



National Committee on Uniform Traffic Control Devices

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ATTACHMENT NO. 8 Markings No. 2

TECHNICAL COMMITTEE: Markings
TOPIC: Changing Shall Language
STATUS: Approved by Markings, January 2012
Distributed as sponsor ballot, Spring 2012
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Appvd by NCUTCD Council June 22, 2012

ORIGIN OF REQUEST: NCUTCD request
AFFECTED PORTIONS OF MUTCD: Chapter 3B

Summary:

The NCUTCD requested technical committee to review language in their respective portions of the MUTCD and identify Standard statements that would be more appropriately worded as a Guidance or Option statement. The MTC reviewed the language over the course of several meetings. No changes are proposed for Chapter 3A or 3C. This ballot presents recommendations for changes in shall language for Chapter 3B.

Recommended Changes to the MUTCD:

The proposed changes to Section 3B.04 are shown in the following pages. Additions are indicated by blue underline, ~~deletions~~ are indicated by red double strikethrough. Explanations on why changes in the language are recommended are presented in brackets immediately after the section title and highlighted in [yellow].

1 CHAPTER 3B. PAVEMENT AND CURB MARKINGS

2 Section 3B.02 No-Passing Zone Pavement Markings and Warrants

3 [Language in lines 18-23 moved from standard to support as the content does not include a shall
4 statement]

5 Standard:

6 No-passing zones shall be marked by either the one direction no-passing zone pavement
7 markings or the two-direction no-passing zone pavement markings described in Section 3B.01 and
8 shown in Figures 3B-1 and 3B-3.

9 When center line markings are used, no-passing zone markings shall be used on two-way
10 roadways at lane-reduction transitions (see Section 3B.09) and on approaches to obstructions that
11 must be passed on the right (see Section 3B.10).

12 On two-way, two- or three-lane roadways where center line markings are installed, no-passing
13 zones shall be established at vertical and horizontal curves and other locations where an
14 engineering study indicates that passing must be prohibited because of inadequate sight distances
15 or other special conditions.

16 On roadways with center line markings, no-passing zone markings shall be used at horizontal
17 or vertical curves where the passing sight distance is less than the minimum shown in Table 3B-1
18 for the 85th-percentile speed or the posted or statutory speed limit. ~~The passing sight distance on a
19 vertical curve is the distance at which an object 3.5 feet above the pavement surface can be seen
20 from a point 3.5 feet above the pavement (see Figure 3B-4). Similarly, the passing sight distance on
21 a horizontal curve is the distance measured along the center line (or right-hand lane line of a three-
22 lane roadway) between two points 3.5 feet above the pavement on a line tangent to the embankment
23 or other obstruction that cuts off the view on the inside of the curve (see Figure 3B-4).~~

24 Support:

25 The passing sight distance on a vertical curve is the distance at which an object 3.5 feet above the
26 pavement surface can be seen from a point 3.5 feet above the pavement (see Figure 3B-4). Similarly, the
27 passing sight distance on a horizontal curve is the distance measured along the center line (or right-hand
28 lane line of a three-lane roadway) between two points 3.5 feet above the pavement on a line tangent to the
29 embankment or other obstruction that cuts off the view on the inside of the curve (see Figure 3B-4).

30 The upstream end of a no-passing zone at point “a” in Figure 3B-4 is that point where the sight
31 distance first becomes less than that specified in Table 3B-1. The downstream end of the no-passing zone
32 at point “b” in Figure 3B-4 is that point at which the sight distance again becomes greater than the
33 minimum specified.

34 The values of the minimum passing sight distances that are shown in Table 3B-1 are for operational
35 use in marking no-passing zones and are less than the values that are suggested for geometric design by
36 the AASHTO Policy on Geometric Design of Streets and Highways (see Section 1A.11).

37 Guidance:

38 *Where the distance between successive no-passing zones is less than 400 feet, no-passing markings*
39 *should connect the zones.*

40 Standard:

41 **Where center line markings are used, no-passing zone markings shall be used on approaches to**
42 **grade crossings in compliance with Section 8B.27.**

43 Option:

44 In addition to pavement markings, no-passing zone signs (see Sections 2B.28, 2B.29, and 2C.45) may
45 be used to emphasize the existence and extent of a no-passing zone.

46 Support:

47 Section 11-307 of the “Uniform Vehicle Code (UVC)” contains further information regarding
48 required road user behavior in no-passing zones. The UVC can be obtained from the National Committee
49 on Uniform Traffic Laws and Ordinances at the address shown on Page i.

