



National Committee on Uniform Traffic Control Devices

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NCUTCD Proposal for Changes to the Manual on Uniform Traffic Control Devices

TECHNICAL COMMITTEE:
ITEM NUMBER:
TOPIC:

Temporary Traffic Controls

17B-TTC-01 v3

Clarification on the use of a Double Headed Arrow to Indicate an Interior Lane Closure, with proposed modifications to Section 6F-23, Table 6F-1, Figure 6F-4, Figure 6H-38, notes for TA-38, and a new Section 6F-XX.

ORIGIN OF REQUEST:

TTCTC Task Force: John Leonard (TTCTC Chair), David Church (Task Force Chair), Tim Cox, Tom Hicks, Dave Royer, Tim Stroth, Jim Bryden, Todd Lohman, Gene Edmonds, Fred Hanscom, Dave McKee, Gene Putman, Charles Adams, Jim Harkness, Matt Briggs

AFFECTED SECTIONS OF MUTCD:

Chapter 6F. TEMPORARY TRAFFIC CONTROL ZONE DEVICES

- Section 6F-23
- Table 6F-1 Temporary Traffic Control Zone Signs and Plaque Sizes (Sheet 2 of 3)
- Figure 6F-4 Warning Signs and Plaques in Temporary Traffic Control Zones (Sheet 2 of 3):

Chapter 6H. TYPICAL APPLICATIONS

- Notes for Figure 6H-38—Typical Application 38, Interior Lane Closure on a Freeway
- Figure 6H-38, Interior Lane Closure on a Freeway (TA-38)

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DEVELOPMENT HISTORY:

- Approved by TTC Technical Committee for submittal to sponsors: 06/29/2017
- Approved by Technical Committee following sponsor comments: 01/04/2018
RESUBMITTED TO SPONSORS
- Approved by Technical Committee following sponsor comments: 06/21/2018
RESUBMITTED TO SPONSORS
- Approved by TTC Technical Committee following sponsor comments: 01/09/2019
- Approved by NCUTCD Council: 01/11/2019

19 *This is a proposal for recommended changes to the MUTCD that has been approved by*
20 *the NCUTCD Council. This proposal does not represent a revision of the MUTCD and*
21 *does not constitute official MUTCD standards, guidance, or options. It will be submitted to*
22 *FHWA for consideration for inclusion in a future MUTCD revision. The MUTCD can be*
23 *revised only through the federal rulemaking process.*
24

25 **SUMMARY:**

26 The Temporary Traffic Controls Technical Committee recommends a clarification to the use of
27 the arrow board located at the point of diversion as shown in Figure 6H-38 of TA-38, Interior
28 Lane Closure on a Freeway. This recommendation requires modifications to Figure 6H-38,
29 Interior Lane Closure on a Freeway.
30

31 **DISCUSSION**

32 Prior versions of this recommendation were distributed to sponsoring organizations for review
33 and comment in both the Fall 2017 and Spring 2018. Sponsor comments from the second review
34 were evaluated by the TTC. Subsequent to these comments, modifications were made to the
35 proposal for changes to the MUTCD, and these revisions are being distributed to Sponsors for a
36 third review. Changes include the addition of the Interior Lane Shift Ahead (W9-4) symbol sign
37 to TA-38, to Table 6F-1, and to Figure 6F-4. This sign was removed from the existing MUTCD
38 beginning with the 2009 Edition of the Manual. The TTC recommends the addition of a solid
39 white stripe and a location change to the shifting distance in TA-38.

40 As now presented in Section 6F.61, an arrow board can only be used to indicate a lane closure
41 (Paragraph 26), and cannot be used to indicate a lane shift. However, TA-38 recommends the
42 use of an arrow board in the double headed mode to indicate the split for an interior lane closure.
43 This interior lane closure is not technically a lane closure, but is a shift of the inside lanes to
44 provide an interior work space. The TTC concurs with Section 6F.61 that an arrow board can
45 only be used to indicate a lane closure.

