

**Recent Publications from the Roadside Safety Pooled Fund:**

- Crash Testing and Evaluation of the 12-ft Pinned F-Shape Temporary Barrier
- Crash Testing and Evaluation of the Modified G4(1S) W-Beam Guardrail on 2;1 Slope
- Crash Testing and Evaluation of W-Beam Guardrail on Box Culvert
- Guidelines for W-Beam Guardrail Post Installation in Rock
- Steel Posts over Underground Structures
- Development and Testing of a Concrete Barrier Design for Use in Front of Slope or MSE Wall
- Alternative Design of Guardrail Posts in Asphalt or Concrete Mowing Pads
- US 11 Lake Pontchartrain Bridge Rail Replacement

Go to our website ([www.roadsidepooledfund.org](http://www.roadsidepooledfund.org)) for further details on these and other ongoing projects.



**SCOPE**

A committee of representatives from participating states form a technical committee to identify common research needs, select projects for funding and oversee implementation of results. Specific research activities include design, analysis, testing, and evaluation of roadside safety structures, and the development of guidelines for the use, selection and placement.

Roadside safety devices addressed include bridge rails, guardrails, transitions, median barriers, portable concrete barriers, end treatments, crash cushions, culverts, breakaway support structures (e.g. sign supports, luminaire supports, mailboxes), and work zone traffic control devices. Research also addresses the influence of highway features such as driveways, slopes, ditches, shoulders, medians, and curbs on single vehicle collisions. The problems identified with these structures and features are addressed through in-service performance evaluation studies, computer simulation, full-scale crash testing, clinical analyses of real-world crash data, and benefit-cost analyses.

The specific identification, selection and prioritization of research issues are made by the technical committee on an annual basis, unless emerging issues require committee decisions in the interim.

**PARTICIPATING PARTNERS:**

**ALASKA Department of Transportation and Public Facilities**  
**CALIFORNIA Department of Transportation**  
**LOUISIANA Department of Transportation and Public Facilities**  
**MINNESOTA Department of Transportation**  
**PENNSYLVANIA Department of Transportation**  
**TENNESSEE Department of Transportation**  
**WASHINGTON State Department of Transportation**  
**FEDERAL HIGHWAY ADMINISTRATION**  
**TEXAS TRANSPORTATION INSTITUTE**

[www.roadsidepooledfund.org](http://www.roadsidepooledfund.org)

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*An ongoing roadside safety  
research program to meet the  
research and functional needs  
of participating states in a cost-  
effective and timely manner.*

[www.roadsidepooledfund.org](http://www.roadsidepooledfund.org)

# Roadside Safety Pooled Fund

Many roadside safety issues are common to more than one state, so there is efficiency and cost-effectiveness in pooling resources to address these issues.

[www.roadsidepooledfund.org](http://www.roadsidepooledfund.org)



## BENEFITS

Each year state transportation agencies are faced with unresolved issues regarding roadside safety features. States participating in the Roadside Safety Pooled Fund (RSPF) cost-effectively leverage their research funds to address safety issues important to them. Participating states propose projects and evaluate research options to find solutions for their safety needs. Combining states' research needs in a multi-year format permits problems to be solved in less time than through individual research projects. States also have the option of conducting individual research at a reduced overhead rate.

Participating states reduce fatalities and serious injuries associated with run-off-road crashes by economically developing and implementing cost-effective roadside safety solutions with efficient procedures and guidelines for use.

The RSPF conducts roadside safety design, testing, and evaluation under the new American Association of State Highway and Transportation Officials (AASHTO) *Manual for Assessing Safety Hardware (MASH)* protocols as necessary to receive FHWA acceptance for roadside appurtenances used on the National Highway System.

## FULL-SCALE CRASH TESTING

Texas Transportation Institute (TTI) Proving Ground, an International Standards Organization (ISO) 17025 accredited mechanical testing lab, has the capabilities to perform full-scale crash tests according to the guidelines established in *MASH*, *EN1317*, and *ASTM F2656*.

## PENDULUM/BOGIE TESTING

The TTI Proving Ground outdoor pendulum, built according to the specifications of the Federal Outdoor Impact Laboratory's (FOIL) pendulum, and a surrogate 5000-lb bogie vehicle are available to evaluate vehicle dynamic response of breakaway structures and barrier components.

## COMPUTER SIMULATION

Today's simulation technology now permits accurate modeling of vehicle interactions with roadside safety devices on the computer. Use of these sophisticated analysis tools provides an enhanced understanding of crash dynamics that enables researchers to design better, more cost-effective safety hardware at a lower cost to the sponsor.

## OTHER EVALUATION TECHNIQUES

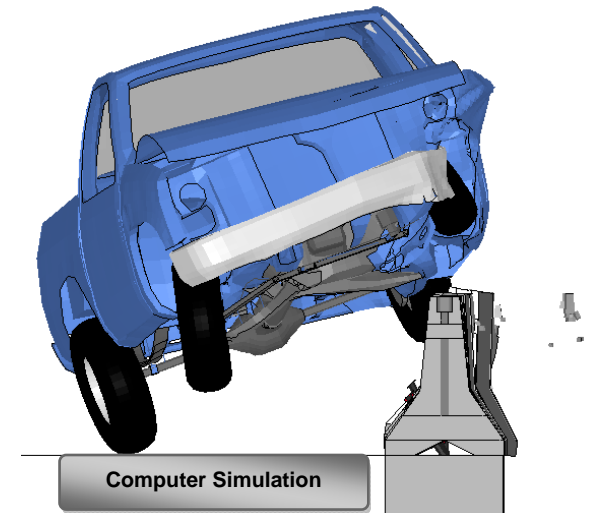
Other problems with roadside safety device structures and features can be addressed through in-service performance evaluation studies, clinical analyses of real-world crash data, and benefit-cost analyses.



Gravitational Pendulum



Bogie Vehicle



Computer Simulation



Roadside safety research program to meet the needs of participating states in a cost-effective and timely manner.