

National Committee on Uniform Traffic Control Devices

Edit Committee Recommendations

Approved by the NCUTCD Council June 20, 2008

TECHNICAL COMMITTEE: NCUTCD Edit Committee
 TOPIC Introduction & Part 1A,
 FHWA NPA 1/02/08
 STATUS/DATE OF ACTION: 03/14/2008, 03/18/2008,
 TECH COMM DRAFTS 05/30/2008
 TECH COMM APPROVAL: June NCUTCD Meeting
 TRANSMITTED TO SPONSORS:
 COUNCIL APPROVAL:
 ORIGIN OF REQUEST: Task Force
 MUTCD SECTIONS: Introduction, Part 1A, Figures 1A-1 & 1A-2
 Tables I-1, 1A-1, 1A-2,& 1A-3

SUMMARY: The FHWA published a Notice of Rulemaking in the Federal Register on January 2, 2008, covering the MUTCD Revisions for the 2009 Manual. The Edit Committee has reviewed this proposed Part of the NPA providing the following comments on behalf of the National Committee on Uniform Traffic Control Devices.

FHWA – Presented as the NPA with Deletions, Insertions & Comments

Deletion = ~~Red strike through~~

Insertion = Blue Underline

Comments = **Green Highlight**

Edit Committee Comments and Recommendations

Retain Existing MUTCD Text = **Red Without Strike through**

Deletion of NPA Text = ~~Blue Strike Through~~

Revision to NPA = **Yellow Highlighting**

Reason for NPA Revisions = **Black with Yellow Highlighting**

Comments on Changes to be Considered = Purple

The FHWA has made a number of editorial changes throughout the NPA to improve the text of the Manual. The Edit Committee suggest that the addition of left-hand and right-hand to replace left edge or left side and right edge or side is an unnecessary revision to the MUTCD that is not needed and represents no area

1 of confusion. Therefore, the Edit Committee recommends that this editorial
2 revision not be implemented.

3 4 INTRODUCTION

5 All of the text-related items on the “list of known errors” in the 2003 edition were
6 incorporated. They are considered editorial unless otherwise noted.

7
8 Cross references to Chapters, Sections, Figures, and Tables have been updated as necessary to
9 maintain accuracy.

10
11 The number or letter designations for items in listings within paragraphs have been updated as
12 necessary to maintain an accurate sequence.

13
14 The word “centerline” was replaced by the phrase “center line” in 56 places in the 2003 MUTCD
15 text in order to be consistent with “edge line.”

16
17 The title of the “Standard Highway Signs and Markings” book was revised in 34 places in the
18 2003 MUTCD text to reflect the updated name of the book.

19 The Manual on Uniform Traffic Control Devices (MUTCD) is approved by the Federal Highway
20 Administrator as the National Standard in accordance with Title 23 U.S. Code, Sections 109(d),
21 114(a), 217, 315, and 402(a), 23 CFR 655, and 49 CFR 1.48(b)(8), 1.48(b)(33), and 1.48(c)(2).

22 23 Addresses for Publications Referenced in the MUTCD

24 25 [AAA](#)

26 [1000 AAA Drive](#)

27 [Heathrow, FL 32746](#)

28 [www.aaa.biz](#) added to provide a complete list of addresses associated with the documents listed
29 in Section 1A.11

30
31 American Association of State Highway and Transportation Officials (AASHTO)

32 444 North Capitol Street, NW, Suite 249

33 Washington, DC 20001

34 [www.transportation.org](#)

35 36 [American National Standards Institute \(ANSI\)](#)

37 [1819 L Street, NW, 6th Floor](#)

38 [Washington, DC 20036](#)

39 [www.ansi.org](#) added to provide a complete list of addresses associated with the documents listed
40 in Section 1A.11

41
42 American Railway Engineering and Maintenance-of-Way Association (AREMA)

43 8201 Corporate Drive, Suite 1125

44 Landover, MD 20785-2230

45 [www.arema.org](#)

46
47 Federal Highway Administration Report Center

48 Facsimile number: 301.577.1421

1 report.center@fhwa.dot.gov
2
3 Illuminating Engineering Society (IES)
4 120 Wall Street, Floor 17
5 New York, NY 10005
6 www.iesna.org
7
8 Institute of Makers of Explosives
9 1120 19th Street, NW, Suite 310
10 Washington, DC 20036-3605
11 www.ime.org
12
13 Institute of Transportation Engineers (ITE)
14 1099 14th Street, NW, Suite 300 West
15 Washington, DC 20005-3438
16 www.ite.org
17
18 International Organization for Standards
19 c/o Mr. Gerard Kuso
20 Austrian Standards Institute
21 Heinestrabe 38
22 Postfach 130
23 A-1021
24 Wien, Austria
25 www.iso.ch
26
27 ~~ISEA~~ ~~The~~ [International](#) Safety Equipment Association ([ISEA](#)) edited to increase accuracy
28 1901 North Moore Street, Suite 808
29 Arlington, VA 22209
30 www.safetysafetyequipment.org
31
32 National Committee on Uniform Traffic Laws and Ordinances (NCUTLO)
33 107 South West Street, Suite 110
34 Alexandria, VA 22314
35 www.ncutlo.org
36
37 Occupational Safety and Health Administration (OSHA)
38 U.S. Department of Labor
39 200 Constitution Avenue, NW
40 Washington, DC 20210
41 www.osha.gov
42
43 Transportation Research Board (TRB)
44 The National Academies
45 2101 Constitution Avenue, NW
46 Washington, DC 20418
47 www.nas.edu/trb
48
49 U.S. Architectural and Transportation Barriers Compliance Board (The U.S. Access Board)
50 1331 F Street, NW, Suite 1000
51 Washington, DC 20004-1111

1 www.access-board.gov

2

3

4 Acknowledgments

5

6 The Federal Highway Administration gratefully acknowledges the valuable assistance that it
7 received from the National Committee on Uniform Traffic Control Devices and its over ~~200~~ 250
8 voluntary members in the development of this Manual.

9

MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES

INTRODUCTION

Standard:

Traffic control devices shall be defined as all signs, signals, markings, and other devices used to regulate, warn, or guide traffic, placed on, over, or adjacent to a street, highway, pedestrian facility, ~~or~~ bikeway, public facility, or private property open to public travel by authority of a public agency or official having jurisdiction.

The Manual on Uniform Traffic Control Devices (MUTCD) is incorporated by reference in 23 Code of Federal Regulations (CFR), Part 655, Subpart F and shall be recognized as the national standard for all traffic control devices installed on any street, highway, ~~or bicycle trail~~ bikeway, public facility, or private property open to public travel in accordance with 23 U.S.C. 109(d) and 402(a). The policies and procedures of the Federal Highway Administration (FHWA) to obtain basic uniformity of traffic control devices shall be as described in 23 CFR 655, Subpart F.

In accordance with 23 CFR 655.603(a), for the purposes of applicability of the MUTCD, private property open to public travel shall include toll roads and roads within shopping centers, parking lot areas, airports, sports arenas, and other similar business and/or recreation facilities that are privately owned, but where the public is allowed to travel without access restrictions. Private gated properties where public access is restricted and private highway-rail grade crossings shall not be considered to be private property open to public travel.

Any traffic control device design or application provision contained in this Manual shall be considered to be in the public domain. Traffic control devices contained in this Manual shall not be protected by a patent, trademark, or copyright, except for the Interstate Shield and any ~~other~~ items owned by FHWA.

Support:

The need for uniform standards was recognized long ago. The American Association of State Highway Officials (AASHO), now known as the American Association of State Highway and Transportation Officials (AASHTO), published a manual for rural highways in 1927, and the National Conference on Street and Highway Safety (NCSHS) published a manual for urban streets in 1930. In the early years, the necessity for unification of the standards applicable to the different classes of road and street systems was obvious. To meet this need, a joint committee of AASHO and NCSHS developed and published the original edition of this Manual on Uniform Traffic Control Devices (MUTCD) in 1935. That committee, now called the National Committee on Uniform Traffic Control Devices (NCUTCD), though changed from time to time in name, organization, and personnel, has been in continuous existence and has contributed to periodic revisions of this Manual. The FHWA has administered the MUTCD since the 1971 edition. The FHWA and its predecessor organizations have participated in the development and publishing of the previous editions. There were ~~eight~~ nine edited to increase accuracy previous editions of the MUTCD, and several of those editions were revised one or more times. Table I-1 traces the evolution of the MUTCD, including the two manuals developed by AASHO and NCSHS.

Standard:

The U.S. Secretary of Transportation, under authority granted by the Highway Safety Act of 1966, decreed that traffic control devices on all streets and highways open to public travel in accordance with 23 U.S.C. 109(d) and 402(a) in each State shall be in substantial conformance with the Standards issued or endorsed by the FHWA.

Support:

1 ~~23 CFR 655.603 adopts the MUTCD as the national standard for any street, highway, or bicycle~~
2 ~~trail open to public travel in accordance with 23 U.S.C. 109(d) and 402(a).~~ The “Uniform
3 Vehicle Code (UVC)” is one of the publications referenced in the MUTCD. The UVC contains a
4 model set of motor vehicle codes and traffic laws for use throughout the United States.

