



Bridge Procedures and Design Guide February 2018 AMENDMENTS

AMENDMENT INDEX:

- 1 – Interim guide for Bridge Barrier Rails (BBR) transitions from NCHRP 350 to MASH. ~~12/10/2018~~ (R1 5/10/19)**

AMENDMENT #1 (R1)

May 10, 2019

The following is an ADDITION to the Bridge Procedures and Design Guide (BPDG). In the event of conflicts, please contact the Bridge Bureau for clarification:

Interim guide for Bridge Barrier Rails (BBR) transition from NCHRP 350 to MASH (2016):

1. NMDOT is committed to incorporating only MASH (2016) compliant BBR after December 31, 2019.
2. All design documents that go to production after October 2019 must have MASH compliant BBR.
3. NMDOT's determination of conformance with MASH criteria will be based upon the availability of an FHWA eligibility letter and by the availability of Test Reports from A2LA accredited test facilities that confirm all strength and safety performance criteria of MASH have been met. An additional basis of acceptance shall be determination of satisfaction of MASH criteria in NCHRP 20-07 / Task 395 Report dated November 2017. The Test Level criteria of the assembly will be included with the acceptance documentation listed above.
4. Per NCHRP 20-07 / Task 395 dated November 2017, the NMDOT standard drawings for the 42" Concrete BBR (514-03) and the 42" Metal BBR (543-07) satisfy MASH TL-4 criteria. It is recommended that 514-03 be used everywhere practical – concrete is the most cost effective both for initial and maintenance. It is acceptable to utilize 514-03 and 543-07 at any location (unless engineering judgement suggests that a TL-5 rail be used, in which case, the EOR must provide a custom design).
5. BBRs with heights other than 42" are currently being analyzed. There are currently no 32" or 36" BBR that are recommended by NMDOT for use.
6. With regard to Test Level requirements on Bridges, determination of Test Level requirements is as follows:

TL-4 is required on interstates

TL-3 may be used off interstates

Engineering judgement may be used to INCREASE the Test Level requirements for specific bridges with the approval of the ADE-D. Modifications to REDUCE the Test Level Criteria must be approved by the State Engineer. Things to consider with regard to INCREASING the Test Level requirement:

areas that see high ADT, particularly if there is a high percentage of truck traffic

BBR that protect significant geographic changes (deep canyons)

tight curves and/or super-elevation

7. If a project needs a "special" BBR - we will likely accept BBR that are have been MASH tested and are compliant at the Test Level required. Note: BBRs that are "special" will mostly likely be very expensive - make

sure that is accounted for in the project estimate. The Engineer of Record (EOR) must present the conformance documentation for the approval of the State Bridge Engineer and the ADE-D prior to completion of design and must incorporate the design into the design documents which will be stamped by the EOR.

Notes:

The 42" standard is based upon an absolute minimum of $36" + 2 * 3" = 42"$ to accommodate 2 future overlays.

Any barrier that is TL-5 or 6 per NCHRP 350 is also MASH compliant – the test criteria for TL-5 and TL-6 remain unchanged.

END AMENDMENT #1 (revised)