46 The TTC recommends modifications to the Notes for Figure 6H-38 - Typical Application 38
47 Interior Lane Closure on a Freeway - as well as to Figure 6H-38 in Section 6H. The TTC
48 recommends removing language from the Notes for Figure 6H-38 – Typical Application 38 –
49 regarding the use of an arrow board in the double headed mode to indicate a lane shift as shown
50 in the attached. The TTC recommends that the current CENTER LANE CLOSED AHEAD
51 (W9-3) sign be deleted from Figure 6H-38 and replaced with a modified Interior Lane Shift
52 Ahead (W9-4) symbol sign (see discussion below on the W9-4 sign) to indicate the expected
53 motorist action with the travel lanes defined, and an optional W13-1 Advisory Speed plaque
54 located below the new W9-3a series sign. The TTC also recommends the addition of a R4-9
55 Stay in Lane regulatory sign distance A after the W9-3a sign and prior to the lane shift. In
56 addition, the TTC recommends the deletion of the arrow board in the double headed mode from
57 the figure. The TTC recommends a solid double white lane line be included from the "Stay in
58 Lane" signs to the beginning of the shifting taper. The TTC recommends modifying the TA-38
59 sketch to show the 1/2 L distance closer to the inside lane shifting taper. The TTC recommends
60 adding details of the W9-3a symbol sign to the appropriate areas of Section 6F. These
61 modifications are shown in the proposed Figure 6H-38.
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65 **Center Lane Closed Ahead (W9-3a) symbol sign discussion**

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67 The Center Lane Closed Ahead (W9-3a) symbol sign was used through the 2003 MUTCD. It
68 was removed in the 2009 Edition of the MUTCD.

69
70 According to the Federal Register / Vol. 74, No. 240 / Wednesday, December 16, 2009 / Rules
71 and Regulations: (<https://www.gpo.gov/fdsys/pkg/FR-2009-12-16/pdf/E9-28322.pdf>)

72
73 *“466. In Section 6F.23 CENTER LANE CLOSED AHEAD Sign, a State DOT and a*
74 *transportation research institute recommended removing the existing Center Lane Closed*
75 *Ahead (W9-3a) symbol sign because the symbol sign was confusing in its meaning.*
76 *Although this was not proposed in the NPA, the FHWA agrees and in this final rule removes*
77 *the OPTION for using the sign and revises the title of the section. This symbol has not*
78 *undergone human factors testing to confirm that its meaning can be comprehended by road*
79 *users. The FHWA also removes the symbol sign from Figures 6F-4 and 6H- 38 in this final*
80 *rule”.*

81
82 As such, this symbol sign was not included in the 2009 Edition of the MUTCD due to a request
83 from a State DOT and a transportation research institute that had concerns the public
84 understanding the meaning of this sign. This was not a recommendation from the either the TTC
85 Committee or Sponsors prior to the decision being made by the FHWA to not include this sign in
86 the 2009 Edition of the MUTCD.

87
88 The TTC Committee believes that the W9-3a symbol sign (2003 Edition) is more appropriate for
89 use in TTC zones as shown in TA-38 instead of the CENTER LANE CLOSED AHEAD (W9-3)
90 word sign based on the placement of this sign after an outer lane has already been closed;
91 therefore, not having a “center” lane. The TTC Committee recommends reincorporating the W9-
92 3a symbol sign in the next edition of the MUTCD under the new name and sign designation of
93 Interior Lane Shift Ahead (W9-4) symbol sign.

94
95 As a result, information on this new sign designation should be added to Table 6F-1 Temporary
96 Traffic Control Zone Signs and Plaque Sizes (Sheet 2 of 3), and to Figure 6F-4 Warning Signs
97 and Plaques in Temporary Traffic Control Zones (Sheet 2 of 3).

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99 **RECOMMENDED MUTCD CHANGES**

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101 The following present the proposed changes to the current MUTCD within the context of the
102 current MUTCD language. Proposed additions to the MUTCD are shown in blue underline and
103 proposed deletions from the MUTCD are shown in ~~red strikethrough~~. Changes previously
104 approved by NCUTCD Council (but not yet adopted by FHWA) are shown in green double
105 underline for additions and ~~green double strikethrough~~ for deletions. In some cases, background
106 comments may be provided with the MUTCD text. These comments are indicated by
107 [highlighted light blue in brackets].

