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## **National Committee on Uniform Traffic Control Devices**

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6 7	RWSTC Agenda item III.3 June 2013
8	National Committee on Uniform Traffic Control Devices
9	RWSTC
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11	TECHNICAL COMMITTEE: NCUTCD Regulatory/Warning Signs Technical Committee
12	DATE OF ACTION, 11 11 12 period 11 25 12 period 11 26 12 period 12 2 12 period
13 14	DATE OF ACTION: 11-11-12, revised 11-25-12, revised 11-26-12, revised 12-2-12, revised 12-22-12, revised 12-24-12, updated 12-26-12, revised following sponsor comments 6-8-13,
15	revised 6-11-13 following sponsor comments, revised 6-13-13 following sponsor comments,
16	revised 6-16-13 following sponsor comments, revised 6-17-13 following sponsor comments,
17	revised following sponsor comments 6-26-13, approved by council 6-28-13
18	Task force: Tom Heydel (chair), Lee Roadifer, Gerry Willhelm, Richard Meredith, Ron
19	Lipps, Jim Sullivan
20	Details (figures): Richard Meredith RWSTC APPROVAL DATE: January 10, 2013
21 22	TRANSMITTAL TO SPONSORS DATE: Spring 2013
23	RWSTC APPROVAL FOLLOWING SPONSOR COMMENTS: June 26, 2013
24	COUNCIL APPROVAL DATE: June 28, 2013
25	
26	TOPIC: DO NOT ENTER/WRONG WAY Signing
27	<b>AFFECTED PORTIONS OF MUTCD</b> : Section 2B.37, 2B.38, 2B.41 and Figure-2B-12
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29	DISCUSSION/QUESTION:
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31	There are some clarifications and inconsistencies in the text and figures related to wrong way
32	movement signing in the MUTCD.
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33	Figure 2B-12 does not provide for situations where the median is less than 30 feet, and does not match
34	the text in terms of wrong way movement signing shown in the text. Also, the figure and text do not
35	adequately address the difference between urban low speed divided highways and high speed rural
36	<u>highways</u>

- 37 Figure 2B-12 is inconsistent regarding the WRONG WAY (R5-1a) sign. The text says the signs are
- optional and Figure 2B-12 does not say they are optional. The text in Section 2B.38 says wrong way
- 39 signs are optional but figure 2B-18 indicates only one of the WRONG WAY signs is optional.

#### **RECOMMENDATION:**

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- Section 2B.37 DO NOT ENTER signing Add text to require the DO NOT ENTER signing for median widths 30 feet and greater. Add text to provide for median widths less than 30 feet
- and for low speed urban city streets that are divided highways.

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- Section 2B.38 WRONG WAY signing revise figure 2B-12 to show that the WRONG WAY sign is optional for divided highways. Text indicates the sign is optional; therefore, the figure
- should be changed to match the text. Change text by eliminating the reference to exit ramps
- 49 <u>only, to make it all encompassing to match figure.</u>
- Remove reference in paragraph 01 related to ramps since that is covered in Section 2B.41.

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- 52 Section 2B.41 WRONG WAY signing at interchange ramps Move this section after 2B.38 in
- order to have the DO NOT ENTER and WRONG WAY signing sections together. Add
- 54 language requiring at least one wrong way sign on exit ramp for consistency with the figure. no
- 55 changes recommended.
- Text is consistent with figure 2B-18 in terms of the DO NOT ENTER and WRONG WAY signs.

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Move Sections 2B.40 and 2B.41which deal with ONE WAY signs and WRONG WAY signs at ramps after section 2B.38, so signs associated with wrong way movements are consecutive sections rather than having Selective exclusion signs intermixed in there.

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**RECOMMENDED WORDING:** 

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

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NOTE: REVISED FIGURE 2B.12 FOUND AT END OF DOCUMENT

- 69 Section 2B.37 DO NOT ENTER Sign (R5-1)
- 70 Standard:
- 71 01 The DO NOT ENTER (R5-1) sign (see Figure 2B-11) shall be used where traffic is
- 72 <del>prohibited</del> a two-way roadway becomes a one-way roadway as shown in Figure
- 73 2B-14, from entering a restricted roadway, and near the downstream end of an
- 74 interchange exit ramp as shown in Figure 2B-18 (see Section 2B.41).
- 75 (02) Except as noted in paragraph 4, a DO NOT ENTER (R5-1) sign shall be installed at
- 76 an intersection with a divided highway where the median width is 30 feet or greater.
- 77 <u>as shown in Figure 2B-12.</u>

- 78 Option:
- 79 (03) A DO NOT ENTER (R5-1) sign may be installed at an intersection with a divided highway
- where the median width is less than 30 feet.
- 81 (04) A DO NOT ENTER (R5-1) sign may be omitted at an intersection with a low speed urban
- 82 street that is a divided highway where the median width is 30 feet or greater.