5 Guidance:

6 The States ~~are encouraged to~~ should adopt Section 15-116 of the UVC, which states that, “No
7 person shall install or maintain in any area of private property used by the public any sign, signal,
8 marking, or other device intended to regulate, warn, or guide traffic unless it conforms with the
9 State manual and specifications adopted under Section 15-104.”

10 Support:

11 The Standard, Guidance, Option, and Support material described in this edition of the
12 MUTCD provide the transportation professional with the information needed to make appropriate
13 decisions regarding the use of traffic control devices on streets and highways. ~~The material in~~
14 ~~this edition is organized to better differentiate between Standards that must be satisfied for the~~
15 ~~particular circumstances of a situation, Guidances that should be followed for the particular~~
16 ~~circumstances of a situation, and Options that may be applicable for the particular circumstances~~
17 ~~of a situation.~~

18 Throughout this Manual the headings Standard, Guidance, Option, and Support are used to
19 classify the nature of the text that follows. Figures, tables, and illustrations, or certain items
20 contained therein, supplement the text and might constitute a Standard, Guidance, Option, or
21 Support. The user needs to refer to the appropriate text to classify the nature of the figure, table,
22 ~~or~~ illustration, or certain item contained therein.

23 **Standard:**

24 When used in this Manual, the text headings shall be defined as follows:

- 25 1. Standard—a statement of required, mandatory, or specifically prohibitive practice
26 regarding a traffic control device. All Standard statements are labeled, and the text
27 appears in bold type. The verb “shall” is typically used. The verb “should” is not
28 used in Standard statements. Standard statements are sometimes modified by
29 Options.
- 30 2. Guidance—a statement of recommended, but not mandatory, practice in typical
31 situations, with deviations allowed if engineering judgment or engineering study
32 indicates the deviation to be appropriate. All Guidance statements are labeled, and
33 the text appears in **unbold italics** type. The verb “should” is typically used. The
34 verb “shall” is not used in Guidance statements. Guidance statements are
35 sometimes modified by Options.

36
37 ***Reason: The NCUTCD previously recommended that the Guidance Statements be printed***
38 ***in “Italics” or other distinctive font to distinguish the Guidance Statements from***
39 ***Option and Support Statements. That recommendation is reiterated for the 2009***
40 ***Edition of the MUTCD.***

- 41
42 3. Option—a statement of practice that is a permissive condition and carries no
43 requirement or recommendation. Option statements ~~may~~ sometime contain
44 allowable modifications to a Standard or Guidance statement. All Option
45 statements are labeled, and the text appears in unbold type. The verb “may” is
46 typically used. The verbs “shall” and “should” are not used in Option statements.
- 47 4. Support—an informational statement that does not convey any degree of mandate,
48 recommendation, authorization, prohibition, or enforceable condition. Support

1 statements are labeled, and the text appears in unbold type. The verbs “shall,”
2 “should,” and “may” are not used in Support statements. **these four items were**
3 **edited to increase consistency**

4 Support:

5 Throughout this Manual all dimensions and distances are provided in the International
6 System of Units, a modernized version of the Metric system, and their English equivalent units
7 are shown in parentheses.

8 Guidance:

9 Before laying out distances or determining ~~sign~~ sizes of devices, the public agency should
10 decide whether to use the International System of Units (Metric) or the English equivalent units.
11 The chosen units should be specified on plan drawings. The chosen unit of measurement should
12 be made known to those responsible for designing, installing, or maintaining traffic control
13 devices.

14 Signs with Metric legends are shown in the figures that illustrate sign images only if the
15 design of the sign with Metric units differs from the design of the sign with English equivalent
16 units in a manner that is in addition to just the legend itself. If the only design difference between
17 the Metric sign and the English sign is the legend, only the English sign is illustrated.

18 Except when a specific numeral is required or recommended **added to increase accuracy** by
19 the text of a Section of this Manual, numerals ~~shown~~ displayed **edited to increase consistency** on
20 the ~~sign~~ images of devices in the figures that specify quantities such as times, distances, speed
21 limits, and weights should be regarded as examples only. When installing any of these ~~signs~~
22 devices, the numerals should be appropriately altered to fit the specific ~~signing~~ situation.

23 Support:

24 The following information will be useful when reference is being made to a specific portion
25 of text in this Manual.

26 There are ten Parts in this Manual and each Part is comprised of one or more Chapters. Each
27 Chapter is comprised of one or more Sections. Parts are given a numerical identification, such as
28 Part 2 – Signs. Chapters are identified by the Part number and a letter, such as Chapter 2B –
29 Regulatory Signs. Sections are identified by the Chapter number and letter followed by a decimal
30 point and a number, such as Section 2B.03 – Size of Regulatory Signs.

31 Each Section is comprised of one or more paragraphs. The paragraphs are indented ~~but~~ and
32 ~~are not~~ identified by a number ~~or letter~~. Paragraphs are counted from the beginning of each
33 Section without regard to the intervening text headings (Standard, Guidance, Option, or Support).
34 Some paragraphs have lettered or numbered items. As an example of how to cite this Manual, the
35 phrase “Not less than 12 m (40 ft) beyond the stop line” that appears in Section 4D.14 of this
36 Manual would be referenced in writing as “Section 4D.14, P1, A.1,” and would be verbally
37 referenced as “Item A.1 of Paragraph 1 of Section 4D.14.” **last sentence was updated to maintain**
38 **accuracy**

39 Standard:

40 **In accordance with 23 CFR 655.603(b)(~~4~~)(3), States or other Federal agencies that have**
41 **their own MUTCDs or Supplements to the National MUTCD shall revise these MUTCDs or**
42 **Supplements to be in substantial conformance with changes to the National MUTCD within**
43 **2 years of ~~issuance of the effective date of the Final Rule for the changes.~~ Substantial**
44 **conformance of such State or other Federal agency MUTCDs or Supplements shall be as**
45 **defined in 23 CFR 655.603(b)(1). Unless a particular device is no longer serviceable, non-**
46 **compliant devices on existing highways and bikeways shall be brought into compliance with**
47 **the current edition of the National MUTCD as part of the systematic upgrading of**
48 **substandard traffic control devices (and installation of new required traffic control devices)**

1 required pursuant to the Highway Safety Program, 23 U.S.C. § 402(a). In cases involving
2 Federal-aid projects for new highway or bikeway construction or reconstruction, the traffic
3 control devices installed (temporary or permanent) shall be in conformance with the most
4 recent edition of the National MUTCD before that highway is opened or re-opened to the
5 public for unrestricted travel [23 CFR 655.603(d)(2) and 23 CFR 655.603(d)(3)]. The
6 FHWA has the authority to establish other target compliance dates for implementation of
7 particular changes to the MUTCD [23 CFR 655.603(d)(4)(1)]. These target compliance
8 dates established by the FHWA shall be as follows:

9 The Edit Committee recommends that the Compliance Dates to implement
10 particular changes to the MUTCD should be located in the appropriate section
11 (MN MUTCD approach) but also suggest that a reference be provided in the
12 Introduction to referencing a list of all compliance dates on the MUTCD webpage

13
14 **Reasons: Locating the Compliance Dates closer to the applicable Sections of the
15 MUTCD is recommended because:**

16 **1. Some MUTCD Users refer to only a specific Part of the MUTCD so having
17 Compliance Dates in each of these Parts would make them more aware of the
18 requirements.**

19 **2. Most designers work with CADD Libraries of signs on their files
20 where they may miss an update in the MUTCD requirements.
21 Locating the dates closer to the requirements would help avoid
22 this oversight.**

23 **3. Local jurisdictions are not always that aware of Compliance
24 Dates. Locating them closer to the MUTCD provisions would
25 increase that awareness.**

26
27 Section 2A.06 Design of Signs—e-mail addresses prohibited on signs—10 years from the
28 effective date of the Final Rule for the 2009 MUTCD.

29 Section 2A.12 Symbols—use of symbols from one type of sign on a different type of sign—
30 10 years from the effective date of the Final Rule for the 2009 MUTCD.

31 Section 2A.13 Word Messages—ratio of letter height to legibility distance for sign letter
32 sizes should be based on 1:30 ratio—10 years from the effective date of the Final Rule
33 for the 2009 MUTCD.

34 Section 2A.19 Lateral Offset—crashworthiness of sign supports—January 17, 2013 for
35 roads with posted speed limit of 80 km/h (50 mph) or higher.

36 Section 2B.03 Size of Regulatory Signs—increased sign sizes and other changes to Table
37 2B-1 in 2003 MUTCD—~~10 years from the effective date of the Final Rule for the 2003~~
38 ~~MUTCD~~ December 22, 2013. **edited to increase clarity now that the effective date is**
39 **known**

40 Section 2B.03 Size of Regulatory Signs—increased sign sizes and other changes to Table
41 2B-1 in 2009 MUTCD—10 years from the effective date of the Final Rule for the 2009
42 MUTCD.

43 Section 2B.03 Size of Regulatory Signs—required sign sizes for multi-lane roadways in new
44 Table 2B-2 in 2009 MUTCD—10 years from the effective date of the Final Rule for the
45 2009 MUTCD.

