Markings Technical Committee Recommendations following Sponsor Comments

RECOMMENDED MUTCD CHANGES

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

PART 3: MARKINGS

Chapter 3A. General

Section 3A.01 Functions and Limitations

Support:

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

Section 3A.02 Standardization of Application

Guidance:

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

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

Guidance:

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

Option:

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

Chapter 3B. Pavement and Curb Markings

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

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

Option

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

Guidance:

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

Option:

Based on engineering judgment, the minimum taper length should be computed by the formula \( L = \frac{WS^2}{60} \) on site roadways open to public travel where the operating speed is less than 25 mph.

Section 3B.09 Lane-Reduction Transition Markings

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

Option:

Based on engineering judgment, the minimum taper length may be less than 100 feet on site roadways open to public travel with operating speeds of less than 25 mph.

Section 3B.10 Approach Markings for Obstructions

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

Option:

Based on engineering judgment, the minimum taper length may be less than 100 feet on site roadways open to public travel where the operating speed is less than 25 mph.

Section 3B.16 Stop and Yield Lines

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

Option:

Stop lines may be used to indicate the point behind which vehicles are required to stop in compliance with a STOP (R1-1) sign, a Stop Here For Pedestrians (R1-5b or R1-5c) sign, or some other traffic control device that requires vehicles to stop, except YIELD signs that are not associated with passive grade crossings.
Yield lines may be used to indicate the point behind which vehicles are required to yield in compliance with a YIELD (R1-2) sign or a Yield Here To Pedestrians (R1-5 or R1-5a) sign.

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

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

### Section 3B.18 Crosswalk Markings

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

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

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

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

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

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

**Standard:**
14. The word STOP shall not be placed on the pavement in advance of a stop line, unless every vehicle is required to stop at all times.

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

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

### Section 3B.24 Chevron and Diagonal Crosshatch Markings

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

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

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<th>Minimum Passing Sight Distance</th>
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