

975 Markings Technical Committee Recommendations 976 following Sponsor Comments

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979 RECOMMENDED MUTCD CHANGES

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981 The following present the proposed changes to the MUTCD within the context of the current
982 MUTCD language. Proposed additions to the MUTCD are shown in **blue underline** and proposed
983 deletions from the MUTCD are shown in **red strikethrough**. Changes previously approved by
984 NCUTCD Council are shown in **green double underline** for additions and **green double**
985 **strikethrough** for deletions. Changes to previously approved NCUTCD text are shown **blue**
986 **underline** and **red strikethrough** within the **green text**. **Yellow highlighted text** are changes made
987 in response to or after sponsor comments and are the recommendations of the MTC.

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989 PART 3: MARKINGS

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991 Chapter 3A. General

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993 Section 3A.01 Functions and Limitations

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Support:

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01 Markings ~~on highways and on private roads open to public travel~~ have important functions
996 in providing guidance and information for the road user. Major marking types include pavement
997 and curb markings, delineators, colored pavements, channelizing devices, and islands. In some
998 cases, markings are used to supplement other traffic control devices such as signs, signals, and
999 other markings. In other instances, markings are used alone to effectively convey regulations,
1000 guidance, or warnings in ways not obtainable by the use of other devices.

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1002 Section 3A.02 Standardization of Application

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Guidance:

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02 Before any new highway, site roadway ~~private road~~ ~~open to public travel~~ (see definition in
1005 ~~Section 1A.13~~), ~~paved detour~~, or temporary route is opened to public travel, all necessary
1006 markings should be in place.

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1008 Section 3A.06 Functions, Widths, and Patterns of Longitudinal Pavement Markings

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Guidance:

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04 *Broken lines should consist of 10-foot line segments and 30-foot gaps, or dimensions in a
1011 similar ratio of line segments to gaps (i.e., 3:1) as appropriate for traffic speeds and need for
1012 delineation.*

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Option:

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04a SROPT: Broken lines may be 5-foot line segments and 15-foot gaps on site roadways open
1015 to public travel where the operating speed is less than 25 mph.

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1017 Chapter 3B. Pavement and Curb Markings

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1018 Section 3B.02 No-Passing Zone Pavement Markings and Warrants

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Standard:

1020 04 On roadways with center line markings, no-passing zone markings shall be used at
 1021 horizontal or vertical curves where the passing sight distance is less than the minimum
 1022 shown in Table 3B-1 for the 85th-percentile speed or the posted or statutory speed limit.
 1023 The passing sight distance on a vertical curve is the distance at which an object 3.5 feet
 1024 above the pavement surface can be seen from a point 3.5 feet above the pavement (see
 1025 Figure 3B-4). Similarly, the passing sight distance on a horizontal curve is the distance
 1026 measured along the center line (or right-hand lane line of a three-lane roadway) between
 1027 two points 3.5 feet above the pavement on a line tangent to the embankment or other
 1028 obstruction that cuts off the view on the inside of the curve (see Figure 3B-4).

1029 Option

1030 ~~04a SROPT: Based upon engineering judgment, no-passing zone pavement markings may be~~
 1031 ~~omitted on site roadways open to public travel where the operating speed is less than 25 mph.~~

1032 *Guidance:*

1033 16 The minimum lane transition taper length should be 100 feet in urban areas and 200 feet in
 1034 rural areas.

1035 Option:

1036 ~~17 SROPT: Based on engineering judgement, the minimum taper length should be computed~~
 1037 ~~by the formula $L=WS^2/60$ may be less than 100 feet on site roadways open to public travel where~~
 1038 ~~the operating speed is less than 25 mph.~~

1039 Section 3B.09 Lane-Reduction Transition Markings

1040 Option:

1041 03 On low-speed urban roadways and on site roadways open to public travel with operating
 1042 speeds less than 25 mph where curbs clearly define the roadway edge in the lane-reduction
 1043 transition, or where a through lane becomes a parking lane, the edge line and/or delineators
 1044 shown in Figure 3B-14 may be omitted as determined by engineering judgment.

1045 ~~05a SROPT: The minimum taper length should be computed by the formula $L=WS^2/60$ on site~~
 1046 ~~roadways open to public travel with operating speeds of less than 25 mph.~~

1047 Option:

1048 ~~17 SROPT: Based on engineering judgement, the minimum taper length may be less than 100~~
 1049 ~~feet on site roadways open to public travel where the operating speed is less than 25 mph.~~

1050 Section 3B.10 Approach Markings for Obstructions

1051 *Guidance:*

1052 05 The minimum taper length should be 100 feet in urban areas and 200 feet in rural areas.