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111 **Part 6. TEMPORARY TRAFFIC CONTROL**

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113 **Chapter 6F. TEMPORARY TRAFFIC CONTROL ZONE DEVICES**

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115 **Section 6F.23 CENTER LANE CLOSED AHEAD Sign (W9-3)**

116 Guidance:

117 *01 The CENTER LANE CLOSED AHEAD (W9-3) sign (see Figure 6F- 4) should be used in*
118 *advance of that point where work occupies the center lane(s) and approaching motor vehicle*
119 *traffic is directed to the right or left of the work zone in the center lane by using a merging taper*
120 *to facilitate the center lane closure.*

121
122 **Section 6F.XX Interior Lane Shift Ahead (W9-4) Symbol Sign**

123 Guidance:

124 *01 The Interior Lane Shift Ahead (W9-4) symbol sign (see Figure 6F- 4) should be used in*
125 *advance of that point where work occupies the interior lane(s) and approaching motor vehicle*
126 *traffic is directed to the right or left of the work zone in the interior lane by using a shifting taper*
127 *to route traffic around the closed interior lane.*

128
129 **Chapter 6H. TYPICAL APPLICATIONS**

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131 **Notes for Figure 6H-38—Typical Application 38**
132 **Interior Lane Closure on a Freeway**

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134 **Standard:**

- 135 **1. An arrow board shall be used when a freeway lane is closed. When more than one**
- 136 **freeway lane is closed, a separate arrow board shall be used for each closed lane.**
- 137 **2. If temporary traffic barriers are installed, they shall comply with the provisions and**
- 138 **requirements in Section 6F.85.**
- 139 **3. The barrier shall not be placed along the shifting taper. The lane shall first be**
- 140 **shifted using channelizing devices and pavement markings.**
- 141 **4. For long-term stationary work, existing conflicting pavement markings shall be**
- 142 **removed and temporary markings shall be installed before traffic patterns are**
- 143 **changed.**

144 *Guidance:*

- 145 *5. For a long-term closure, a barrier should be used to provide additional safety to the*
- 146 *operation in the closed interior lane. A buffer space should be used at the upstream end*
- 147 *of the closed interior lane.*
- 148 *6. The ~~first~~ arrow board displaying an arrow pointing to the right should be on the left-*
- 149 *hand shoulder at the beginning of the taper. ~~The arrow board displaying a double~~*
- 150 *~~arrow should be centered in the closed interior lane and placed at the downstream~~*
- 151 *~~end of the shifting taper.~~*
- 152 *~~7. If the two arrow boards create confusion, the 2L distance between the end of the~~*
- 153 *~~10. merging taper and beginning of the shift taper should be extended so that road~~*
- 154 *~~users can focus on one arrow board at a time.~~*
- 155 *~~8. The placement of signs should not obstruct or obscure arrow boards.~~*

156 7. For long-term use, the ~~dashed~~ broken lane lines should be made solid white in the two-
157 lane section.

158 Option:

159 8. As an alternative to initially closing the left-hand lane, as shown in the typical application,
160 the right-hand lane may be closed in advance of the interior lane closure with appropriate
161 channelization and signs.

162 8a The Interior Lane Shift Ahead (W9-4) symbol sign may be mirrored to indicate a right
163 lane shift.

164 9. A short, single row of channelizing devices in advance of the vehicular traffic split to
165 restrict vehicular traffic to their respective lanes may be added.

166 10. DO NOT PASS signs may be used.

167 11. If a paved shoulder having a minimum width of 10 feet and sufficient strength is
168 available, the left-hand and center lanes may be closed and motor vehicle traffic
169 carried around the work space on the right-hand lane and a right-hand shoulder.