46 ~~Section 2B.04 STOP Sign (R1-1)—4 WAY plaque requirement—January 17, 2004.~~ **no**
47 **longer relevant**

1 ~~Section 2B.06 STOP Sign Placement—signs mounted on back of STOP sign—10 years~~
2 ~~from the effective date of the Final Rule for the 2003 MUTCD.~~ deleted because it is now
3 incorporated into the Section 2B.10 compliance date

4 Section 2B.09 YIELD Sign Applications—changes in YIELD sign application criteria from
5 the 1988 MUTCD—January 17, 2011.

6 Section 2B.10 STOP sign or YIELD Sign Placement—~~signs mounted~~ prohibition of items
7 on back of STOP or YIELD signs and Guidance on other signs back-to-back with STOP
8 or YIELD signs not obscuring shape and deletion of exception for DO NOT ENTER
9 signs—10 years from the effective date of the Final Rule for the ~~2003~~ 2009 MUTCD.
10 former item superseded by new item

11 Section 2B.11 Yield Here To Pedestrians Signs and Stop Here For Pedestrians Signs (R1-5;
12 R1-5a Series)—new Section in 2003 MUTCD added to increase accuracy—10 years
13 from the effective date of the Final Rule for the 2003 MUTCD December 22, 2013.
14 edited to increase clarity now that the effective date is known

15 Section 2B.12 In-Street and Overhead Pedestrian Crossing Signs (R1-6, R1-6a, R1-9, and
16 R1-9a)—new Overhead Pedestrian Crossing (R1-9 or R1-9a) signs—10 years from the
17 effective date of the Final Rule for the 2009 MUTCD.

18 Section 2B.12 In-Street and Overhead Pedestrian Crossing Signs (R1-6, R1-6a, R1-9, and
19 R1-9a)—special support requirements for in-street signs—5 years from the effective
20 date of the Final Rule for the 2009 MUTCD.

21 Section 2B.13 Speed Limit Sign (R2-1)—color of changeable message legend of YOUR
22 SPEED legend—10 years from the effective date of the Final Rule for the 2003 MUTCD
23 December 22, 2013. edited to increase clarity now that the effective date is known

24 Section 2B.19 Intersection Lane Control Signs (R3-5 through R3-8)—overhead lane-use
25 signs should be provided for lane drops and shared through/turn lanes at signalized
26 locations—10 years from the effective date of the Final Rule for the 2009 MUTCD.

27 Section 2B.25 Reversible Lane Control Signs (R3-9d, R3-9f through R3-9i)—removal of
28 R3-9c and R3-9e signs—10 years from the effective date of the Final Rule for the 2003
29 MUTCD December 22, 2013. edited to increase clarity now that the effective date is
30 known

31 Sections 2B.26 through 2B.30 Regulatory Signs for Preferential Only Lanes Signs (R3-10
32 through R3-15)—10 years from the effective date of the Final Rule for the 2003
33 MUTCD December 22, 2013. edited to increase clarity now that the effective date is
34 known

35 ~~Section 2B.27 Preferential Only Lanes for High Occupancy Vehicles (HOVs)—new section~~
36 ~~in Millennium Edition—January 17, 2007.~~ no longer relevant

37 ~~Section 2B.28 Preferential Only Lane Sign Applications and Placement—10 years from the~~
38 ~~effective date of the Final Rule for the 2003 MUTCD.~~ deleted because it is now
39 incorporated into the Sections 2B.26 through 2B.30 compliance date

40 Section 2B.31 Regulatory Signs for Toll Plazas—regulatory signs for toll plazas—10 years
41 from the effective date of the Final Rule for the 2009 MUTCD.

42 Section 2B.32 Regulatory Signs for Managed Lanes and ETC Only Lanes—regulatory
43 signs for managed lanes and ETC only lanes—10 years from the effective date of the
44 Final Rule for the 2009 MUTCD.

45 Section 2B.33 Jughandle Signs (R3-23, R3-24, R3-25, and R3-26 Series)—regulatory signs
46 for jughandles—10 years from the effective date of the Final Rule for the 2009 MUTCD.

1 Section 2B.35 DO NOT PASS WHEN SOLID LINE IS ON YOUR SIDE Sign (R4-15)—
2 new R4-15 sign—10 years from the effective date of the Final Rule for the 2009
3 MUTCD.

4 ~~Section 2B.37 ONE WAY Signs (R6-1, R6-2) placement requirement at intersecting~~
5 ~~alleys—January 17, 2008. no longer relevant~~

6 Section 2B.43 Slow Vehicle Turn-Out Signs (R4-12, R4-13, and R4-14)—new slow vehicle
7 turn-out signs—10 years from the effective date of the Final Rule for the 2009 MUTCD.

8 Section 2B.46 Selective Exclusion Signs—new legends for various selective exclusion
9 signs—10 years from the effective date of the Final Rule for the 2009 MUTCD.

10 Section 2B.47 ONE WAY Signs (R6-1, R6-2)—new requirement for ONE WAY signs—10
11 years from the effective date of the Final Rule for the 2009 MUTCD.

12 Section 2B.49 Divided Highway Crossing Signs (R6-3, R6-3a)—required use of Divided
13 Highway Crossing signs—10 years from the effective date of the Final Rule for the 2009
14 MUTCD.

15 Sections 2B.50 and 2B.51 Roundabout Signs—new regulatory signs for roundabouts—10
16 years from the effective date of the Final Rule for the 2009 MUTCD.

17 Section 2B.54 Design of Parking, Standing, and Stopping Signs—new signs for fee
18 parking—10 years from the effective date of the Final Rule for the 2009 MUTCD.

19 Section 2B.59 Traffic Signal Signs (R10-1 through R10-32P)—changes to R10-1 through
20 R10-4 series of pedestrian signs, and new signs and new designs for various traffic
21 signal signs in Figure 2B-30—10 years from the effective date of the Final Rule for the
22 2009 MUTCD.

23 Section 2B.60 Photo Enforced Signs and Plaques (R10-18, R10-19P, R10-19aP)—new
24 Section in 2003 MUTCD added to increase accuracy—10 years from the effective date
25 of the Final Rule for the 2003 MUTCD December 22, 2013. edited to increase clarity
26 now that the effective date is known

27 Section 2B.61 Ramp Metering Signs (R10-28 and R10-29)—new ramp metering signs—10
28 years from the effective date of the Final Rule for the 2009 MUTCD.

29 Section 2B.65 Weigh Station Signs (R13 Series)—new design and legend for R13-1 sign—10
30 years from the effective date of the Final Rule for the 2009 MUTCD.

31 Section 2B.67 Hazardous Material Signs (R14-2, R14-3)—change in sign legend—10 years
32 from the effective date of the Final Rule for the 2003 MUTCD December 22, 2013.
33 edited to increase clarity now that the effective date is known

34 Section 2B.69 Headlight Use Signs (R16-5 through R16-12)—new headlight use signs—10
35 years from the effective date of the Final Rule for the 2009 MUTCD.

36 Section 2B.70 Miscellaneous Regulatory Signs—new R16-4 sign—10 years from the
37 effective date of the Final Rule for the 2009 MUTCD.

38 Section 2C.03 Design of Warning Signs—use of fluorescent yellow-green background color
39 for pedestrian, bicycle, school, and playground signs and their related supplemental
40 plaques—10 years from the effective date of the Final Rule for the 2009 MUTCD.

41 ~~Section 2C.04 Size of Warning Signs—increased sizes of W4-1, W5-2, W6-3, and W12-1~~
42 ~~signs—January 17, 2008. no longer relevant~~

43 Section 2C.04 Size of Warning Signs—sizes of W1 Series Arrows signs, ~~W7 Series runaway~~
44 truck signs, superseded by new Section 2F.12 ~~W12-2p~~ W12-2a edited to increase
45 accuracy low clearance signs, and W10-1 advance grade crossing sign—10 years from
46 the effective date of the Final Rule for the 2003 MUTCD December 22, 2013. edited to
47 increase clarity now that the effective date is known

1 Section 2C.04 Size of Warning Signs—size of warning signs on multi-lane roads and
2 changes in sizes in Table 2C-2—10 years from the effective date of the Final Rule for the
3 2009 MUTCD.

4 Section 2C.05 Placement of Warning Signs—revisions in Table 2C-4—10 years from the
5 effective date of the Final Rule for the 2009 MUTCD.

6 Sections 2C.06 through 2C.14 Horizontal Alignment Warning Signs—revised requirements
7 regarding various horizontal alignment signs—10 years from the effective date of the
8 Final Rule for the 2009 MUTCD.

9 Section 2C.13 Truck Rollover Warning Signs (W1-13, ~~W1-13a~~)—new Section in 2003
10 MUTCD added to increase accuracy—~~10 years from the effective date of the Final Rule~~
11 ~~for the 2003 MUTCD~~ December 22, 2013. edited to increase clarity now that the
12 effective date is known

13 Section 2C.14 Advisory Exit and Ramp Speed Signs (W13-2 and W13-3)—elimination of
14 Curve Speed (W13-5) warning sign—10 years from the effective date of the Final Rule
15 for the 2009 MUTCD.

