



October 9, 2019

TO: WSDOT Project Development Engineers

FROM:  Steve Roark, State Design Engineer
Development Division Director

SUBJECT: Project Delivery Memo #19-02: F-Shape Barrier – MASH Implementation

PURPOSE

In 2016, FHWA and AASHTO reached a joint implementation agreement to provide guidance on how to phase in the use of roadside safety hardware tested using the AASHTO Manual for Assessment of Safety Hardware. WSDOT Project Delivery Memorandum 16-03, MASH Implementation, stipulates a schedule for updating specifications and guidance to support the installation of a new generation of roadside safety devices that is based on that agreement. Because the timing of the various implementation dates in these documents may not coincide with publication schedules or approval processes, WSDOT may choose to create alternative approaches to meeting the dates stipulated in in the agreement and Memorandum 16-03.

Background

According to Project Delivery Memorandum 16-03, MASH will be implemented in stages based on hardware category. On December 31, 2019, one of the categories that will be implemented is portable barrier installed permanently. This category has been affected by a change in design, requiring a new standard plan and specification. The previous design (WSDOT Type 2 barrier), is being superseded by another design called F-shape, which has been crash tested to MASH criteria. An updated standard plan for F-shape (C60.10) that conforms more closely to the crash tested design than the previous design (K80.30) was released in September 2019, and is now available for use. WSDOT Design Manual direction on the use of F-shape barrier will be issued in December. However, projects that have received design approval in advance of that date require additional direction in order to keep the implementation date for this category of hardware.

Other categories of hardware are currently being monitored with respect to this implementation date, including cable barrier, bridge rails, guardrail transitions, sign supports and similar breakaway hardware. MASH compatible solutions for these categories are in development, and more information will be shared as it becomes available.

DIRECTION

General

All projects with an advertising date after December 31, 2019 will be required to use F-shape for installation of portable barriers intended for permanent use. For purposes of this memorandum, a permanent installation is one that is to be turned over to WSDOT and maintained as a traffic barrier once the project has been closed. WSDOT Type 2 barrier may continue to be used for temporary applications. Next year we will re-visit and determine, in collaboration with industry, the future timeline for the continued use of Type 2 barrier.

ACTIONS REQUIRED

Regions

Project staff and management are to determine the best approach to meeting the direction to install F-shape barrier when installing precast barrier in permanent installations described above.

Design Office, Development Division

Update the WSDOT Design Manual to reflect the direction described above. Monitor implementation and make adjustments as necessary to improve the process going forward.

Monitor all other hardware categories assigned to the December 31, 2019 date, and develop policy, guidance, specifications, and/or other supporting documentation to implement them as information becomes available. Because of uncertainty related to this ongoing development, and our agency's organizing principles surrounding policy updates and project development in general, it's anticipated that one or more of these other categories will not be implemented by the date assigned in the implementation agreement.

The AASHTO/FHWA Joint Implementation Agreement is available for review here:
<https://tinyurl.com/yy6hzatk>

SR:jd

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