50 **Standard:**

51 **On three-lane roadways where the direction of travel in the center lane transitions from one**
52 **direction to the other, a no-passing buffer zone shall be provided in the center lane as shown in**
53 **Figure 3B-5. A lane-reduction transition (see Section 3B.09) shall be provided at each end of the**
54 **buffer zone.**

55 **The buffer zone shall be a flush median island formed by two sets of double yellow center line**
56 **markings that is at least 50 feet in length.**

57 Option:

58 Yellow diagonal crosshatch markings (see Section 3B.24) may be placed in the flush median area
59 between the two sets of no-passing zone markings as shown in Figure 3B-5.

60 *Guidance:*

61 *For three-lane roadways having a posted or statutory speed limit of 45 mph or greater, the lane*
62 *transition taper length should be computed by the formula $L = WS$. For roadways where the posted or*
63 *statutory speed limit is less than 45 mph, the formula $L = WS^2/60$ should be used to compute the taper*
64 *length.*

65 Support:

66 Under both formulas, L equals the taper length in feet, W equals the width of the center lane or offset
67 distance in feet, and S equals the 85th-percentile speed or the posted or statutory speed limit, whichever is
68 higher.

69 *Guidance:*

70 *The minimum lane transition taper length should be 100 feet in urban areas and 200 feet in rural*
71 *areas.*

72 **Section 3B.06 Edge Line Pavement Markings**

73 [Changed edge line requirement from shall to should because otherwise, an edge line could not be
74 continued through an intersection at the top of a T intersection. An exception specifically allows the use
75 of edge lines when there is no intersecting approach.]

76 **Standard:**

77 1 **If used, edge line pavement markings shall delineate the right or left edges of a roadway.**

78 ~~2 **Except for dotted edge line extensions (see Section 3B.08), edge line markings shall not be**~~
79 ~~**continued through intersections or major driveways.**~~

80 3 **If used on the roadways of divided highways or one-way streets, or on any ramp in the direction**
81 **of travel, left edge line pavement markings shall consist of a normal solid yellow line to delineate**
82 **the left-hand edge of a roadway or to indicate driving or passing restrictions left of these markings.**

83 4 **If used, right edge line pavement markings shall consist of a normal solid white line to delineate**
84 **the right-hand edge of the roadway.**

85 *Guidance:*

86 5 *Edge line markings should not be broken for minor driveways.*

87 *Edge line markings should not be continued through intersections or major driveways, except for the*
88 *following situations:*

89 *a. Dotted edge line extensions (see Section 3B.08), or*

90 *b. Through that part of an intersection with no intersection approach (such as at the top of a T-*
91 *intersection).*

92 Support:
93 6 Edge line markings have unique value as visual references to guide road users during adverse weather
94 and visibility conditions.

95 Option:

96 7 Wide solid edge line markings may be used for greater emphasis.

97 **Section 3B.08 Extensions Through Intersections or Interchanges**

98 [Lines 103-109: Requirement to use a line that is at least as wide as the line extended is changed to a
99 recommendation. Line 122: language modified to eliminate the use of “required” in a Guidance
100 statement. Lines 125-126, 128-130: Language change to match recommended language changes in
101 Section 3B.06.]

102 **Standard:**

103 1 ~~Except as provided in Paragraph 2, p~~Pavement markings extended into or continued through
104 an intersection or interchange area shall be the same color ~~and at least the same width~~ as the line
105 markings they extend (see Figure 3B-13).

106 Guidance:

107 1a Except as provided in Paragraph 2, pavement markings extended into or continued through an
108 intersection or interchange area should be at least the same width as the line markings they extend (see
109 Figure 3B-13).

110 Option:

111 2 A normal line may be used to extend a wide line through an intersection.

112 *Guidance:*

113 3 *Where highway design or reduced visibility conditions make it desirable to provide control or to*
114 *guide vehicles through an intersection or interchange, such as at offset, skewed, complex, or multi-legged*
115 *intersections, on curved roadways, where multiple turn lanes are used, or where offset left turn lanes*
116 *might cause driver confusion, dotted line extension markings consisting of 2-foot line segments and 2- to*
117 *6-foot gaps should be used to extend longitudinal line markings through an intersection or interchange*
118 *area.*

119 Option:

120 4 Dotted edge line extensions may be placed through intersections or major driveways.

