



Montana Department of Transportation
PO Box 201001
Helena, MT 59620-1001

Memorandum

To: Lesly Tribelhorn, PE
Highways Engineer

From: Jennifer Nelson, PE *JMN*
Butte District Preconstruction Engineer

Date: March 25, 2016

Subject: IM 90-4(74)230
Homestake Erosion Repair
UPN 8764000
Work Type 510-Environmental
Finding of Public Interest: Trinity Soft-Stop Optional Terminal Section

Pursuant to 23 CFR 635.411, we are requesting your Finding of Public Interest for MDT's use of the Trinity Soft-Stop optional terminal section on the subject project.

Project Information:

- The subject project will replace guardrail, terminal sections, concrete barrier rail, and associated other roadside hardware on Interstate 90 between RP 230.4 and RP 240.1.
- The project is not currently in the TCP, but is being produced as a potential 2016 backup.
- Approximately 58,000 feet of guardrail will be installed as part of the project.

Background and Benefits

- Testing criteria for highway roadside hardware have been in place since 1962. NCHRP Report 350, Recommended Procedures for the Safety Performance Evaluation of Highway Features, had been the accepted method for safety hardware device testing and eligibility since 1993.
- The AASHTO Manual for Assessing Safety Hardware (MASH) testing standards were published in 2009. As of January 1, 2011, all new roadside hardware products were required to be tested using MASH crash test criteria for use on the National Highway System (NHS).
- The January 7, 2016 memo from FHWA specifies that, for contracts on the NHS with letting dates after the dates below, only safety hardware evaluated using MASH criteria (2016 edition) will be allowed for new permanent installations and full replacements:
 - December 31, 2017: w-beam barriers and cast-in-place concrete barriers
 - June 30, 2018: w-beam terminals
 - December 31, 2018: cable barriers, cable barrier terminals, and crash cushions
 - December 31, 2019: bridge rails, transitions, all other longitudinal barriers (including portable barriers installed permanently), all other terminals, sign supports and other breakaway hardware
- Having new guardrail installations of significant size, such as this one, be MASH-compliant, will improve the overall safety of the transportation system, as well as

reducing future replacement obligations. Therefore, new w-beam guardrail will all be installed at the 31" height shown in the Midwest Guardrail Systems detail.

- There is currently only one optional terminal section product that has been certified by FHWA as meeting MASH standards, the Trinity Soft-Stop. This is the terminal section that would need to be used with the 31" tall guardrail to make a fully-MASH-compliant system.
- Current efforts at MDT to develop standard detail drawings and guidelines for MASH-compliant hardware indicate that the Trinity Soft-Stop will be among the optional terminal sections selected for system synchronization in the future, when more MASH-compliant terminal section options are available.

With your approval we will take all action requested and proceed with the design accordingly.

Approval *Lesly Tribelhorn*

Date *March 29, 2016*

Lesly Tribelhorn, P.E.
Highways Engineer

cc:

Jeff Ebert, District Administrator
Kevin Christensen, Construction Engineer
Matt Strizich, Materials Engineer
Master file

Joe Walsh, Project Design Manager
Dustin Rouse, Preconstruction Engineer
Suzy Price, Contract Plans Engineer
Dwane Kailey, Chief Engineer