16 Section 2C.19 NARROW BRIDGE Sign (W5-2)—elimination of symbol sign—~~10 years~~
17 ~~from the effective date of the Final Rule for the 2003 MUTCD~~ December 22, 2013.
18 edited to increase clarity now that the effective date is known

19 Section 2C.21 Divided Highway Sign (W6-1)—removal of W6-1a and W6-1b word message
20 signs—10 years from the effective date of the Final Rule for the 2009 MUTCD.

21 Section 2C.22 Divided Highway Ends Sign (W6-2)—removal of W6-2a and W6-2b word
22 message signs—10 years from the effective date of the Final Rule for the 2009 MUTCD.

23 Section 2C.23 Freeway or Expressway Ends Signs (W19 Series)—new W19 series signs—10
24 years from the effective date of the Final Rule for the 2009 MUTCD.

25 Section 2C.29 PAVEMENT ENDS Sign (W8-3)—removal of symbol sign—January 17,
26 2011.

27 Section 2C.30 Shoulder and Uneven Lanes Signs (W8-4, W8-9, ~~and W8-9a~~ W8-17, and W8-
28 23)—~~removal of new symbol design for W8-17 signs~~ ~~January 17, 2011~~ 10 years from
29 the effective date of the Final Rule for the 2009 MUTCD. new item supersedes previous
30 item

31 Section 2C.31 Surface Condition Signs (W8-5, W8-7, W8-8, W8-13, and W8-14)—new W8-
32 14 symbol sign—10 years from the effective date of the Final Rule for the 2009
33 MUTCD.

34 Section 2C.32 Warning Signs and Plaques for Motorcyclists (W8-15, W8-15P, and W8-
35 16)—new W8-15 and W8-16 signs and new W8-15P plaque—10 years from the effective
36 date of the Final Rule for the 2009 MUTCD.

37 Section 2C.34 Weather Condition Signs (W8-18, W8-19, W8-21, and W8-22)—new signs
38 for weather conditions—10 years from the effective date of the Final Rule for the 2009
39 MUTCD.

40 Section 2C.35 Advance Traffic Control Signs (W3-1, W3-2, W3-3, W3-4)—removal of W3-
41 1a, W3-2a, W3-3a word message signs—10 years from the effective date of the Final
42 Rule for the 2009 MUTCD.

43 Section 2C.36 Advance Ramp Control Signal Signs (W3-7 and W3-8)—new signs for ramp
44 metering—10 years from the effective date of the Final Rule for the 2009 MUTCD.

45 Section 2C.37 Reduced Speed ~~Reduction~~ Limit Ahead edited to increase consistency Signs
46 (W3-5, W3-5a)—removal of R2-5 Series Reduced Speed Ahead signs and use of W3-5 or
47 W3-5a warning signs instead—~~15 years from the effective date of the Final Rule for the~~

1 ~~2003 MUTCD~~ [December 22, 2018](#). **edited to increase clarity now that the effective date**
2 **is known**

3 Section 2C.39 Merge Signs (W4-1, W4-5)—Entering Roadway Merge sign (~~W4-1a~~ [W4-5](#)
4 **edited to increase accuracy**)—~~10 years from the effective date of the Final Rule for the~~
5 ~~2003 MUTCD~~ [December 22, 2013](#). **edited to increase clarity now that the effective date**
6 **is known**

7 Section 2C.40 Added Lane Signs (W4-3, W4-6)—Entering Roadway Added Lane sign (~~W4-~~
8 ~~3a~~ [W4-6](#) **edited to increase accuracy**)—~~10 years from the effective date of the Final Rule~~
9 ~~for the 2003 MUTCD~~ [December 22, 2013](#). **edited to increase clarity now that the**
10 **effective date is known**

11 Section 2C.41 Lane Ends Signs (W4-2, [W4-7](#), W9-1, W9-2)—new design of W4-2 sign—~~10~~
12 ~~years from the effective date of the Final Rule for the 2003 MUTCD~~ [December 22, 2013](#).
13 **edited to increase clarity now that the effective date is known**

14 [Section 2C.42 RIGHT \(LEFT\) LANE EXIT ONLY AHEAD Sign \(W9-7\)—new W9-7](#)
15 [sign—10 years from the effective date of the Final Rule for the 2009 MUTCD.](#)

16 [Sections 2C.43 and 2C.44 Toll Facility Signs—new signs for toll facilities—10 years from](#)
17 [the effective date of the Final Rule for the 2009 MUTCD.](#)

18 Section 2C.45 Two-Way Traffic Sign (W6-3)—transition from one-way street—~~5 years~~
19 ~~from the effective date of the Final Rule for the 2003 MUTCD~~ [December 22, 2008](#).
20 **edited to increase clarity now that the effective date is known**

21 Section 2C.48 Intersection Warning Signs (W2-1 through W2-8)—new design of Circular
22 Intersection (W2-6) sign—~~10 years from the effective date of the Final Rule for the 2003~~
23 ~~MUTCD~~ [December 22, 2013](#). **edited to increase clarity now that the effective date is**
24 **known**

25 Section 2C.51 Vehicular Traffic Signs (W8-6, W11-1, W11-5, W11-5a, W11-8, W11-10,
26 W11-11, W11-12P, W11-14, [and W11-15](#))—new symbol signs W11-1, W11-5, W11-5a,
27 W11-6, W11-11, and W11-14—~~10 years from the effective date of the Final Rule for the~~
28 ~~2003 MUTCD~~ [December 22, 2013](#). **edited to increase clarity now that the effective date**
29 **is known**

30 [Section 2C.51 Vehicular Traffic Signs \(W8-6, W11-1, W11-5, W11-5a, W11-8, W11-10,](#)
31 [W11-11, W11-12P, W11-14, and W11-15\)—new W11-15 symbol sign—10 years from](#)
32 [the effective date of the Final Rule for the 2009 MUTCD.](#)

33 Section 2C.52 Nonvehicular Signs (W11-2, W11-3, W11-4, W11-6, W11-7, W11-9, [and](#)
34 [W11-16 through W11-22](#))—elimination of crosswalk lines from crossing signs and use of
35 diagonal downward pointing arrow (W16-7P) supplemental plaque if at the crossing—
36 January 17, 2011.

37 [Section 2C.52 Nonvehicular Signs \(W11-2, W11-3, W11-4, W11-6, W11-7, W11-9, and](#)
38 [W11-16 through W11-22\)—required use of fluorescent yellow-green background color](#)
39 [for school signs and their related supplemental plaques—10 years from the effective](#)
40 [date of the Final Rule for the 2009 MUTCD.](#)

41 [Section 2C.52 Nonvehicular Signs \(W11-2, W11-3, W11-4, W11-6, W11-7, W11-9, and](#)
42 [W11-16 through W11-22\)—recommended use of fluorescent yellow-green background](#)
43 [color for pedestrian, bicycle, and playground signs and their related supplemental](#)
44 [plaques—10 years from the effective date of the Final Rule for the 2009 MUTCD.](#)

45 [Section 2C.52 Nonvehicular Signs \(W11-2, W11-3, W11-4, W11-6, W11-7, W11-9, and](#)
46 [W11-16 through W11-22\)—new W11-16 through W11-22 symbol signs for various large](#)
47 [animals—10 years from the effective date of the Final Rule for the 2009 MUTCD.](#)

1 Section 2C.54 NEW TRAFFIC PATTERN AHEAD Sign (W23-2)—new W23-2 sign—10
2 years from the effective date of the Final Rule for the 2009 MUTCD.

3 Section 2C.61 Advance Street Name Plaque (W16-8P, W16-8aP)—requirement to use a
4 combination of lower-case letters with initial upper-case letters—15 years from the
5 effective date of the Final Rule for the 2009 MUTCD.

6 Section 2C.65 PHOTO ENFORCED Plaque (W16-10P)—new Section in 2003 MUTCD
7 added to increase accuracy —~~10 years from the effective date of the Final Rule for the~~
8 ~~2003 MUTCD~~ December 22, 2013. edited to increase clarity now that the effective date
9 is known

10 Section 2C.67 NEW Plaque (W16-15P)—new W16-15P plaque—2 years from the effective
11 date of the Final Rule for the 2009 MUTCD.

12 Sections 2C.68 and 2C.69 Toll Facility Plaques—new plaques for toll facilities—10 years
13 from the effective date of the Final Rule for the 2009 MUTCD.

14 Section 2D.05 Lettering Style—elimination of the practice for names of places, streets, and
15 highways on conventional road guide signs of using all upper-case letters—15 years
16 from the effective date of the Final Rule for the 2009 MUTCD.

17 Section 2D.08 Arrows—requirements for design and positioning of down arrows on
18 overhead guide signs—15 years from the effective date of the Final Rule for the 2009
19 MUTCD.

20 Section 2D.25 TOLL Auxiliary Sign (M4-15)—requirement for use of TOLL auxiliary
21 sign—5 years from the effective date of the Final Rule for the 2009 MUTCD.

