

local ordinance, to minimize unnecessary sign clutter. The NCUTCD and the City of Tucson, Arizona, supported this change. In response to a comment from a private citizen, the FHWA adds additional clarity by inserting an OPTION statement indicating that curb markings without signs or word markings may be used to convey a general prohibition of parking within a specified distance of a stop sign, driveway, fire hydrant, or crosswalk.

163. In Section 3B.22 Preferential Lane Word and Symbol Markings, the FHWA adds to the second STANDARD statement that more than one symbol or word marking can be used to mark a preferential lane, that the word message "HOV" is acceptable as a preferential marking (relocating this from the OPTION statement), and that the "T" marking shall be the light rail transit preferential lane symbol. Additionally, in the same STANDARD statement, the FHWA requires that symbol or word markings for each preferential lane use be installed if two or more preferential lane uses are permitted in a single lane. These changes provide uniformity for marking of multi-use preferential lanes and provide a distinctive symbol for light rail transit. The NCUTCD and the Florida DOT supported this change. Caltrans opposed the "T" marking, stating that the "T" marking could be mistaken as the abbreviation for other uses (such as taxis, trams, and trains). The FHWA adopts the wording as proposed in the NPA. While possible future research may find that there is a better marking, there are currently very few applications of exclusive light rail transit lanes on street. If a better symbol is indicated by research in the future the FHWA will address this accordingly in a future rulemaking.

164. In Section 3B.24 Markings for Roundabout Intersections, the FHWA adds a new STANDARD statement, which prohibits marking bicycle lanes on roundabout intersections. Many comments, especially from the bicycling community, agreed with this statement.

As a result of a comment from the New York DOT, the FHWA changes Item C of the SUPPORT statement to clarify that the flare or widening for a roundabout intersection approach should allow for proper operation as needed. This is a critical characteristic of a modern roundabout intersection. In addition, the FHWA adds a paragraph to the last OPTION statement regarding the option of using yield lines in roundabout intersections. The FHWA also adds yield lines to the figures illustrating roundabout intersection markings to correct an omission noted

by a traffic engineering consultant, regarding yield lines in roundabout intersections. These minor changes to the SUPPORT, OPTION, and figures do not impose any new requirements and are considered editorial in nature.

165. In Section 3C.01 Object Marker Design and Placement Height, the FHWA adds to the text of the first STANDARD statement the sign numbers for Type 1 markers for clarity. The FHWA also adds text to reflect the FHWA's Official Interpretation #3-155(I)³³ to clarify the text for Type 2 markers. The FHWA inserts that the minimum width of both the yellow and black stripes on a Type 3 striped marker shall be 75 mm (3 in), to provide for uniformity of appearance of these markers. The FHWA establishes a 10-year phase-in target compliance date from the effective date of this final rule for existing markers in good condition.

One commenter suggested that there be a maximum width specified for the stripes. The FHWA has no information regarding a reasonable maximum width and therefore additional research is necessary. This issue may be the subject of a future rulemaking.

166. In Section 3D.01 Delineators, the FHWA changes the STANDARD statement indicating that delineators are considered guidance devices rather than warning devices to a SUPPORT statement to be consistent with other parts of the MUTCD. Two commenters from the NCUTCD and the City of Tucson, Arizona, supported this change.

167. In Section 3D.04 Delineator Placement and Spacing, in response to a comment from a traffic engineering consultant, the FHWA adds to the first GUIDANCE statement a description of the three ways that delineators can be mounted with guardrail. This text is needed for consistency with the notes in Figure 3D-1 and to reflect common practices.

168. In Section 3E.01 Colored Pavements, the FHWA makes several changes to reflect that red colored pavement is no longer being considered a traffic control device. The FHWA adds to the SUPPORT statement that colored pavement located between the crosswalk lines is not considered to be a traffic control device. The FHWA removes item A of the STANDARD statement concerning when the color red is used, and removes the second GUIDANCE statement concerning how the color red is used. The FHWA received several comments regarding

this change from the NCUTCD, traffic control device manufacturers, and State DOTs, many in favor and requesting that colored pavement for bicycle lanes also be included. One commenter from the Arizona DOT expressed concern that the use of colored pavement may be expanded and used inappropriately, in the absence of further direction. The FHWA adopts the language as proposed in the NPA. The use of colored pavement in bicycle lanes is currently under experimentation and may be appropriate for discussion in a future rulemaking.

Additionally, in the first GUIDANCE statement, the FHWA adopts text that recommends that colors that degrade the contrast of white crosswalk lines, or that might be mistaken by road users as a traffic control application, not be used for colored pavement located between crosswalk lines. Four commenters, representing associations for the blind, agreed with this statement.

Discussion of Adopted Amendments to Part 4—Highway Traffic Signals

169. In Section 4A.02 Definitions Relating to Highway Traffic Signals, the FHWA removes the definition of "Emergency Beacons", to correspond with FHWA's decision to remove the proposed section numbered and titled in the NPA "Section 4F.04 Emergency Beacon" from this final rule (see discussion of Section 4F.03 Operation of Emergency-Vehicle Traffic Control Signals).

The FHWA received three comments from the Missouri DOT and the cities of Tucson, Arizona, and Plano, Texas, opposed to the proposal to revise the definition of "Pedestrian Clearance Time" to correspond to proposed changes in the standards contained in Section 4E.10 Pedestrian Intervals and Signal Phases. The commenters stated that defining pedestrian clearance time as a standard eliminates the flexibility in calculating clearance time. The FHWA disagrees with the commenters because this definition must correspond to the text of Section 4E.10, and in that section, the FHWA adopts the provision to calculate pedestrian clearance time from curb to curb and not to allow clearance time to be calculated to the middle of the farthest lane. (See discussion of Section 4E.10.) The FHWA adopts the language as proposed in the NPA.

The FHWA also received two comments from the NCUTCD and the City of Plano, Texas, requesting that the new definitions for "Separate Left Turn Signal Face," and "Shared Left Turn Signal Face" be deleted, because these phrases are described in Section 4D.06

³³ A copy of the FHWA's Official Interpretation number 3-155(I) is available from the American Traffic Safety Services Association's web site at the following URL: <http://www.atssa.com/pubinfo/downloads/5-31-02b.pdf>.