropriate countermeasures needed for planned work activities based on reduced and eliminated worker fatalities and serious injuries.

WHAT IS THE PROGRESS TO DATE?

Project panel meetings were held on May 21, August 8, and October 13, 2025. A survey was created and sent out to Caltrans personnel. The survey will help in the development of a Maintenance Worker Exposure Index (MWEI).

Amending contract for a 7-month no-cost time extension with a new completion date of December 31, 2026, if approved.

Contractor created a classification system for the survey respondents' job title which aims to group participants as office-work or field-work centered.

Project panel meeting was held on April 24, 2026. Contractor finalized data from survey and methodology for constructing the MWEI.