170 *Guidance:*

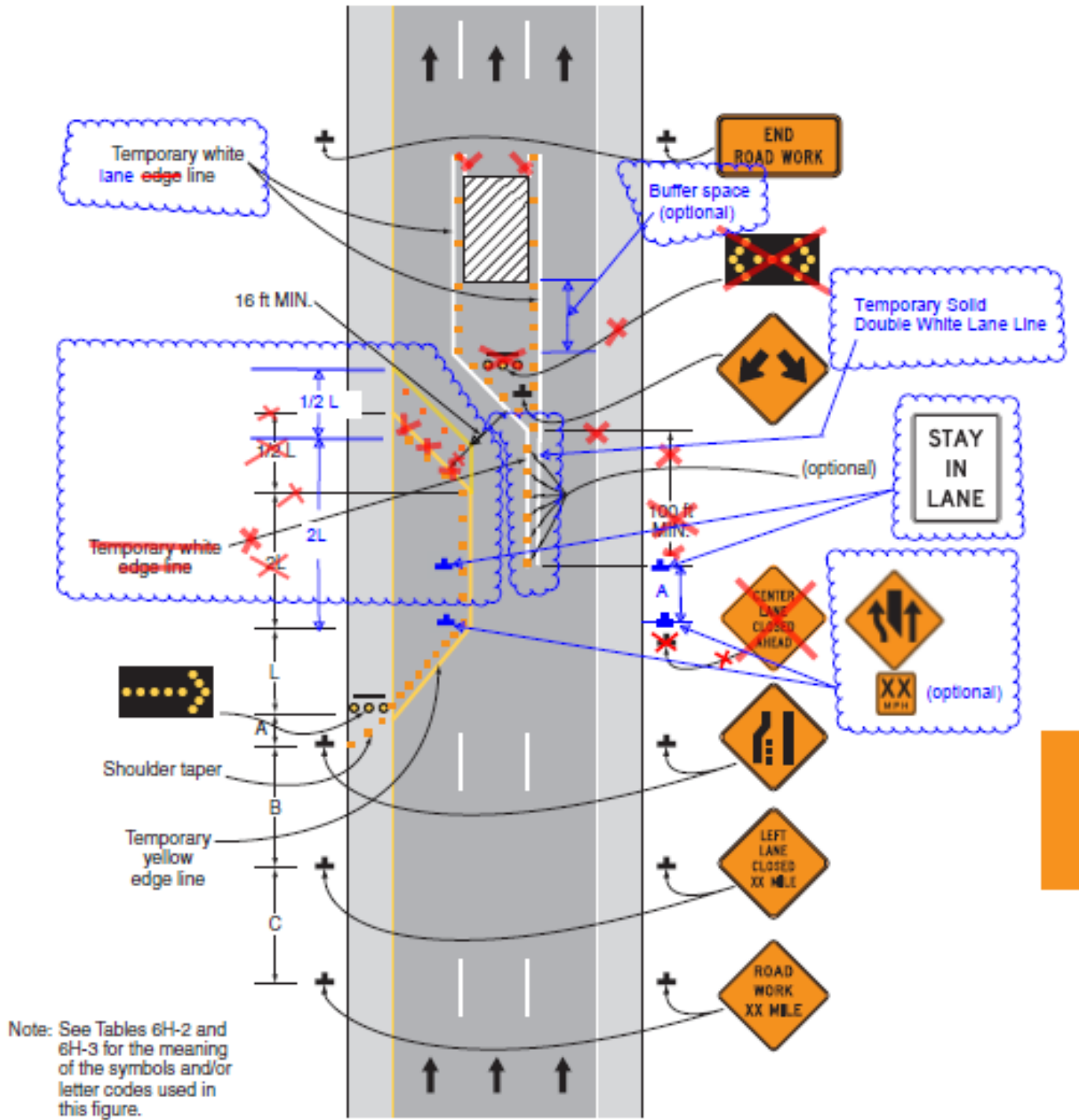
171 12. *When a shoulder lane is used that cannot adequately accommodate trucks, trucks should*
172 *be directed to use the normal travel lanes.*

173 Option:

174 13. A work vehicle with a truck mounted attenuator may be utilized within the closed interior
175 lane between the buffer space and the work area.

