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# Memorandum

Subject: **INFORMATION:** Clarification of Roles and Responsibilities in Implementing the American Association of State Highway and Transportation Officials (AASHTO) / Federal Highway Administration (FHWA) Joint Implementation Agreement on the AASHTO *Manual for Assessing Safety Hardware* (MASH)

Date: MAR 17 2017

From: Elizabeth Alicandri  
Associate Administrator for Safety

In Reply Refer To:  
HSA-1

To: Division Administrators  
Directors of Field Services  
Federal Lands Highway Division Engineers

## Purpose

Since the distribution of the AASHTO/FHWA joint implementation agreement for AASHTO MASH, we have received many questions on how FHWA and AASHTO are moving forward with the joint implementation agreement. This memo describes the different roles and responsibilities of FHWA and AASHTO since the transition from the National Cooperative Highway Research Program (NCHRP) Report 350 testing criteria to AASHTO's MASH criteria.

## Background

In 2015, roadway departure fatalities accounted for 18,695 highway fatalities. The implementation of the AASHTO MASH will help make roads safer and lessen the severity of roadway departure crashes. The AASHTO MASH, updated in 2016, provides AASHTO's first officially adopted crash-testing procedures for use in assessing roadside hardware. Until AASHTO MASH, NCHRP 350 - *Recommended Procedures for the Safety Performance Evaluation of Highway Features*, was the primary reference. FHWA accepted the responsibility for clarifying and providing guidance for the NCHRP 350 report. The NCHRP 350 report is now superseded by the AASHTO MASH.

## Responsibilities

In December 2015, the AASHTO/FHWA joint implementation agreement for AASHTO MASH was successfully balloted by AASHTO's Standing Committee on Highways and approved by FHWA. The agreement will help encourage the application of the newest and safest generation of roadside hardware. Per the agreement:

- *“AASHTO Technical Committee for Roadside Safety (TCRS) will continue to be responsible for developing and maintaining the evaluation criteria adopted by AASHTO.”*
- *“FHWA will continue its role in issuing letters of eligibility of roadside safety hardware for federal-aid reimbursement.”*

As noted above from the agreement, the AASHTO TCRS is responsible for developing and maintaining the evaluation criteria in AASHTO MASH. The FHWA will continue to provide technical assistance on roadside hardware to the AASHTO TCRS. Ultimately, the decision to make changes to the AASHTO MASH resides with AASHTO.

The FHWA will continue its role issuing letters of eligibility for roadside safety hardware that have been evaluated using AASHTO’s MASH testing guidelines and criteria. Questions pertaining to the FHWA Federal-aid Eligibility Reimbursement Process or issuance of eligibility letters should be addressed to the FHWA Office of Safety.

Please note FHWA no longer issues new eligibility letters for roadside safety hardware tested under NCHRP 350. FHWA’s Federal-aid eligibility letters are provided *as a service* to the States and are not a requirement for roadside safety hardware to be eligible for Federal-aid reimbursement. As stated in our eligibility letter, “eligibility for reimbursement under the Federal-aid highway program does not establish approval, certification or endorsement of the device for any particular purpose or use.” It is the States’ responsibility to determine whether or not to use a particular hardware device and how to use it for their particular situation.

AASHTO TCRS and FHWA will evaluate and monitor the availability of MASH-compliant devices and will revisit the implementation agreement as needed. Since the original implementation agreement was balloted by AASHTO, changes to the agreement will also be balloted by AASHTO and approved by FHWA.

### **Summary**

Please share this memorandum with your State DOT. For more information about the AASHTO/FHWA Joint MASH Implementation Agreement, please visit [https://safety.fhwa.dot.gov/roadway\\_dept/countermeasures/reduce\\_crash\\_severity/policy\\_memo\\_guidance.cfm](https://safety.fhwa.dot.gov/roadway_dept/countermeasures/reduce_crash_severity/policy_memo_guidance.cfm). If you have any questions, please contact Will Longstreet at (202)366-0087 or Menna Yassin at (202)366-2833.

# Memorandum

*Making Conservation  
a California Way of Life*

To: DISTRICT DIRECTORS

Date: November 12, 2019

From: STEVE TAKIGAWA  
Deputy Director  
Maintenance and Operations



CORY BINNS  
Acting Deputy Director  
Project Delivery



Subject: **MASH COMPLIANCE PLAN AND POLICY**

On December 23, 2016, the California Department of Transportation (Caltrans) established a timeline for implementation of roadside safety hardware and evaluation of new products under the Manual for Assessing Safety Hardware (MASH). The plan set specific dates when Caltrans will no longer allow the installation of non-MASH compliant safety devices.

