



MEMO

June 26, 2018

To: District Engineers

From: William L. Hale, P.E. *William L. Hale*
Chief Engineer

Subject: Crashworthiness of Roadside Safety Hardware

The May 21, 2012, memorandum from Tony Furst on the subject of [Roadside Safety Hardware - Federal-Aid Reimbursement Eligibility Process](#) and related Frequently Asked Questions, establishes that States can certify that roadside safety hardware has been tested by an accredited crash test laboratory and meets MASH criteria, and can thus be eligible for reimbursement.

The November 12, 2015, memo from Michael S. Griffith on the subject of [Federal-aid Reimbursement Eligibility Process for Safety Hardware Devices](#) provides information on changes to the process.

The April 9, 2018, memorandum from Michael S. Griffith on the subject of [Evaluating a State DOT's Process to Determine Roadside Safety Hardware Crashworthiness on the National Highway System](#) and related Frequently Asked Questions, establishes that it is the State's responsibility to determine crashworthiness and provides guidance on the process the State can use.

The Texas Department of Transportation (TxDOT) determines initial roadside safety hardware crashworthiness based on successful crash testing in accordance with AASHTO Manual for Assessing Safety Hardware (MASH) or by evaluation by TxDOT and identified as similar in strength and geometry to another device that has been successfully crash tested in accordance with MASH. By issuing standard details for roadside safety hardware or listing the hardware in a manual (i.e., the [Bridge Railing Manual](#)) the roadside safety hardware has been deemed to be crashworthy and eligible for Federal Aid Reimbursement.

Roadside safety hardware can be approved for use on TxDOT projects in any one of the following ways:

- It has been successfully crash tested in accordance with current criteria. Further evaluation by Division of Record may be required before approval can be given.
- It has been approved for specific uses by FHWA after evaluation of results from successful crash testing.
- It has been evaluated by TxDOT and identified as similar in strength and geometry to another rail that has been successfully crash tested in accordance with current criteria.

TxDOT will be assessing the in-service performance of roadside safety hardware initially determined crashworthy under MASH. TxDOT will be determining a process for evaluating crash reports and existing data annually to identify crashes that involved roadside safety hardware initially determined crashworthy under MASH. In addition, the Divisions and Districts will be surveyed annually for

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specific feedback on their experience installing, maintaining, and repairing particular roadside safety hardware.

The Division of Record for specific roadside safety hardware maintains records of the basis of acceptance that can be made available to FHWA upon request. The Division of Record for various roadside safety hardware is as follows:

- Bridge Division – bridge rails
 - <http://www.dot.state.tx.us/insdtdot/orgchart/cmd/cserve/standard/bridge-e.htm#RAILINGSTANDARDS>
- Design Division – precast and cast-in-place concrete barrier; metal barriers; metal beam guard fence, transitions, and terminals; and crash cushions.
 - <http://www.dot.state.tx.us/insdtdot/orgchart/cmd/cserve/standard/rdwylse.htm>
- Maintenance Division – mailboxes
 - <https://www.txdot.gov/insdtdot/orgchart/cmd/cserve/standard/maintcad.htm>
- Traffic Division – sign supports (permanent and temporary) and all other breakaway hardware
 - <https://www.dot.state.tx.us/insdtdot/orgchart/cmd/cserve/standard/toc.htm>

CC: Federal Highway Administration
Senior Leadership
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EO Deputy Division Directors (BRG, CST, DES, MNT, TRF)
Bridge Division
Construction Division
Design Division
Maintenance Division
Traffic Division