22 Section 2D.26 Electronic Toll Collection (ETC) Only Auxiliary Signs (M4-16 and M4-20)—
23 requirement for use of ETC Only auxiliary sign—5 years from the effective date of the
24 Final Rule for the 2009 MUTCD.

25 Section 2D.35 Combination Lane Use/Destination Overhead Guide Sign (D15-1)—design of
26 combined lane-use/destination overhead guide signs—10 years from the effective date of
27 the Final Rule for the 2009 MUTCD.

28 Section 2D.45 Street Name Signs (D3-1 or D3-1a)—~~symbol sizes,~~ 150 mm (6 in) letter ~~sizes~~
29 height for lettering on ~~ground-~~ post-mounted edited to increase consistency Street Name
30 signs (except on ~~roads that are not~~ multi-lane streets with speed limits greater than 60
31 km/h (40 mph), ~~other new provisions of Millennium Edition~~—January 9, 2012.

32 Section 2D.45 Street Name Signs (D3-1 or D3-1a)—200 mm (8 in) letter ~~sizes~~ height on
33 ~~ground-~~ post-mounted edited to increase consistency signs on multi-lane streets with
34 speed limits greater than 60 km/h (40 mph) and 300 mm (12 in) letter ~~sizes~~ height on
35 overhead-~~mounted~~ edited to increase consistency signs—~~15 years from the effective date~~
36 ~~of the Final Rule for the 2003 MUTCD~~ December 22, 2018. edited to increase clarity
37 now that the effective date is known

38 Section 2D.45 Street Name Signs (D3-1 or D3-1a)—pictograph on street name sign should
39 be to right of street name—15 years from the effective date of the Final Rule for the
40 2009 MUTCD.

41 Section 2D.45 Street Name Signs (D3-1 or D3-1a)—limitations on alternative colors for
42 street name signs—15 years from the effective date of the Final Rule for the 2009
43 MUTCD.

44 Section 2D.46 Advance Street Name Signs (D3-2)—new Section in 2000 MUTCD and
45 revisions in 2003 MUTCD—~~15 years from the effective date of the Final Rule for the~~
46 ~~2003 MUTCD~~ December 22, 2018. edited to increase clarity now that the effective date
47 is known

1 ~~Section 2D.45 General Service Signs (D9 Series) Traveler Info Call 511 (D12-5) sign,~~
2 ~~Channel 9 Monitored (D12-3) sign—10 years from the effective date of the Final Rule~~
3 ~~for the 2003 MUTCD. this item is now shown as compliance dates for Sections 2F.07~~
4 ~~and 2F.08~~

5 Section 2D.47 Signing on Conventional Roads on Approaches to Interchanges—
6 requirement for multi-lane approaches to interchanges to have guide signs to identify
7 which direction of turn is to be made for access to each direction of the freeway or
8 expressway—10 years from the effective date of the Final Rule for the 2009 MUTCD.

9 Section 2D.52 Community Wayfinding Signs—community wayfinding signs—15 years
10 from the effective date of the Final Rule for the 2009 MUTCD.

11 Section 2D.53 Truck, Passing, or Climbing Lane Signs (D17-1 and D17-2)—new designs for
12 truck lane signs—10 years from the effective date of the Final Rule for the 2009
13 MUTCD.

14 Section 2D.54 Slow Vehicle Turn-Out Sign (D17-7)—new D17-7 sign—10 years from the
15 effective date of the Final Rule for the 2009 MUTCD.

16 Section 2E.19 Arrows for Interchange Guide Signs—requirements for design and
17 positioning of down arrows on overhead guide signs—15 years from the effective date of
18 the Final Rule for the 2009 MUTCD.

19 Section 2E.20 Diagrammatic Signs—new design and placement requirements for
20 diagrammatic signs—15 years from the effective date of the Final Rule for the 2009
21 MUTCD.

22 Section 2E.21 Signing for Interchange Lane Drops—new requirements for use of EXIT
23 ONLY and down arrows for lane drops—15 years from the effective date of the Final
24 Rule for the 2009 MUTCD.

25 ~~Section 2E.28 Interchange Exit Numbering—size of exit number plaque—January 17,~~
26 ~~2008. no longer relevant~~

27 Section 2E.27 Interchange Exit Numbering—LEFT on exit number plaques for left-hand
28 exits—5 years from the effective date of the Final Rule for the 2003 MUTCD December
29 22, 2018. change from 5 to 15 years is from errata list for 2003 MUTCD – edited to
30 increase clarity now that the effective date is known

31 Sections 2E.27 Interchange Exit Numbering—required use of the reference location exit
32 numbering system—10 years from the effective date of the Final Rule for the 2009
33 MUTCD.

34 Sections 2E.29, 2E.32, and 2E.36 Freeway and Expressway Guide Signing—black-on-
35 yellow LEFT sign panel requirements—10 years from the effective date of the Final
36 Rule for the 2009 MUTCD.

37 ~~Section 2E.30 Advance Guide Signs—advance placement distance—January 17, 2008. no~~
38 ~~longer relevant~~

39 Sections 2E.51 ~~to~~ through 2E.54 Preferential ~~Only~~ Lane ~~Guide~~ Signs—new Section (2E.59)
40 in the 2003 Edition MUTCD—10 years from the effective date of the Final Rule for the
41 2003 MUTCD December 22, 2013. edited to increase clarity now that the effective date
42 is known

43 Sections 2E.51 through 2E.54 Preferential Lane Guide Signs—new provisions in the 2009
44 MUTCD for preferential lane guide signing—10 years from the effective date of the
45 Final Rule for the 2009 MUTCD.

1 Sections 2E.55 through 2E.60 Toll Facility and Toll Plaza Signs—new provisions regarding
2 toll facility and toll plaza signing—10 years from the effective date of the Final Rule for
3 the 2009 MUTCD.

4 Section 2E.61 Guide Signs for Managed Lanes—new provisions for guide signs for
5 managed lanes—5 years from the effective date of the Final Rule for the 2009 MUTCD.

6 Section 2F.02 General Service Signs for Conventional Roads—new designs for the D9-10
7 and D9-16 signs—10 years from the effective date of the Final Rule for the 2009
8 MUTCD.

9 Section 2F.04 Interstate Oasis Signing—Interstate Oasis signing—10 years from the
10 effective date of the Final Rule for the 2009 MUTCD.

11 Section 2F.05 Rest Area and Other Roadside Area Signs—new D9-21 and D9-22 signs—10
12 years from the effective date of the Final Rule for the 2009 MUTCD.

13 Section 2F.07 Radio Information Signing —Channel 9 Monitored (D12-3) sign—December
14 22, 2013. this item was previously shown as a compliance date for Section 2D.45

15 Section 2F.08 TRAVEL INFO CALL 511 Sign (D12-5)—December 22, 2013. this item was
16 previously shown as a compliance date for Section 2D.45

17 Section 2F.10 Brake Check Area Signs (D5-13 and D5-14)—new signs—10 years from the
18 effective date of the Final Rule for the 2009 MUTCD.

19 Section 2F.11 Chain Up Area Signs (D5-15 and D5-16)—new signs—10 years from the
20 effective date of the Final Rule for the 2009 MUTCD.

21 Section 2F.12 Truck Escape Ramp Signs (D17-3, D17-4, and D17-5)—new sign designs
22 (colors)—10 years from the effective date of the Final Rule for the 2009 MUTCD.

23 Section 2G.03 Logos and Logo Sign Panels—design and location of RV Access message on
24 logo sign panels—5 years from the effective date of the Final Rule for the 2009 MUTCD.

25 Section 2G.03 Logos and Logo Sign Panels—new provisions in this Section other than the
26 design and location of RV Access message on logo sign panels—15 years from the
27 effective date of the Final Rule for the 2009 MUTCD.

28 Section 2G.05 Size of Lettering—minimum height of letters and numerals on specific
29 service signs—January 17, 2011.

30 Section 2G.05 Size of Lettering—letter sizes for word legend only logo sign panels—10
31 years from the effective date of the Final Rule for the 2009 MUTCD.

32 Section 2I.01 Reference Location Signs (D10-1 through D10-3) and Intermediate Reference
33 Location Signs (D10-1a through D10-3a)—location and spacing of Reference Location
34 signs and design of Intermediate Reference Location signs—~~10 years from the effective~~
35 ~~date of the Final Rule for the 2003 MUTCD~~ December 22, 2013. edited to increase
36 clarity now that the effective date is known

37 Section 2I.03 ~~Reference Location Signs and~~ Enhanced Reference Location Signs (D10-4,
38 D10-5)—design of Enhanced Reference Location signs and Intermediate Enhanced
39 Reference Location signs—~~10 years from the effective date of the Final Rule for the~~
40 ~~2003 MUTCD~~ December 22, 2013. edited to increase clarity now that the effective date
41 is known

42 Section 2I.09 Acknowledgement Signs—new provisions for acknowledgement signs—10
43 years from the effective date of the Final Rule for the 2009 MUTCD.

44 Section 2J.04 General Design Requirements for Recreational and Cultural Interest Area
45 Symbol Guide Signs—new designs for various recreational and cultural interest area
46 signs—10 years from the effective date of the Final Rule for the 2009 MUTCD.

