

road users, especially older drivers, at many locations. The FHWA also recommends that Pull-Through signs with down arrows be used where alignment of the through lanes is curved and the exit direction is straight ahead, where the number of through lanes is not readily evident, and at multi-lane exits where there is a reduction in the number of through lanes. The FHWA received three comments from the NCUTCD, the City of Tucson, Arizona, and a private citizen supporting the proposed changes to the text and one comment from a private citizen opposed to it. The opposing commenter suggested the wording be revised to clarify that Pull-Through signs be used where there is a reduction in the number of through lanes because it is not appropriate to recommend Pull-Through signs at all multi-lane exits. The FHWA agrees and modifies the text to clarify the use of Pull-Through signs with down arrows at multi-lane exits where there is a reduction in the number of through lanes.

115. In Section 2E.13 Size and Style of Letters and Signs, in Table 2E-3, the FHWA adds dimensions for the "Action Message Word" row and adds a row with dimensions for the sizes of "Numerals and Letter" for Gore signs. The FHWA received one comment from the NCUTCD in support of the changes to this table. Based on an editorial comment, the FHWA revises the dimensions for the Action Message Word under "category a" for major interchanges to make this entry consistent with all of the other entries on this table.

In Table 2E-4, under item H, Rest Area and Scenic Area Signs, the FHWA changes the values for Distance Fraction to 250 mm (10 in), and the values for Distance Word to 300 mm (12 in) to correct an error in the 2000 MUTCD. A commenter from the Oregon DOT noted this inadvertent transposition of values and the FHWA agrees with this correction.

116. In Section 2E.19 Diagrammatic Signs, the FHWA proposed in the NPA to add to item A of the first STANDARD statement the option of showing each individual lane arrangement, based on research related to the needs of older road users.²⁶ The FHWA also proposed adding a second illustration to Figure

2E-3 Diagrammatic Sign for a Single-Lane Left Exit to show two diagrammatic arrows instead of just one. The FHWA received comments from the NCUTCD, the Kansas DOT, and a private citizen opposing the new sign design, stating that the size of the sign would be increased, the message difficult to read, and that additional guidance should be provided so that readers know how to design the signs. The FHWA agrees that additional research and study is needed to refine the design of the individual lane arrangement style of the diagrammatic sign. Therefore, the FHWA withdraws this proposal to include the option of showing each individual lane arrangement, as well as the proposal to add an illustration within Figure 2E-3.

The FHWA adopts additional editorial changes to improve the graphic representations in Figures 2E-3 through 2E-7 to be consistent with the text.

117. In Section 2E.23 Lateral Offset (titled "Lateral Clearance" in the 2000 MUTCD and the NPA), the FHWA changes the title to be consistent with changes in terminology as discussed in Section 2A.19 Lateral Offset.

118. In Section 2E.28 Interchange Exit Numbering, the FHWA revises the first STANDARD statement to require that a space be included between the suffix letter and the exit number on an exit number plaque for multi-exit interchanges. The FHWA received one comment from Caltrans opposed to this change, suggesting that the FHWA change this to a GUIDANCE because total width is an issue on signs, especially in retrofitting signs. The FHWA disagrees and adopts this change because the space between the exit number and suffix letter is important for adequate legibility. The FHWA also adds to this STANDARD that exit numbers shall not include the cardinal initials corresponding to the directions of the cross route. This sentence is moved from Section 2E.42 Cloverleaf Interchange because it is more appropriate in this section.

The FHWA relocates the second OPTION statement (of the 2000 MUTCD) to the first GUIDANCE statement. Because road users might not expect a left exit and have difficulty in maneuvering to the left, the FHWA recommends that the word "LEFT" be added to the exit number plaque. The FHWA received one comment from a private citizen in support of this change, and six comments from the NCUTCD, and the Minnesota, Kansas, and Wisconsin DOTs opposed to it. Most of the commenters in opposition felt the addition of the word "LEFT" to the exit number plaque should be an OPTION,

rather than GUIDANCE. The FHWA disagrees and adopts this change as a GUIDANCE because of numerous complaints of the difficulty that road users have in knowing when an exit is on the left. Very few road users know that when the exit plaque is installed on the top left edge of the sign, it means the exit is on the left.

The FHWA also adds additional text that, for exits that are not numbered (no exit plaque), a LEFT plaque should be added to the top left edge of the sign for a left exit. The FHWA adopts this text to address a comment from a private citizen suggesting that non-numbered exits needed to be addressed in a manner that is consistent with the way numbered left exits are signed, to provide for adequate safety at these locations. The FHWA establishes a phase-in target compliance date of 15 years from the effective date of this final rule for the new GUIDANCE for existing signs in good condition to minimize any impact on State or local governments.

The FHWA adds an OPTION statement following the first GUIDANCE statement, stating that the portion of the exit number plaque containing the word "LEFT" may have a black legend and border on a yellow background. This OPTION statement mirrors other similar uses of the black on yellow color pattern for signs and panels associated with left exits in the MUTCD. The FHWA received three comments from the NCUTCD, the Minnesota DOT, and a private citizen opposed to this new statement, but these commenters provided no reasoning for their opposition. The FHWA adopts the OPTION in this final rule because it is consistent with the EXIT ONLY and LEFT EXIT color scheme, it further increases conspicuity of the infrequent left exit, and it is an optional treatment that jurisdictions may use but is not required.

Additionally, the FHWA removes the EXIT 13 plaque from Figure 2E-3 to reflect the changes in Section 2E.28. The FHWA makes additional editorial modifications to the figures to correspond with the text and correct minor errors.

119. In Section 2E.30 Advance Guide Signs, the FHWA modifies the first GUIDANCE statement to provide necessary clarification for placement of advance guide signs. This change responds to a comment from Caltrans stating that clarification on advance sign placement is necessary to address situations where it is not practical to use three Advance Guide signs because of very close spacing between interchanges. This minor change does not add any new requirements and

²⁶ Information about this research is summarized on pages 190 and 191 of the "Highway Design Handbook for Older Drivers and Pedestrians," Report number FHWA-RD-01-103, published by the FHWA Office of Safety Research and Development, 2001. It is available for purchase from The National Technical Information Service, Springfield, Virginia 22161, (703) 605-6000, or at their Web site at the following URL: <http://www.ntis.gov>.