#### 83 Figure 2B-11 Selective Exclusion Signs



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#### Guidance:

02 The DO NOT ENTER sign, if used, should be placed directly in view of a road user at the point where a road user could wrongly enter a divided highway, one-way roadway, or ramp (see Figures 2B-12, <u>2B-14 and 2B-18</u>). The sign should be mounted <u>as shown in figure 2B.18</u> on the right-hand side of the roadway, facing traffic that might enter the roadway or ramp in the wrong direction. <u>At an intersection with a divided highway where the median width is less than 30 feet; the sign; if used, should be placed on the <u>left-hand</u> outside edge <u>side</u> of the roadway facing traffic that might enter the roadway in the wrong direction.</u>

## <u>Figure 2B-12</u> Locations of Wrong-Way Signing for Divided Highways with Median Widths of 30 Feet or Wider



97 03 If the DO NOT ENTER sign would be visible to traffic to which it does not apply, the sign 98 should be turned away from, or shielded from, the view of that traffic. 99 Option: 100 04 The DO NOT ENTER sign may be installed where it is necessary to emphasize the one-way 101 traffic movement on a ramp or turning lane. 102 05 A second DO NOT ENTER sign on the left-hand side of the roadway may be used, particularly 103 where traffic approaches from an intersecting roadway (see Figure 2B-12). 104 105 06 Section 2B.41 XX contains information regarding an optional lower mounting height for DO 106 NOT ENTER signs that are located along an exit ramp facing a road user who is traveling in the 107 wrong direction. 108 NOTE: Move Section 2B.41 after 2B.38 so all the DO NOT ENTER, WRONG WAY movement 109 sections are consecutive. Paragraph 06 which states 2B.41 would be renumbered accordingly. 110 Note: Changes to Figure 2B-12 are shown with the new figure at the end of this 111 proposal. New figure at end of proposal that replaces the figure above. 112 Section 2B.38 WRONG WAY Sign (R5-1a) 113 Option: 114 01 The WRONG WAY (R5-1a) sign (see Figure 2B-11) may be used as a supplement to the DO 115 NOT ENTER sign where an exit ramp intersects a crossroad or a crossroad intersects a one-way 116 roadway in a manner that does not physically discourage or prevent wrong-way entry (see 117 Figure 2B-12). 118 Guidance: 119 02 If used, the WRONG WAY sign should be placed at a location along the one-way roadway 120 farther from the crossroad than the DO NOT ENTER sign 121 Support: 122 03 Section 2B.41(XX) contains information regarding an optional lower mounting height for 123 WRONG WAY signs that are located along an exit ramp facing a road user who is traveling in the 124 wrong direction. 125 MOVE Section 2B.41 so it is after 2B.38 in order to have all the Wrong Way/Do Not 126 Enter signing sections in consecutive order for easier reference by the user of these 127 sections. Renumber sections 2B.39 and 2B.40 accordingly. Move 2B.39 (Selective 128 Exclusion signs) so it is after Section 2B.40 (ONE WAY Signs). This way the ONE WAY 129 signs section immediately follows the Do Not Enter and Wrong Way sign sections. 130 Section 2B.41(XX) (move to after Section 2B.38 and renumber accordingly) 131 Wrong-Way Traffic Control at Interchange Ramps 132 Standard:

01 At interchange exit ramp terminals; where the ramp intersects a crossroad in such a

manner that wrong-way entry could inadvertently be made, the following signs shall

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- 135 be used. at least one WRONG WAY sign shall be placed on the exit ramp facing a roo
- 136 traveling in the wrong direction (See Figure 2B-18).

137 Figure 2B-18 Example of Application of Regulatory Signing and Pavement Markings at 138

an Exit Ramp Termination to Deter Wrong-Way Entry





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- A. At least one ONE WAY sign for each direction of travel on the crossroad shall be placed where the exit ramp intersects the crossroad.
- B. At least one DO NOT ENTER sign shall be conspicuously placed near the downstream end of the exit ramp in positions appropriate for full view of a road user starting to enter wrongly from the crossroad.
- C. At least one WRONG WAY sign shall be placed on the exit ramp facing a road user traveling in the wrong direction.

#### Guidance:

02 In addition, the following pavement markings should be used (see Figure 2B-18):

- A. On two-lane paved crossroads at interchanges, double solid yellow lines should be used as a center line for an adequate distance on both sides approaching the ramp intersections.
- B. Where crossroad channelization or ramp geometrics do not make wrong-way movements difficult, a lane-use arrow should be placed in each lane of an exit ramp near the crossroad terminal where it will be clearly visible to a potential wrong-way road user.

- 156 03 The following traffic control devices may be used to supplement the signs and pavement 157 markings described in Paragraphs 1 and 2:
- A. Additional ONE WAY signs may be placed, especially on two-lane rural crossroads, 158 159 appropriately in advance of the ramp intersection to supplement the required ONE WAY 160 sign(s).