If one or more Caltrans approved MASH compliant safety devices are available for a specific need, Caltrans must use the safety device(s) even if it may require a sole source contract. If a situation arises where a MASH compliant safety device is not available to address a specific need, Caltrans must use a National Cooperative Highway Research Program (NCHRP) Report 350 approved safety device. If a NCHRP Report 350 device is not available, Caltrans must use engineering judgement to address the specific need.

For cases when either a NCHRP Report 350 device or engineering judgement is used for traffic safety devices, the engineer must consult with the District Traffic Safety Devices Coordinator. The engineer must then document the decision in the project history file.

These requirements apply to all projects and work done on the State highway system.

The MASH compliant safety hardware approved by Caltrans can be found at:  
<<https://dot.ca.gov/programs/traffic-operations/mash>>

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For further questions regarding this process for traffic safety devices, please contact Duper Tong, Chief, Office of Traffic Engineering at (916) 654-5176 or by e-mail at <Duper.Tong@dot.ca.gov>. For bridge rails, transitions, sign supports and other breakaway hardware, contact Joel Magana, Chief, Office of Design and Technical Services at (916) 227-8018 or by e-mail at <Joel.Magana@dot.ca.gov>.

c: Jasvinderjit S. Bhullar, Chief, Division of Traffic Operations  
Dennis T. Agar, Chief, Division of Maintenance  
Rachel Falsetti, Chief, Division of Construction  
Janice Benton, Chief, Division of Design  
Thomas A. Ostrom, Chief, Division of Engineering Services  
Dara Wheeler, Chief, Division of Research, Innovation and System  
Information  
Duper Tong, Chief, Office of Traffic Engineering  
Joel Magana, Chief, Office of Design and Technical Services

# Memorandum

*Making Conservation  
a California Way of Life*

To: STRUCTURE POLICY BOARD

Date: August 19, 2019

From: RUTH FERNANDES *RF*  
State Bridge Engineer (A)  
Deputy Division Chief (A)  
Structure Policy & Innovation  
Division of Engineering Services

Subject: **ADOPTION OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, EIGHTH EDITION WITH CALIFORNIA AMENDMENTS**

Effective November 1, 2019, the *AASHTO LRFD Bridge Design Specifications, Eighth Edition with California Amendments (AASHTO-CA BDS-8)*, constitutes the primary design specifications for California bridges and transportation-related structures.

For projects under development, adoption of *AASHTO-CA BDS-8* is:

- Mandatory for all projects with a Type Selection approval on or after November 1, 2019.
- Optional if it would not impose a significant delay in the project schedule or a significant increase in the project engineering or construction costs. The project history notes and plans must indicate the design criteria used.

Caltrans' Standard Plans and Standard Specifications remain valid for use. If a project under development requires significant deviation from these standards, the design must meet the requirements of *AASHTO-CA BDS-8*.

The State Bridge Engineer shall approve any exceptions to adopting provisions in the *AASHTO-CA BDS-8* as stated above. This request shall be made as early as possible.

*AASHTO-CA BDS-8* shall be the basis of all Caltrans' guidance material under development.

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For questions or concerns on the application of the *AASHTO-CA BDS-8* on a specific project, consultants and local agencies should contact the Structure Liaison Engineer. Caltrans' staff may contact the appropriate Technical Committee Chair or Technical Specialist.

*AASHTO-CA BDS-8* is available on the Caltrans' Division of Engineering Services website. If you are not able to locate *AASHTO-CA BDS-8* or any other bridge manual, please contact us at: [manuals.products@dot.ca.gov](mailto:manuals.products@dot.ca.gov).

c: Thomas A. Ostrom, Acting Chief, Division of Engineering Services  
Janice Benton, Chief, Division of Design  
Sue Hida, Chief, DES SP&I Office of State Bridge Engineer Support  
Nina Choy, Chief, DES SP&I Office of Structure Quality Management  
Mark Mahan, Chief, DES SP&I Office of Earthquake Engineering  
Joel Magaña, Chief, DES SP&I Office of Design & Technical Services  
Offices of Bridge Design, DES SD  
Sergio Aceves, Assistant Division Chief, Division of Pavements