

vertical clearance of the other structures. These lower clearances for the sign structures are sometimes needed to maximize the visibility of the signs when low bridge structure or tunnel clearances limit the sign visibility. There was one editorial comment from the NCUTCD regarding this change, which the FHWA incorporates in this final rule.

22. In Section 2A.19 Lateral Offset, the FHWA divides the first STANDARD statement into a STANDARD and a GUIDANCE statement. The STANDARD statement refers to the lateral offset of overhead sign supports, and the GUIDANCE statement refers to the lateral offset of signs mounted at the roadside. Changing the lateral offset of roadside-mounted signs to a GUIDANCE provides additional flexibility to jurisdictions for signs mounted at the roadside. There was one comment from the NCUTCD in support of this change, the Kansas DOT opposed it, and Caltrans requested additional clarification. The Kansas DOT opposed the conversion of the minimum lateral offset for signs mounted at the roadside to a GUIDANCE, and suggested that it should remain a STANDARD in order to minimize the chance of allowing signs to be placed immediately adjacent to the shoulder or the roadway edge. The FHWA disagrees because it is more appropriate for this item to be a GUIDANCE, especially given the exemptions in the last OPTION statement. The FHWA encourages the 12-foot offset, but provides flexibility to jurisdictions for the placement of signs mounted at the roadside in places where the 12-foot offsets would not be desirable or practical. A State may choose to impose a more stringent requirement if it desires. The FHWA adopts this change, as specified in the NPA, in this final rule.

Additionally, in the 2000 edition of the MUTCD a new requirement was established in this section that, if located within the clear zone, ground-mounted sign supports shall be breakaway, yielding, or shielded with a barrier or crash cushion and that supports for overhead-mounted signs shall be shielded with a barrier or crash cushion, but no special phase-in target compliance date was established at that time. In response to comments that agencies are encountering difficulties and economic impacts given the extensive testing of devices that has to occur in accordance with NCHRP Report 350<sup>7</sup> in order to determine and

certify crashworthiness, the FHWA determines that a special target compliance date is required for the crashworthiness provisions in this section. In this final rule, the FHWA establishes a phase-in target compliance date of January 17, 2013 for crashworthiness of sign supports within the clear zone for roads with posted speed limits of 80 km/h (50 mph) or above. This is consistent with guidance previously communicated informally to jurisdictions in a variety of training and presentations by the FHWA Office of Safety regarding roadside safety and countermeasures for run-off-the-road crashes, and is a reasonable target date for achieving compliance on high-speed roads.

23. In the NPA, the FHWA proposed revisions to Section 2A.20 Position of Signs, to remove the second sentence under the SUPPORT statement as the references to the figures duplicates other references elsewhere. Upon further consideration, the FHWA believes that this section is not necessary and deletes this section from the MUTCD in its entirety in this final rule. This section does not include any information that is not already contained elsewhere in the Manual. The FHWA revises the subsequent section numbers accordingly.

24. In Section 2A.21 Posts and Mountings (numbered Section 2A.22 in the NPA), the FHWA adds an OPTION statement after the SUPPORT statement, indicating that a strip of retroreflective material may be used on the supports of regulatory and warning signs to draw attention to the sign during nighttime conditions. One consultant and three State DOTs opposed this new OPTION, but the NCUTCD and several other agencies supported it. Those opposed stated several reasons, such as difficulty in deciding which signs should receive a reflective strip, lack of research support, and consistency. The FHWA agrees that additional instruction is needed regarding the use of the reflective strip, and adds the phrase "Where engineering judgment indicates a need to draw attention to the sign during nighttime conditions". Because this is an OPTION, States that oppose it can choose to not allow this use.

Additionally, the FHWA adds a second STANDARD statement after the OPTION statement specifying the size, location, and color of the strip of retroreflective material if it is used. This provides for uniformity of application. Based on comments received from a

traffic engineering consultant for this section as well as other comments in Section 8B.03 Highway-rail Grade Crossing (Crossbuck) Sign (R15-1) and Number of Tracks Sign (R15-2) regarding the placement of the strip in relation to the ground, the FHWA revises this statement to indicate that the bottom of the strip be within 0.6 m (2 ft) above the edge of the roadway. The FHWA adopts this change, along with editorial modifications, in this final rule.

25. In Section 2A.23 Median Opening Treatments for Divided Highways with Wide Medians (numbered Section 2A.24 in the NPA and title changed from 2000 MUTCD), the FHWA removes the GUIDANCE statement that appeared in the 2000 MUTCD and changes the STANDARD statement to a GUIDANCE statement. The FHWA received three comments from the NCUTCD, Caltrans, and the City of Tucson, Arizona, in support of these changes, and two comments from ATSSA and the Minnesota DOT opposing the change from STANDARD to GUIDANCE. This change makes it recommended rather than mandatory that intersections on divided highways where the median width at the median opening is 9 m (30 ft) or more, be signed as two separate intersections. The commenters suggested that the use of the mandatory word "shall" would provide for greater consistency between jurisdictions and should be maintained to assist tourists and older drivers. The FHWA believes that it is important to provide additional signing flexibility to jurisdictions regarding median openings. A GUIDANCE statement strongly encourages the practice without mandating it, and allows for engineering judgment to be used to determine if some intersections on roadways with medians wider than 9 m (30 ft) might function better without being signed as two separate intersections. Therefore, the FHWA adopts the change as specified in the NPA.

26. In Section 2B.02 Design of Regulatory Signs, the NPA included a proposal to add OPTION and GUIDANCE statements at the end of the section regarding the use of Changeable Message Signs to provide for the display of regulatory signs. The NCUTCD, the City of Tucson, Arizona, and a traffic control device manufacturer supported the new OPTION statement. Caltrans questioned whether the information also applied to portable changeable message signs. The FHWA agrees that the OPTION statement applies to more than just regulatory signs, and removes this OPTION statement from this section and places it in Section 2A.07 Changeable

<sup>7</sup> NCHRP Report 350, "Recommended Procedures for the Safety Performance Evaluation of Highway Features," 1993, is available for downloading from

the Transportation Research Board at the following URL: [http://gulliver.trb.org/publications/nchrp/nchrp\\_rpt\\_350-a.pdf](http://gulliver.trb.org/publications/nchrp/nchrp_rpt_350-a.pdf).