1 Section 2K.03 Evacuation Route Signs (EM-1 and EM-1a)—new design and size of EM-1
2 sign—~~15 years from the effective date of the Final Rule for the 2003 MUTCD~~ December
3 22, 2018. edited to increase clarity now that the effective date is known

4 Section ~~3C.04~~ 2L.01 Object Marker Design and Placement Height—width of stripes on
5 Type 3 striped marker—~~10 years from the effective date of the Final Rule for the 2003~~
6 ~~MUTCD~~ December 22, 2013. edited to increase clarity now that the effective date is
7 known

8 Chapter 2M Changeable Message Signs—new provisions for changeable message signs—~~10~~
9 15 years from the effective date of the Final Rule for the 2009 MUTCD.

10 Reason: The GMI Committee requested this change at January meeting

11

12 ~~Section 3B.01 Yellow Centerline Pavement Markings and Warrants—new section in~~
13 ~~Millennium Edition—January 3, 2003.~~ no longer relevant

14 Section 3B.03 Other Yellow Longitudinal Pavement Markings—spacing requirements for
15 pavement marking arrows in two-way left-turn lanes—~~5 years from the effective date of~~
16 ~~the Final Rule for the 2003 MUTCD~~ December 22, 2008. edited to increase clarity now
17 that the effective date is known

18 Sections 3B.04 and 3B.05 White Longitudinal Pavement Markings—dotted lines required
19 for acceleration, deceleration, and auxiliary lanes—5 years from the effective date of the
20 Final Rule for the 2009 MUTCD.

21 Section 3B.05 Other White Longitudinal Pavement Markings—required locations for
22 channelizing lines at exit and entrance ramp gores—5 years from the effective date of
23 the Final Rule for the 2009 MUTCD.

24 ~~Section 3B.07 Warrants for Use of Edge Lines—new section in Millennium Edition—~~
25 ~~January 3, 2003.~~ no longer relevant

26 Section 3B.09 Lane Reduction Transition Markings—use of dotted lines for lane
27 reductions—5 years from the effective date of the Final Rule for the 2009 MUTCD.

28 Section 3B.16 Stop and Yield Lines—stop lines shall not be used for yield conditions—5
29 years from the effective date of the Final Rule for the 2009 MUTCD.

30 Section 3B.17 Do Not Block Intersection Markings—new Section—5 years from the
31 effective date of the Final Rule for the 2009 MUTCD.

32 Section 3B.18 Crosswalk Markings—gap between transverse lines of a crosswalk—~~10 years~~
33 ~~from the effective date of the Final Rule for the 2003 MUTCD~~ December 22, 2013.
34 edited to increase clarity now that the effective date is known

35 Section 3B.20 Pavement Word, ~~and~~ Symbol, ~~and~~ Arrow Markings—~~typical~~ spacing of lane-
36 use arrows in two-way left-turn lanes shown in Figure 3B-7—~~5 years from the effective~~
37 ~~date of the Final Rule for the 2003 MUTCD~~ December 22, 2008. edited to increase
38 clarity now that the effective date is known

39 Section 3B.20 Pavement Word, Symbol, and Arrow Markings—lane-use arrows should be
40 used for certain conditions and should be located in certain positions—5 years from the
41 effective date of the Final Rule for the 2009 MUTCD.

42 Section 3B.20 Pavement Word, Symbol, and Arrow Markings—ONLY marking should be
43 used with turn arrows in dropped lanes—5 years from the effective date of the Final
44 Rule for the 2009 MUTCD.

45 Section 3B.20 Pavement Word, Symbol, and Arrow Markings—lane reduction arrow
46 should be used where speed is 70 km/h (45 mph) or above—5 years from the effective
47 date of the Final Rule for the 2009 MUTCD.

1 Section 3B.22 Speed Reduction Markings—new Section—5 years from the effective date of
2 the Final Rule for the 2009 MUTCD.

3 Section 3B.24 Preferential Lane Word and Symbol Markings—preferential lane markings
4 for ETC only lanes—5 years from the effective date of the Final Rule for the 2009
5 MUTCD.

6 Section 3B.25 Preferential Lane Longitudinal Markings for Motor Vehicles—markings for
7 buffer-separated and counter-flow preferential lanes—5 years from the effective date of
8 the Final Rule for the 2009 MUTCD.

9 Section 3B.26 Chevron and Diagonal Crosshatching Markings—requirement to use
10 chevron markings in gores rather than optional diagonal markings—5 years from the
11 effective date of the Final Rule for the 2009 MUTCD.

12 Sections 3B.27 and 3B.28 Speed Hump Markings and Advance Speed Hump Markings—if
13 used, shall be as depicted—5 years from the effective date of the Final Rule for the 2009
14 MUTCD.

15 Section 3B.29 Markings for Toll Plazas—recommended use of solid lane lines and required
16 design of optional purple markings—5 years from the effective date of the Final Rule
17 for the 2009 MUTCD.

18 Chapter 3C Roundabout Markings—changes from existing requirements and
19 recommendations—5 years from the effective date of the Final Rule for the 2009
20 MUTCD.

21 Section 3D.03 Delineator Application—delineators should be used with guardrail or
22 longitudinal barriers—10 years from the effective date of the Final Rule for the 2009
23 MUTCD.

24 Section 4C.04 Warrant 3, Peak Hour—signal should be actuated if this is only warrant
25 met—15 years from the effective date of the Final Rule for the 2009 MUTCD.

26 Section 4C.05 Warrant 4, Pedestrian Volume—signal should also control side street or
27 driveway if installed at such location based on this warrant only—15 years from the
28 effective date of the Final Rule for the 2009 MUTCD.

29 Section 4C.06 Warrant 5, School Crossing—signal should also control side street or
30 driveway if installed at such location based on this warrant only—15 years from the
31 effective date of the Final Rule for the 2009 MUTCD.

32 Section 4D.01 General—location of signalized midblock crosswalks—~~10 years from the~~
33 ~~effective date of the Final Rule for the 2003 MUTCD~~ December 22, 2013. **edited to**
34 **increase clarity now that the effective date is known**

35 Section 4D.04 Signal Indications – Design, Illumination, Color, and Shape—strobes shall
36 not be used—5 years from the effective date of the Final Rule for the 2009 MUTCD.

37 Section ~~4D.05~~ 4D.10 Application of Steady Signal Indications—Item B.4 in the third
38 paragraph of the Standard **edited to increase consistency**—~~5 years from the effective~~
39 ~~date of the Final Rule for the 2003 MUTCD~~ December 22, 2008. **edited to increase**
40 **clarity now that the effective date is known**

41 Section 4D.11 Number of Signal Faces on an Approach—various recommendations for
42 signal displays for approaches with speeds of more than 60 km/h or more than 40
43 mph—15 years from the effective date of the Final Rule for the 2009 MUTCD.

44 Section 4D.12 Visibility, Aiming, and Shielding of Signal Faces—backplates should be used
45 for approaches with speeds of more than 60 km/h or more than 40 mph—15 years from
46 the effective date of the Final Rule for the 2009 MUTCD.

1 Section 4D.13 Lateral Positioning of Signal Faces—overhead-mounted separate flashing
2 yellow arrow and flashing red arrow turn signal faces shall be over the turn lane—15
3 years from the effective date of the Final Rule for the 2009 MUTCD.

4 Section 4D.17 Signal Indications for Left-Turn Movements – General—a protected only
5 mode left-turn movement that does not begin and terminate at the same time as the
6 adjacent through movement shall not be provided on an approach unless an exclusive
7 left-turn lane exists—10 years from the effective date of the Final Rule for the 2009
8 MUTCD.

9 Section 4D.19 Signal Indications for Protected Only Mode Left-Turn Movements—
10 elimination of the use of a circular red signal indication in a protected only left-turn
11 signal face for an approach where the CIRCULAR GREEN and left-turn GREEN
12 ARROW signal indications do not begin and terminate together—15 years from the
13 effective date of the Final Rule for the 2009 MUTCD.

14 Section 4D.21 Signal Indications for Right-Turn Movements – General—a protected only
15 mode right-turn movement that does not begin and terminate at the same time as the
16 adjacent through movement shall not be provided on an approach unless an exclusive
17 right-turn lane exists—10 years from the effective date of the Final Rule for the 2009
18 MUTCD.

19 Section 4D.25 Signal Indications for Approaches With Shared Left-Turn/Right-Turn Lanes
20 and No Through Movement—required signal displays for approaches with a shared
21 left-turn/right-turn lane and no through movement—15 years from the effective date of
22 the Final Rule for the 2009 MUTCD.

23 Section 4D.26 Yellow Change and Red Clearance Intervals—red clearance interval should
24 be provided when indicated by engineering practices, and durations of yellow change
25 and red clearance intervals shall be determined using engineering practices—5 years
26 from the effective date of the Final Rule for the 2009 MUTCD.

27 Section 4D.27 Preemption and Priority Control of Traffic Control Signals—signals with
28 railroad preemption should have backup power—10 years from the effective date of the
29 Final Rule for the 2009 MUTCD.