- B. Additional WRONG WAY signs may be used.
  - C. Slender, elongated wrong-way arrow pavement markings (see <u>Figure 3B-24</u>) intended primarily to warn wrong-way road users that they are traveling in the wrong direction may be placed upstream from the ramp terminus (see <u>Figure 2B-18</u>) to indicate the correct direction of traffic flow. Wrong-way arrow pavement markings may also be placed on the exit ramp at appropriate locations near the crossroad junction to indicate wrong-way movement. The wrong-way arrow markings may consist of pavement markings or bidirectional red-and-white raised pavement markers or other units that show red to wrong-way road users and white to other road users (see Figure <u>3B-24</u>).
  - D. Lane-use arrow pavement markings may be placed on the exit ramp and crossroad near their intersection to indicate the permissive direction of flow.
  - E. Freeway entrance signs (see Section 2D.46) may be used.

#### 173 Guidance:

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- 174 04 On interchange entrance ramps where the ramp merges with the through roadway and the
- design of the interchange does not clearly make evident the direction of traffic on the separate
- 176 roadways or ramps, a ONE WAY sign visible to traffic on the entrance ramp and through roadway
- should be placed on each side of the through roadway near the entrance ramp merging point as
- illustrated in Figure 2B-19.

# <u>Figure 2B-19</u> Example of Application of Regulatory Signing and Pavement Markings at an Entrance Ramp Terminal Where the Design Does Not Clearly Indicate the Direction of Flow



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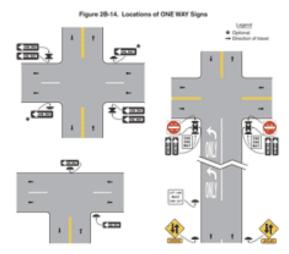
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#### Option:

- 184 05 At locations where engineering judgment determines that a special need exists, other
- standard warning or prohibitive methods and devices may be used as a deterrent to the wrong-
- 186 way movement.
- 187 06 Where there are no parked cars, pedestrian activity or other obstructions such as snow or
- vegetation, and if an engineering study indicates that a lower mounting height would address
- 189 wrong-way movements on freeway or expressway exit ramps, a DO NOT ENTER sign(s) and/or a
- 190 WRONG WAY sign(s) that is located along the exit ramp facing a road user who is traveling in the
- wrong direction may be installed at a minimum mounting height of 3 feet, measured vertically
- 192 from the bottom of the sign to the elevation of the near edge of the pavement.

#### 193 Support:

- 194 07 Sections 2B.41 (XX), 2B.37 and 2B.38 contains further information on signing to avoid
- 195 wrong-way movements at at-grade intersections on expressways.
- 196 NOTE: Section 2B.41, Paragraph 07 would be renumbered accordingly when placed after 2B.38
- 197 Figure 2B-14 shown below for information only



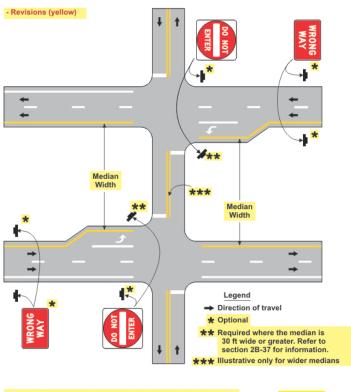
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### NOTE: REVISED FIGURE 2B-12 BELOW

Figure 2B-12(rev). Locations of Do Not Enter and Wrong-Way Signing for Divided Highways



NOTE: Pavement markings are shown for clarity only. Refer to Part 3 for guidance on markings.

rev 11-13-2011 06-21-2012 12-24-2012 01-10-2013

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206	The following changes are made to the figure 2B-12:
207 208 209 210 211 212 213 214 215 216	<ul> <li>DO NOT ENTER signs are optional where the median width is less than 30 feet.</li> <li>WRONG WAY signs are optional.</li> <li>Section 2B.40 and figures associated with Section 2B.40 describe ONE WAY or KEEP RIGHT signing required for reinforcing wrong way movement.</li> <li>Add double yellow center line in median and stop bars for clarity for wider medians. Change WRONG WAY sign to be optional to match text in section 2B.38.</li> <li>Delete reference to 30 feet or wider on the figure. Figure applies to all median widths with * describing options and ** describing where signs are required. Section 2B.37 providing standards, guidance and options.</li> </ul>
217	RWSTC Vote on 6-26-13 following sponsor comments:
218	For: Unanimous
219	Against:
220	Abstentions:
221	Council Vote: 6-28-13
222	For: Unanimous
223	Against:
224	Abstentions:
225 226 227 228 229 230 231	C: NCUTCD/Jan 2013 meeting/ wrong way signing 11-11-12, revised 11-25-12, revised 11-26-12, revised 12-2-12, revised 12-22-12, revised 12-24-12, updated 12-26-12, revised 1-10-13, revised following sponsor comments 6-8-13. Revised 6-11-13 following sponsor comments, revised 6-13-13 following sponsor comments, revised 6-17-13 following sponsor comments, revised following sponsor comments, revised following sponsor comments 6-26-13, approved by council 6-28-13