



Florida Department of Transportation

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ERIK R. FENNIMAN
INTERIM SECRETARY

DME MEMORANDUM NUMBER 18-04

DATE: December 26, 2018

TO: DISTRICT MAINTENANCE ENGINEERS

FROM: Rudy Powell, Jr., P.E., Director, Office of Maintenance

A handwritten signature in blue ink, appearing to read "R. Powell, Jr.", is written over the "FROM:" line.

COPIES: Courtney Drummond, P.E., Chief Engineer
David Sadler, P.E., Director, Office of Construction
Tim Lattner, P.E., Director, Office of Design
Stefanie Maxwell, P.E., Manager, Program Management Office
Kristin McCrary, P.E., Roadway Maintenance Engineer
Fred Noble, P.E., State NPDES Administrator
Tim Allen, Traffic Services and Permitting Manager
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SUBJECT: Crash Cushions

REQUIREMENTS

The Joint AASHTO\FHWA MASH Implementation Agreement calls for all Crash Cushions installed on projects with lettings after December 31, 2018, to be compliant with the AASHTO Manual for Assessing Safety Hardware, 2016 (MASH-16) crash testing standards.

Procedure 850-055-003, Crash Cushion Inventory and Inspection, states the following in Section 9 concerning crash cushion upgrade criteria.

When more than 50% of the crash cushion components are damaged or deteriorated, it shall be replaced to the current standards using the crash cushions listed on the APL. For each crash cushion that is replaced, the designated area engineer or District Design Office shall evaluate the crash cushion history to ensure it is replaced with the most cost effective crash cushion, taking into account the long term maintenance of the unit. For example, if a crash cushion is routinely being hit, it shall be replaced with a low

maintenance/resettable type crash cushion even if the initial installation cost may be higher. Crash cushions are to be installed according to the manufacturer's specification.

Crash cushions requiring repair which do not meet National Cooperative Highway Research Program (NCHRP) Report 350 or the American Association of State Highway and Transportation Officials (AASHTO) Manual for Assessing Safety Hardware (MASH) crashing testing compliance, must be replaced to the current standards using a crash cushion listed on the APL. These Pre-NCHRP 350 crash cushions are considered obsolete under this provision and include, but are not limited to, the following:

- *Hi-Dro Cell*
- *G-R-E-A-T*
- *Hex Foam*

There are currently a limited number of MASH-16 compliant crash cushions listed on the Department's Approved Products List (APL), and it is possible that length restrictions or hazard width requirements may not be obtainable with a currently available MASH system. Available lengths and widths can be determined from the manufacturer's drawings on the APL. Due to these product limitations, any location where a crash cushion length or width requirement cannot be met with a MASH compliant unit listed on the APL, use a NCHRP 350 device on the APL with the approval of the District Maintenance Engineer or their designee.

For all locations where length restrictions or hazard width requirements would not prevent the installation of a MASH system listed on the APL, the MASH system must be used.

IMPLEMENTATION

These requirements are effective as of January 1, 2019.

CONTACT

Should you have any questions concerning this memorandum, contact Kristin McCrary at 850-410-5694