30 ~~Section 4D.12~~ 4D.31 Flashing Operation of Traffic Control Signals – Transition Out of
31 Flashing Mode—duration of steady red clearance interval in change from red-red
32 flashing mode to steady (stop-and-go) mode—10 years from the effective date of the
33 ~~Final Rule for the 2003 MUTCD~~ December 22, 2013. **edited to increase clarity now that**
34 **the effective date is known**

35 Section 4D.34 Use of Signs at Signalized Locations—overhead lane-use signs should be
36 provided for lane drops and shared through/turn lanes at signalized locations—10 years
37 from the effective date of the Final Rule for the 2009 MUTCD.

38 ~~Section 4E.06 Accessible Pedestrian Signals—new section in Millennium Edition—January~~
39 ~~17, 2005.~~ **no longer relevant**

40 Section 4E.06 Accessible Pedestrian Signals—accessible pedestrian signals shall have both
41 audible and vibrotactile features—10 years from the effective date of the Final Rule for
42 the 2009 MUTCD.

43 Section 4E.06 Accessible Pedestrian Signals—speech walk messages shall only be used
44 where it is infeasible to install two pushbuttons more than 3 m (10 ft) apart on same
45 corner—10 years from the effective date of the Final Rule for the 2009 MUTCD.

46 Section 4E.07 Countdown Pedestrian Signals—new Section in 2003 MUTCD added to
47 increase accuracy—10 years from the effective date of the Final Rule for the 2003
48 ~~MUTCD~~ December 22, 2013 **edited to increase clarity now that the effective date is**

1 ~~known~~ for countdown pedestrian signal hardware; ~~3 years from the effective date of the~~
2 ~~Final Rule for the 2003 MUTCD for operational requirements of countdown pedestrian~~
3 ~~signals.~~ ~~second portion is no longer relevant~~

4 Section 4E.07 Countdown Pedestrian Signals—addition of pedestrian change interval
5 countdown displays to existing pedestrian signal heads—10 years from the effective date
6 of the Final Rule for the 2009 MUTCD.

7 Section 4E.08 Pedestrian Detectors—required positioning of pedestrian pushbuttons—15
8 years from the effective date of the Final Rule for the 2009 MUTCD.

9 Section 4E.08 Pedestrian Detectors—new requirements in this Section except positioning of
10 pedestrian pushbuttons—10 years from the effective date of the Final Rule for the 2009
11 MUTCD.

12 ~~Section 4E.09 Accessible Pedestrian Signal Detectors—new section in Millennium~~
13 ~~Edition—January 17, 2005.~~ ~~no longer relevant~~

14 Section 4E.09 Accessible Pedestrian Signal Detectors—locator tone shall be provided with
15 accessible pedestrian signal pushbutton and other new requirements for accessible
16 pedestrian signal pushbuttons—10 years from the effective date of the Final Rule for the
17 2009 MUTCD.

18 Section 4E.10 Pedestrian Intervals and Signal Phases—pedestrian clearance time sufficient
19 to travel to far side of the traveled way—~~5 years from the effective date of the Final~~
20 ~~Rule for the 2003 MUTCD~~ December 22, 2008. ~~edited to increase clarity now that the~~
21 ~~effective date is known~~

22 Section 4E.10 Pedestrian Intervals and Signal Phases—pedestrian change interval shall not
23 extend into yellow change and red clearance intervals—10 years from the effective date
24 of the Final Rule for the 2009 MUTCD.

25 Section 4E.10 Pedestrian Intervals and Signal Phases—slower recommended walking speed
26 for calculating pedestrian clearance time—5 years from the effective date of the Final
27 Rule for the 2009 MUTCD.

28 Section 4E.10 Pedestrian Intervals and Signal Phases—if pedestrian clearance time only
29 enough to get to median, additional pedestrian signal faces, pushbuttons, and signs shall
30 be provided in median—10 years from the effective date of the Final Rule for the 2009
31 MUTCD.

32 Chapter 4F Pedestrian Hybrid Signals—new Chapter—10 years from the effective date of
33 the Final Rule for the 2009 MUTCD.

34 Section 4G.04 Emergency-Vehicle Hybrid Signals—new Section—10 years from the
35 effective date of the Final Rule for the 2009 MUTCD.

36 Section 4I.02 Design of Freeway Entrance Ramp Control Signals—two signal faces for each
37 lane with staggered release ramp metering signals—10 years from the effective date of
38 the Final Rule for the 2009 MUTCD.

39 Section 4J.02 Design and Location of Movable Bridge Signals and Gates—use of vertical
40 stripes on gates—10 years from the effective date of the Final Rule for the 2009
41 MUTCD.

42 Chapter 4K Toll Plaza Traffic Signals—new Chapter—10 years from the effective date of
43 the Final Rule for the 2009 MUTCD.

44 Section 4L.03 Warning Beacon—beacons with toll plaza canopy signs should be distinctly
45 separate from lane-use signals—10 years from the effective date of the Final Rule for
46 the 2009 MUTCD.

1 Section 4M.01 Application of Lane-Use Control Signals—requirement to use lane-use
2 control signals over the centers of controlled lanes at toll plazas—10 years from the
3 effective date of the Final Rule for the 2009 MUTCD.

4 Section 4N.02 In-Roadway Warning Lights at Crosswalks—requirement for sign with each
5 pushbutton and requirement for additional pedestrian detector in median if period of
6 operation is only enough to get to median—10 years from the effective date of the Final
7 Rule for the 2009 MUTCD.

8 ~~Section 5C.05 NARROW BRIDGE Sign (W5-2)—elimination of symbol sign—10 years~~
9 ~~from the effective date of the Final Rule for the 2003 MUTCD December 22, 2013.~~
10 **edited to increase clarity now that the effective date is known**

11 ~~Section 6D.01 Pedestrian Considerations—all new provisions for pedestrian accessibility—~~
12 ~~5 years from the effective date of the Final Rule for the 2003 MUTCD December 22,~~
13 ~~2008.~~ **edited to increase clarity now that the effective date is known**

14 ~~Section 6D.02 Accessibility Considerations—new Section in 2003 MUTCD—~~ **added to**
15 **improve clarity** ~~5 years from the effective date of the Final Rule for the MUTCD~~
16 ~~December 22, 2008.~~ **edited to increase clarity now that the effective date is known**

17 ~~Section 6D.03 Worker Safety Considerations—all workers within the right-of-way shall~~
18 ~~wear high-visibility apparel requirements—3 2 years from the effective date of the Final~~
19 ~~Rule for the 2003 2009 MUTCD.~~

20 ~~Section 6E.02 High-Visibility Safety Apparel—all flaggers within the right-of-way shall~~
21 ~~wear high-visibility apparel requirements for flaggers—3 2 years from the effective date~~
22 ~~of the Final Rule for the 2003 2009 MUTCD.~~

23 Sections 6E.04 through 6E.06 Automated Flagger Assistance Devices—new Sections—5
24 years from the effective date of the Final Rule for the 2009 MUTCD.

25 ~~Section 6F.03 Sign Placement—crashworthiness of sign supports—January 17, 2005.~~ **no**
26 **longer relevant**

27 Section 6F.30 NEW TRAFFIC PATTERN AHEAD Sign (W23-2)—new W23-2 sign—5
28 years from the effective date of the Final Rule for the 2009 MUTCD.

29 Section 6F.57 Portable Changeable Message Signs—new requirements—5 years from the
30 effective date of the Final Rule for the 2009 MUTCD.

31 ~~Section 6F.58 Channelizing Devices—crashworthiness—January 17, 2005.~~ **no longer**
32 **relevant**

33 ~~Section 6F.61 Cones—width of retroreflective stripes—5 years from the effective date of~~
34 ~~the Final Rule for the 2003 MUTCD December 22, 2008.~~ **edited to increase clarity now**
35 **that the effective date is known**

36 ~~Section 6F.63 Type I, H, or III Barricades—crashworthiness—January 17, 2005.~~ **no longer**
37 **relevant**

38 ~~Section 6F.66 Longitudinal Channelizing Barricades—crashworthiness—January 17, 2005.~~
39 **no longer relevant**

40 Section 6F.70 Temporary Lane Separators—new Section—5 years from the effective date
41 of the Final Rule for the 2009 MUTCD.

42 ~~Section 6F.82 Crash Cushions—crashworthiness—January 17, 2005.~~ **no longer relevant**

43 Typical Applications 37, 38, 39, 42, and 44—arrow board required for each lane closed—2
44 years from the effective date of the Final Rule for the 2009 MUTCD.

1 Section 7B.07 Sign Color for School Warning Signs—required use of fluorescent yellow-
2 green background color for school signs and their related supplemental plaques—10
3 years from the effective date of the Final Rule for the 2009 MUTCD.

4 Section 7B.10 School Advance ~~Warning Crossing~~ Assembly (~~S1-1 with Supplemental~~
5 ~~Plaque~~)—use of AHEAD (W16-9P) plaque or distance plaque (W16-2P or W16-2aP)—
6 January 17, 2011.