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Figure 6H-38. Interior Lane Closure on a Freeway (TA-38)



Typical Application 38

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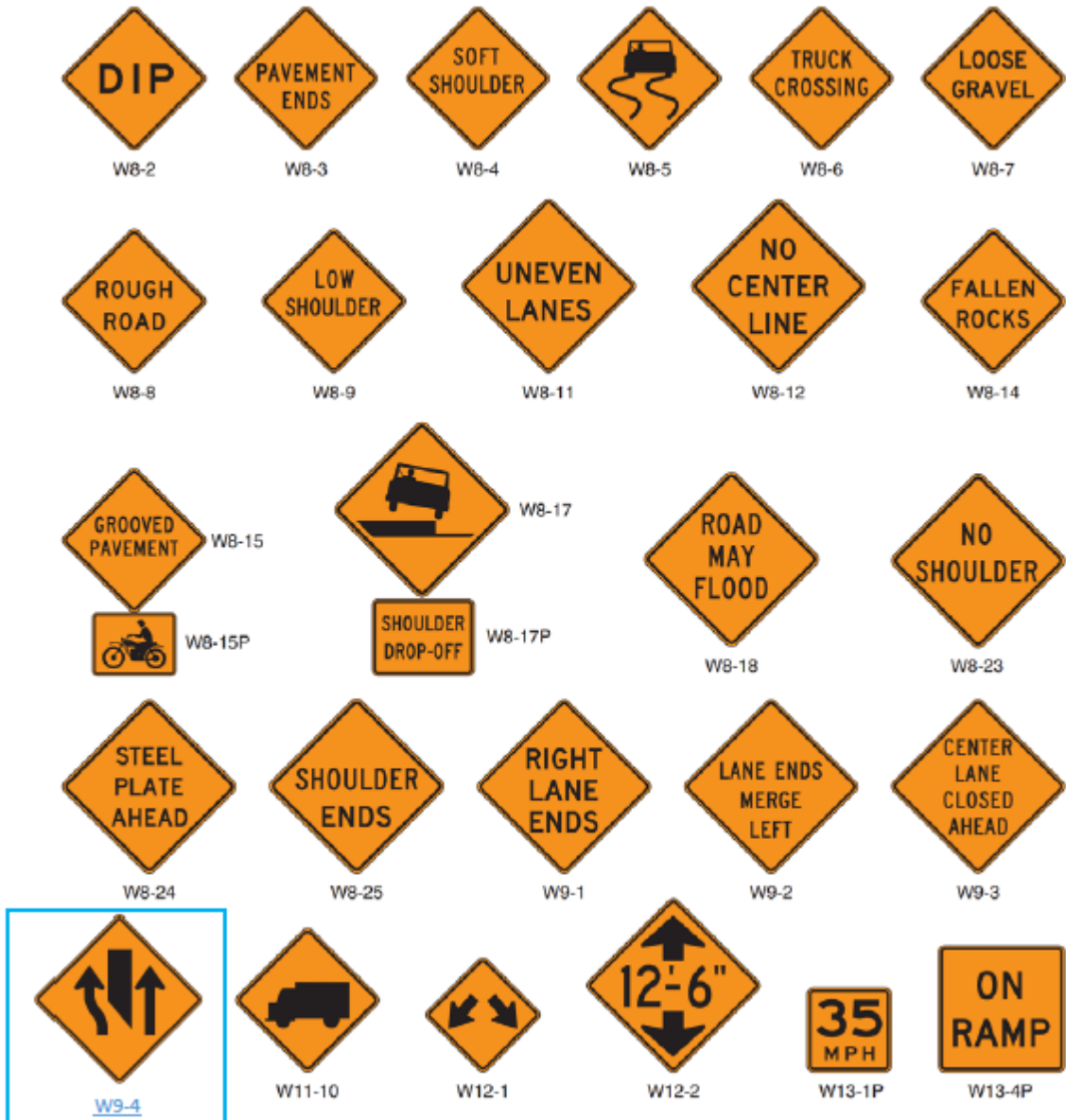
Table 6F-1. Temporary Traffic Control Zone Sign and Plaque Sizes (Sheet 2 of 3)

