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National Committee on Uniform Traffic Control Devices

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National Committee on Uniform Traffic Control Devices RWSTC RECOMMENDATION FOLLOWING SPONSOR COMMENTS

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TECHNICAL COMMITTEE: NCUTCD Regulatory/Warning Signs Technical Committee

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DATE OF ACTION: (TASK FORCE) 6-5-11, 1-7-12 revised following sponsor comments

- 17 TASK FORCE: Tom Heydel (chair), Dave Woosley, Mark Bott, Scott Kuznicki
- 18 RWSTC APPROVAL DATE: 6-26-11
- 19 TRANSMITTAL TO SPONSORS DATE: Fall 2011
- 20 RWSTC APPROVAL FOLLOWING SPONSOR COMMENTS: 1-18-12
- 21 COUNCIL APPROVAL DATE: 1-19-12

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TOPIC: Variable Speed limit sign spacing and locations

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AFFECTED PORTIONS OF MUTCD: Section 2B.13 (2009 MUTCD).

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DISCUSSION:

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The MUTCD in Section 2B.13 of the 2009 MUTCD provides for the option of variable speed limits in paragraph (18) of Section 2B.13.

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The MUTCD is silent on where specifically these are to be located and repetition of variable speed limit signs to inform road users of the speed limit or as reminders. Many states have their own supplemental guidance but may or may not be based on actual studies.

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- 37 Two considerations seem to be predominant: 1) speed limits need to be repeated more
- 38 frequently in urban settings than in rural, and 2) repetition of speed limit signs is
- important when the speed limit is less than the norm for the class of road that is being
- signed. Beyond these general principles, there is little consistency in the specific
- 41 guidance that is provided.

The locations should be consistent with static (R2-1) signing placement already contained in the MUTCD.

RECOMMENDATION:

Add a sentence in Section 2B.13 to state that if used, the variable speed limit signs shall be placed where that speed is in effect, after major intersections and where necessary to remind road users of the speed limit that is applicable.

Note: Proposed changes to the 2009 MUTCD are shown in <u>underline red</u> and removed text are shown in <u>strikethrough red</u>.

Text approved already approved by Council on January 20, 2011 shown in <u>blue and underlined</u> and removed text shown in <u>strikethrough blue</u>.

RECOMMENDED WORDING:

Section 2B.13 Speed Limit Sign (R2-1)

Standard:

(01)Speed zones (other than statutory speed limits) shall only be established on the basis of an engineering study that has been performed in accordance with traffic engineering practices. The engineering study shall include an analysis of the current speed distribution of free-flowing vehicles.

- (02)The Speed Limit (R2-1) sign (see Figure 2B-3) shall display the limit established by law, ordinance, regulation, or as adopted by the authorized agency based on the engineering study. The speed limits displayed shall be in multiples of 5 mph.
- (03) Speed Limit (R2-1) signs, indicating speed limits for which posting is required by law, shall be located at the points of change from one speed limit to another.
- (04) At the downstream end of the section to which a speed limit applies, a Speed Limit sign showing the next speed limit shall be installed. Additional Speed Limit signs should be installed beyond major intersections and at other locations where it is necessary to remind road users of the speed limit that is applicable

Guidance:

Additional Speed Limit signs should be installed beyond major intersections and at other locations where it is necessary to remind road users of the speed limit that is applicable.

(Approved by NCUTCD Council June 23, 2011) NOTE: move this guidance statement after paragraph (05)

Standard

(05) Speed Limit signs indicating the statutory speed limits shall be installed at entrances to the State and, where appropriate, at jurisdictional boundaries in urban areas.

Support:

- (06) In general, the maximum speed limits applicable to rural and urban roads are established:
 - A. Statutorily a maximum speed limit applicable to a particular class of road, such as freeways or city streets, that is established by State law; or
 - B. As altered speed zones based on engineering studies.
- (07) State statutory limits might restrict the maximum speed limit that can be established on a particular road, notwithstanding what an engineering study might indicate.