1053 Option:

1054 ~~05a SROPT: Based on engineering judgement, the minimum taper length should be computed~~
 1055 ~~by the formula $L=WS^2/60$ may be less than 100 feet on site roadways open to public travel where~~
 1056 ~~the operating speed is less than 25 mph.~~

1057 Section 3B.16 Stop and Yield Lines

1058 *Guidance:*

1059 01 Stop lines should be used to indicate the point behind which vehicles are required to stop in
 1060 compliance with a traffic control signal.

1061 Option:

1062 02 Stop lines may be used to indicate the point behind which vehicles are required to stop in
 1063 compliance with a STOP (R1-1) sign, a Stop Here For Pedestrians (R1-5b or R1-5c) sign, or
 1064 some other traffic control device that requires vehicles to stop, except YIELD signs that are not
 1065 associated with passive grade crossings.

1066 03 Yield lines may be used to indicate the point behind which vehicles are required to yield in
1067 compliance with a YIELD (R1-2) sign or a Yield Here To Pedestrians (R1-5 or R1-5a) sign.

1068 Option:

1069 ~~19—SROPT: On site roadways open to public travel with operating speeds less than 25 mph, a
1070 stop line or yield line may be used without an accompanying STOP or YIELD sign (see Part 2B).~~

1071 Standard:

1072 ~~20—SROPT: Where a Stop line or Yield line is used without an accompanying sign, a
1073 STOP or YIELD pavement marking message shall be used in advance of the stop or yield
1074 line.~~

1075 Section 3B.18 Crosswalk Markings

1076 *Guidance:*

1077 11 Because non-intersection pedestrian crossings are generally unexpected by the road user,
1078 warning signs (see Section 2C.50) should be installed for all marked crosswalks at non-
1079 intersection locations and adequate visibility should be provided by parking prohibitions.

1080 Option:

1081 ~~19—SROPT: On site roadways open to public travel where the operating speed is less than 25
1082 mph, crosswalk warning signs may be omitted (see Section 2C.50) for marked crosswalks at
1083 non-intersection locations where pedestrian crossings are generally expected by the road user and
1084 where adequate visibility is provided.~~

1085

1086 Section 3B.20 Pavement Word, Symbol, and Arrow Markings

1087 *Option:*

1088 12 On narrow, low-speed shared-use paths, the pavement words, symbols, and arrows may be
1089 smaller than suggested, but to the relative scale.

1090 ~~12a SROPT: On site roadways open to public travel where the operating speed is less than 25
1091 mph, the pavement words, symbols, and arrows may be half-size or larger reduced in size to no
1092 less than ¼ size, but in relative proportion to the associated full-size word, symbol, or arrow.~~

1093 13 Pavement markings simulating Interstate, U.S., State, and other official highway route shield
1094 signs (see Figure 2D-3) with appropriate route numbers, but elongated for proper proportioning
1095 when viewed as a marking, may be used to guide road users to their destinations (see Figure 3B-
1096 25).

1097 Standard:

1098 ~~1514 The word STOP shall not be placed on the pavement in advance of a stop line, unless
1099 every vehicle is required to stop at all times.~~

1100 ~~14 Except at the ends of aisles in parking lots, the word STOP shall not be used on the
1101 pavement unless accompanied by a stop line (see Section 3B.16) and STOP sign (see Section
1102 2B.05). At the end aisle in parking lots, the word STOP shall not be used on the pavement
1103 unless accompanied by a stop line. The word STOP shall not be used on the pavement
1104 unless accompanied by a stop line, except at the end of aisles in parking areas and for site
1105 roadways open to public travel as noted in Section 3B.16.~~

1106 Option:

1107 ~~15a At the ends of driving aisles connecting to site roadways open to public travel, the word
1108 STOP on the pavement may be used in the place of a STOP sign when accompanied with a stop
1109 line.~~

1110 Section 3B.24 Chevron and Diagonal Crosshatch Markings

1111 *Guidance:*

1112 05 The chevrons and diagonal lines used for crosshatch markings should be at least 12 inches
 1113 wide for roadways having a posted or statutory speed limit of 45 mph or greater, and at least 8
 1114 inches wide for roadways having posted or statutory speed limit of less than 45 mph. The
 1115 longitudinal spacing of the chevrons or diagonal lines should be determined by engineering
 1116 judgment considering factors such as speeds and desired visual impacts. The chevrons and
 1117 diagonal lines should form an angle of approximately 30 to 45 degrees with the longitudinal
 1118 lines that they intersect.

1119 06 SROPT: Chevrons and diagonal lines used for crosshatch markings should be at least 4
 1120 inches wide on site roadways open to public travel where the operating speed is less than 25
 1121 mph.
 1122

85th-Percentile or Posted or Statutory Speed Limit	Minimum Passing Sight Distance
20 mph	400 feet
25 mph	450 feet
30 mph	500 feet
35 mph	550 feet
40 mph	600 feet
45 mph	700 feet
50 mph	800 feet
55 mph	900 feet
60 mph	1,000 feet
65 mph	1,100 feet
70 mph	1,200 feet

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