DRISI

Caltrans Division of Research, Innovation and System Information

Research Notes

Midwest Roadside Safety Facility Pooled Fund TPF-5(430)

Various highway roadside appurtenances were crash tested to ensure they meet criteria established nationally. Under the pooled fund program, Midwest Roadside Safety Facility (MWRSF) performed research and Department of Transportation (DOT) supported full scale crash testing.

Transportation Safety and Mobility

MAY 2022

Project Title:
Midwest Roadside Safety Facility Pooled Fund TPF-5(430)

Task Number: 3726

Start Date: July 1, 2019

Completion Date: TBD

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WHAT IS THE NEED?

Road owner and operators, such as State DOTs, including California Department of Transportations (Caltrans), are required to meet federal crash testing safety guidelines. In order to have non-proprietary designs available for use, they need to be developed, tested, analyzed and submitted to Federal Highway Administration (FHWA) for evaluation. This work requires specific expertise and for the testing lab to be accredited by the International Organization for Standardization (ISO)17025. In addition, Caltrans has a large tort liability for vehicle accidents in our right of way. Caltrans can improve safety for the traveling public as well as reduce legal judgment costs by partnering with other DOTs on research to continually improving roadside safety systems.

WHAT ARE WE DOING?

As one of more than 20 state Department of Transportation, Caltrans is participating in the MWRSF Roadside Safety Pooled fund project to improve safety for California and the nation. Caltrans participates through a fund transfer to the pooled fund lead state, Nebraska State DOT. Caltrans also participates in the pooled fund project prioritization process, project meetings, as well as the annual and mid-year pooled fund meetings. Lastly, we work with our internal Caltrans customers to review and help implement MwRSF developed and tested hardware.

WHAT IS OUR GOAL?

Caltrans' goal in participating in this pooled fund project is to benefit by sharing expertise and receiving nonproprietary roadside safety hardware designs for use on its highways while realizing savings in terms of shared costs.

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WHAT IS THE BENEFIT?

Caltrans benefits by sharing expertise and receiving roadside safety details and designs for use on our highways. The result is a statewide improvement in safety, reducing injuries and deaths for run of road accidents. There is also a reduction in Caltrans tort liability for accidents, ultimately resulting in significant savings for the state of California.

WHAT IS THE PROGRESS TO DATE?

See the following links for the pooled fund quarterly reports and the Midwest Roadside Safety Facility Research Hub for completed research:

https://pooledfund.org/Details/Study/653 and
https://mwrsf.unl.edu/researchhub.php

One recently completed project to evaluate the Midwest Guardrail System with a curb and omitted post to MASH is featured below. This type of installation is useful when a post cannot be installed because some sort of object is in the way.

IMAGE

Image 1: MGS WITH CURB AND OMITTED POST PRIOR TO TESTING

Image 2: MGS WITH CURB AND OMITTED POST: EVALUATION TO MASH 2016 TEST NO. 3-11

Image 3: MGS WITH CURB AND OMITTED POST: EVALUATION TO MASH 2016 TEST NO. 3-10

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