121 *Guidance:*

122 5 *Where greater restriction is desired ~~required~~, solid lane lines or channelizing lines should be*
123 *extended into or continued through intersections or major driveways.*

124 **Standard:**

125 ~~6 Solid lines shall not be used to extend edge lines into or through intersections or major~~
126 ~~driveways.~~

127 *Guidance:*

128 6 Solid lines should not be used to extend edge lines into or through intersections or major driveways,
129 except through that part of an intersection with no intersecting approach (such as at the top of a T-
130 intersection).

131 7 *Where a double line is extended through an intersection, a single line of equal width to one of the*
132 *lines of the double line should be used.*

133 8 *To the extent ~~possible~~ practical, pavement marking extensions through intersections should be*
134 *designed in a manner that minimizes potential confusion for drivers in adjacent or opposing lanes.*

135

136 **Section 3B.15 Transverse Markings**

137 [Requirement that these markings be white is addressed in other sections.

138 **Standard:**

139 ~~Transverse markings, which include shoulder markings, word and symbol markings, arrows,~~
140 ~~stop lines, yield lines, crosswalk lines, speed measurement markings, speed reduction markings,~~
141 ~~speed hump markings, parking space markings, and others, shall be white unless otherwise~~
142 ~~provided in this Manual.~~

143 *Guidance:*

144 *Because of the low approach angle at which pavement markings are viewed, transverse lines should*
145 *be proportioned to provide visibility at least equal to that of longitudinal lines.*

146 **Section 3B.21 Speed Measurement Markings**

147 [Lines 153-156: portion of Standard statement moved to Guidance. Discussion among MTC members
148 indicate that some agencies use marking symbols that are larger than 24 inches.]

149 Support:

150 A speed measurement marking is a transverse marking placed on the roadway to assist the
151 enforcement of speed regulations.

152 **Standard:**

153 **Speed measurement markings, if used, shall be white,**~~and shall not be greater than 24 inches in~~
154 ~~width.~~

155 *Guidance:*

156 *Speed measurement markings, if used, should not be greater than 24 inches in width.*

157 Option:

158 Speed measurement markings may extend 24 inches on either side of the center line or 24 inches on
159 either side of edge line markings at 1/4-mile intervals over a 1-mile length of roadway. When paved
160 shoulders of sufficient width are available, the speed measurement markings may be placed entirely on
161 these shoulders (see Drawing A of Figure 3B-10). Advisory signs may be used in conjunction with these
162 markings.

163 **Section 3B.22 Speed Reduction Markings**

164 [Lines 180-187: requirement that markings be progressively reduced changes to recommendation. Line
165 189: language revised to change statement from negative to positive.]

166 Support:

167 Speed reduction markings (see Figure 3B-28) are transverse markings that are placed on the roadway
168 within a lane (along both edges of the lane) in a pattern of progressively reduced spacing to give drivers
169 the impression that their speed is increasing. These markings might be placed in advance of an
170 unexpectedly severe horizontal or vertical curve or other roadway feature where drivers need to decelerate
171 prior to reaching the feature and where the desired reduction in speeds has not been achieved by the
172 installation of warning signs and/or other traffic control devices.

173 *Guidance:*

174 *If used, speed reduction markings should be reserved for unexpected curves and should not be used*
175 *on long tangent sections of roadway or in areas frequented mainly by local or familiar drivers, (e.g.,*
176 *school zones). If used, speed reduction markings should supplement the appropriate warning signs and*
177 *other traffic control devices and should not substitute for these devices.*

178 **Standard:**

179 **If used, speed reduction markings shall be a series of white transverse lines on both sides of the**
180 **lane that are perpendicular to the center line, edge line, or lane line.** ~~The longitudinal spacing~~

181 ~~between the markings shall be progressively reduced from the upstream to the downstream end of~~
182 ~~the marked portion of the lane.~~

183 *Guidance:*

184 *Speed reduction markings should not be greater than 12 inches in width, and should not extend more*
185 *than 18 inches into the lane.*

186 *The longitudinal spacing between the markings should be progressively reduced from the upstream to*
187 *the downstream end of the marked portion of the lane.*

188 **Standard:**

189 Speed reduction markings shall ~~not~~ be used only in lanes that ~~do not~~ have a longitudinal line
190 (center line, edge line, or lane line) on both sides of the lane.

191

192 Council Vote on 7/22/12: Unanimous approval on changes to Sections 3B.02, 3B.06, 3B.08, and
193 3B.15. Approval (32-1-1) for changes to Section 3B.21. Approval (31-2-1) for changes to
194 Section 3B.22.