Sign or Plaque	Sign Designation	Section	Conventional Road	Freeway or Expressway	Minimum
XX MPH Speed Zone Ahead	W3-5a	6F.16	36 x 36	48 x 48	30 x 30
Merging Traffic	W4-1,5	6F.16	36 x 36	48 x 48	36 x 36
Lane Ends	W4-2	6F.24	36 x 36	48 x 48	30 x 30
Added Lane	W4-3,6	6F.16	36 x 36	48 x 48	30 x 30
No Merge Area (plaque)	W4-5P	6F.16	18 x 24	24 x 30	—
Road Narrows	W5-1	6F.16	36 x 36	48 x 48	30 x 30
Narrow Bridge	W5-2	6F.16	36 x 36	48 x 48	30 x 30
One Lane Bridge	W5-3	6F.16	36 x 36	48 x 48	30 x 30
Ramp Narrows	W5-4	6F.26	36 x 36	48 x 48	30 x 30
Divided Highway	W6-1	6F.16	36 x 36	48 x 48	30 x 30
Divided Highway Ends	W6-2	6F.16	36 x 36	48 x 48	30 x 30
Two-Way Traffic	W6-3	6F.32	36 x 36	48 x 48	30 x 30
Two-Way Traffic	W6-4	6F.76	12 x 18	12 x 18	—
Hill (symbol)	W7-1	6F.16	36 x 36	48 x 48	30 x 30
Next XX Miles (plaque)	W7-3aP	6F.53	24 x 18	36 x 30	—
Bump	W8-1	6F.16	36 x 36	48 x 48	30 x 30
Dip	W8-2	6F.16	36 x 36	48 x 48	30 x 30
Pavement Ends	W8-3	6F.16	36 x 36	48 x 48	30 x 30
Soft Shoulder	W8-4	6F.44	36 x 36	48 x 48	30 x 30
Slippery When Wet	W8-5	6F.16	36 x 36	48 x 48	30 x 30
Truck Crossing	W8-6	6F.36	36 x 36	48 x 48	30 x 30
Loose Gravel	W8-7	6F.16	36 x 36	48 x 48	30 x 30
Rough Road	W8-8	6F.16	36 x 36	48 x 48	30 x 30
Low Shoulder	W8-9	6F.44	36 x 36	48 x 48	30 x 30
Uneven Lanes	W8-11	6F.45	36 x 36	48 x 48	30 x 30
No Center Line	W8-12	6F.47	36 x 36	48 x 48	30 x 30
Fallen Rocks	W8-14	6F.16	36 x 36	48 x 48	30 x 30
Grooved Pavement	W8-15	6F.16	36 x 36	48 x 48	30 x 30
Motorcycle (plaque)	W8-15P	6F.54	24 x 18	30 x 24	—
Shoulder Drop Off (symbol)	W8-17	6F.44	36 x 36	48 x 48	30 x 30
Shoulder Drop-Off (plaque)	W8-17P	6F.44	24 x 18	30 x 24	—
Road May Flood	W8-18	6F.16	36 x 36	48 x 48	24 x 24
No Shoulder	W8-23	6F.16	36 x 36	48 x 48	30 x 30
Steel Plate Ahead	W8-24	6F.46	36 x 36	48 x 48	30 x 30
Shoulder Ends	W8-25	6F.16	36 x 36	48 x 48	30 x 30
Lane Ends	W9-1,2	6F.16	36 x 36	48 x 48	30 x 30
Center Lane Closed Ahead	W9-3	6F.23	36 x 36	48 x 48	30 x 30 36 X 36
Interior Lane Shift Ahead	W9-4	6F.XX	36X36	48X48	36 X 36
Grade Crossing Advance Warning	W10-1	6F.16	36 dia.	—	—
Truck	W11-10	6F.36	36 x 36	48 x 48	30 x 30
Double Arrow	W12-1	6F.16	30 x 30	—	—
Low Clearance	W12-2	6F.16	36 x 36	48 x 48	30 x 30

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Advisory Speed (plaque)	W13-1P	6F.52	24 x 24	30 x 30	18 x 18
On Ramp (plaque)	W13-4P	6F.25	36 x 36	36 x 36	—
No Passing Zone (pennant)	W14-3	6F.16	48 x 48 x 36	64 x 64 x 48	40 x 40 x 30
XX Feet (plaque)	W16-2P	6F.16	24 x 18	30 x 24	—
Road Work (with distance)	W20-1	6F.18	36 x 36	48 x 48	30 x 30

Figure 6F-4. Warning Signs and Plaques in Temporary Traffic Control Zones
(Sheet 2 of 3)



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