<u>The Traffic Control Devices Handbook contains suggested criteria on the spacing of speed</u> <u>limit signs (Approved by NCUTCD Council January 2011)</u>

9697 Option:

(08) If a jurisdiction has a policy of installing Speed Limit signs in accordance with statutory requirements only on the streets that enter a city, neighborhood, or residential area to indicate the speed limit that is applicable to the entire city, neighborhood, or residential area unless otherwise posted, a CITYWIDE (R2-5aP), NEIGHBORHOOD (R2-5bP), or RESIDENTIAL (R2-5cP) plaque may be mounted above the Speed Limit sign and an UNLESS OTHERWISE POSTED (R2-5P) plaque may be mounted below the Speed Limit sign (see Figure 2B-3).

Guidance:

- (09) A Reduced Speed Limit Ahead (W3-5 or W3-5a) sign (see Section 2C.38) should be used to inform road users of a reduced speed zone where the speed limit is being reduced by more than 10 mph, or where engineering judgment indicates the need for advance notice to comply with the posted speed limit ahead.
- (10) States and local agencies should conduct engineering studies to reevaluate non-statutory speed limits on segments of their roadways that have undergone significant changes since the last review, such as the addition or elimination of parking or driveways, changes in the number of travel lanes, changes in the configuration of bicycle lanes, changes in traffic control signal coordination, or significant changes in traffic volumes.
- (11) No more than three speed limits should be displayed on any one Speed Limit sign or assembly.
- (12) When a speed limit within a speed zone is posted, it should be within 5 mph of the 85th-percentile speed of free-flowing traffic.

119 Guidance:

(13) Speed studies for signalized intersection approaches should be taken outside the influence area of the traffic control signal, which is generally considered to be approximately 1/2 mile, to avoid obtaining skewed results for the 85th-percentile speed.

124 Support:

(14) Advance warning signs and other traffic control devices to attract the motorist's attention to a signalized intersection are usually more effective than a reduced speed limit zone.

129 Guidance:

(15) An advisory speed plaque (see Section 2C.08) mounted below a warning sign should be used to warn road users of an advisory speed for a roadway condition. A Speed Limit sign should not be used for this situation.

133 Option:

- 134 (16) Other factors that may be considered when establishing or reevaluating speed limits are the following:
 - A. Road characteristics, shoulder condition, grade, alignment, and sight distance;
- B. The pace

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- C. Roadside development and environment;
 - D. Parking practices and pedestrian activity; and
 - E. Reported crash experience for at least a 12-month period.
- (17) Two types of Speed Limit signs may be used: one to designate passenger car speeds, including any nighttime information or minimum speed limit that might apply; and the other to show any special speed limits for trucks and other vehicles.
- (18) A changeable message sign that changes the speed limit for traffic and ambient conditions may be installed provided that the appropriate speed limit is displayed at the proper times and locations in accordance with paragraph (04) and (05). NOTE: paragraph (05) is referring to the new guidance statement placed after paragraph (05) approved by Council on June 23, 2011 related to speed limit sign locations shown above.
- (19) A changeable message sign that displays to approaching drivers the speed at which they are traveling may be installed in conjunction with a Speed Limit sign.
- Guidance:
 - (20) If a changeable message sign displaying approach speeds is installed, the legend YOUR SPEED XX MPH or such similar legend should be displayed. The color of the changeable message legend should be a yellow legend on a black background or the reverse of these colors. Support:
- (21) Advisory Speed signs and plaques are discussed in Sections 2C.08 and 2C.14. Temporary Traffic Control Zone Speed signs are discussed in Part 6. The WORK ZONE (G20-5aP) plaque intended for installation above a Speed Limit sign is discussed in Section 6F.12. School Speed Limit signs are discussed in Section 7B.15.

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RWSTC VOTE 1-18-12:

For: Unanimous Opposed:
Abstentions:

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COUNCIL VOTE: 1-19-12 For: Unanimous 37-0-0

167 Opposed: 168 Abstentions:

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171 c: NCUTCD/January 2012 meeting/variable speed limit sign spacing Section 2B.13 6-5-172 11, revised 6-23-11, 1-7-12, 1-18-12 revised following sponsor comments, approved by 173 council 1-19-12

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