7 Section 7B.11 School ~~Crosswalk Warning~~ Crossing Assembly (~~S1-1 with Diagonal~~
8 ~~Downward Pointing Arrow~~)—elimination of crosswalk lines from crossing signs and use
9 of diagonal downward pointing arrow (W16-7P) supplemental plaque—January 17,
10 2011.

11 Section 7B.12 School Bus Stop Ahead Sign (S3-1)—new S3-1 sign—10 years from the
12 effective date of the Final Rule for the 2009 MUTCD.

13 Section 7B.13 SCHOOL BUS TURN AHEAD Sign (S3-2)—new S3-2 sign—10 years from
14 the effective date of the Final Rule for the 2009 MUTCD.

15 Section 7B.15 Reduced ~~Speed~~ School ~~Zone~~ Speed Limit ~~edited to increase consistency~~
16 Ahead Sign (S4-5, S4-5a)—~~removal of REDUCED SPEED AHEAD (R2-5a) signs and~~
17 ~~use of S4-5 or S4-5a warning signs instead—~~ ~~added to improve clarity~~ ~~15 years from the~~
18 ~~effective date of the Final Rule for the 2003 MUTCD~~ December 22, 2018. ~~edited to~~
19 ~~increase clarity now that the effective date is known~~

20 Section 7B.16 END SCHOOL ZONE Sign (S5-2)—required use of S5-2 sign—10 years
21 from the effective date of the Final Rule for the 2009 MUTCD.

22 Section 7D.04 Uniform of Adult Crossing Guards ~~and Student Patrols~~—~~new~~ requirements
23 for high-visibility apparel for adult crossing guards—~~5~~ 2 years from the effective date of
24 the Final Rule for the ~~2003~~ 2009 MUTCD.

25 Section 8B.03 Highway-Rail Grade Crossing (Crossbuck) Sign (R15-1) and Number of
26 Tracks ~~Sign~~ Plaque (R15-2P)—retroreflective strip on crossbuck support—January 17,
27 2011.

28 Sections 8B.04 and 8B.05 STOP or YIELD Signs at Grade Crossings—required use of
29 STOP or YIELD signs with Crossbuck signs at passive grade crossings—5 years from
30 the effective date of the Final Rule for the 2009 MUTCD.

31 ~~Section 8B.04 Highway-Rail Grade Crossing Advance Warning Signs (W10 Series)—~~
32 ~~removal of existing W10-6 series signs—January 17, 2006.~~ ~~no longer relevant~~

33 Section 8B.06 Highway-Rail Grade Crossing Advance Warning Signs (W10 Series)—
34 required use of No Signal or SIGNAL AHEAD plaques with W10-1 through W10-4
35 signs—5 years from the effective date of the Final Rule for the 2009 MUTCD.

36 Section 8B.13 Emergency Notification Sign (I-13)—new design—10 years from the effective
37 date of the Final Rule for the 2009 MUTCD.

38 Section 8C.04 Automatic Gates—use of vertical stripes—10 years from the effective date of
39 the Final Rule for the 2009 MUTCD.

40 Section 8C.06 Wayside Horn Systems—new Section—5 years from the effective date of the
41 Final Rule for the 2009 MUTCD.

42 Section 8C.08 Traffic Control Signals at or Near Highway-Rail Grade Crossings—pre-
43 signals—~~10 years from the effective date of the Final Rule for the 2003 MUTCD~~
44 December 22, 2013. ~~edited to increase clarity now that the effective date is known~~

45 Section 8C.08 Traffic Control Signals at or Near Highway-Rail Grade Crossings—signals
46 with railroad preemption should have backup power—10 years from the effective date
47 of the Final Rule for the 2009 MUTCD.

1 Section 8C.09 Highway-Rail Grade Crossing(s) Within or In Close Proximity to
2 Roundabouts, Traffic Circles, or Circular Intersections—requirements for grade
3 crossings near roundabouts—5 years from the effective date of the Final Rule for the
4 2009 MUTCD.

5 Chapter 8E Pathway-Rail Grade Crossings—new Chapter—5 years from the effective date
6 of the Final Rule for the 2009 MUTCD.

7 Section 9B.01 Application and Placement of Signs—minimum 2.4 m (8 ft) vertical
8 clearance of overhead traffic control devices over shared-use paths—10 years from the
9 effective date of the Final Rule for the 2009 MUTCD.

10 ~~Section 9B.04 Bicycle Lane Signs (R3-17, R3-17a, R3-17b)—deletion of preferential lane~~
11 ~~symbol (diamond) for bicycle lane signs—January 17, 2006. no longer relevant~~

12 Section 9B.06 Bicycles May Use Full Lane Sign (R4-11)—new R4-11 sign—10 years from
13 the effective date of the Final Rule for the 2009 MUTCD.

14 Section 9B.09 Selective Exclusion Signs—new signs—10 years from the effective date of the
15 Final Rule for the 2009 MUTCD.

16 **Section 9B.18 Bicycle Warning and Combined Bicycle/Pedestrian Signs (W11-1 and W11-**
17 **15)—elimination of crosswalk lines from crossing signs and use of diagonal downward**
18 **pointing arrow (W16-7P) supplemental plaque if at the crossing—January 17, 2011.**

19 Section 9B.18 Bicycle Warning and Combined Bicycle/Pedestrian Signs (W11-1 and W11-
20 15)—new W11-15 sign—10 years from the effective date of the Final Rule for the 2009
21 MUTCD.

22 Section 9B.19 Other Bicycle Warning Signs—BIKEWAY NARROWS replaced by PATH
23 NARROWS—10 years from the effective date of the Final Rule for the 2009 MUTCD.

24 Section 9B.20 Bicycle Guide Signs (D1-1b, D1-1c, D1-2b, D1-2c, D1-3b, D1-3c, D11-1, D11-
25 1c)—new designs for guide and destination signs—10 years from the effective date of
26 the Final Rule for the 2009 MUTCD.

27 Section 9B.21 Bicycle Route Signs (M1-8, M1-8a, M1-9)—new designs for bike route
28 number signs—10 years from the effective date of the Final Rule for the 2009 MUTCD.

29 Section 9B.24 Reference Location Signs (D10-1 through D10-3) and Intermediate Reference
30 Location Signs (D10-1a through D10-3a)—new Section—10 years from the effective
31 date of the Final Rule for the 2009 MUTCD.

32 Section 9B.25 Mode-Specific Guide Signs for Shared-Use Paths (D11-1a, D11-1b, D11-2,
33 D11-3, D11-4)—new Section—10 years from the effective date of the Final Rule for the
34 2009 MUTCD.

35 ~~Chapter 9C Markings—deletion of preferential lane symbol (diamond) for bicycle~~
36 ~~pavement markings—January 17, 2007. no longer relevant~~

37 Section 9C.07 Shared Lane Marking—new Section—5 years from the effective date of the
38 Final Rule for the 2009 MUTCD.

39 **Part 10 Traffic Controls for Highway-Light Rail Transit Grade Crossings—automatic**
40 **gates, flashing-light signals, and blank-out signs—January 17, 2011.**

41 Section 10C.02 Highway-Rail Grade Crossing Advance Warning Signs (W10 Series)—
42 required use of No Signal or SIGNAL AHEAD plaques with W10-1 through W10-4
43 signs—5 years from the effective date of the Final Rule for the 2009 MUTCD.

44 ~~Section 10C.15 Highway Rail Grade Crossing Advance Warning Signs (W10 Series)—~~
45 ~~removal of existing W10-6 series signs—January 17, 2006. no longer relevant~~

1 Section 10C.15 Highway-Rail Grade Crossing Advance Warning Signs (W10 Series)—
2 required use of No Signal or SIGNAL AHEAD plaques with W10-1 through W10-4
3 signs—5 years from the effective date of the Final Rule for the 2009 MUTCD.

4 Section 10C.21 Emergency Notification Sign (I-13)—new design—10 years from the
5 effective date of the Final Rule for the 2009 MUTCD.

6 Section 10D.01 Introduction—audible device requirement—5 years from the effective date
7 of the Final Rule for the 2009 MUTCD.

8 Section 10D.05 Wayside Horn Systems—new Section—5 years from the effective date of
9 the Final Rule for the 2009 MUTCD.

10 Section 10D.08 Use of Traffic Control Signals for Control of Light Rail Transit Vehicles at
11 Grade Crossings —recommended design of light rail transit signal indications—15
12 years from the effective date of the Final Rule for the 2009 MUTCD.

13 Section 10D.10 Highway-Light Rail Transit Grade Crossing(s) Within or In Close
14 Proximity to Roundabouts, Traffic Circles, or Circular Intersections—requirements for
15 grade crossings near roundabouts—5 years from the effective date of the Final Rule for
16 the 2009 MUTCD.

17 **Chapter 10F Pathway-Light Rail Transit Grade Crossings—new Chapter—5 years from**
18 **the effective date of the Final Rule for the 2009 MUTCD.**

19 Option:

20 In order for maintenance personnel to understand what to do when replacing a damaged non-
21 compliant traffic control device, agencies may establish a policy regarding whether to replace the
22 device in kind or to replace it with a compliant device.

23 Support:

24 Often it is desirable to upgrade to a compliant device at the time of this maintenance of a
25 damaged device. However, it might be appropriate to replace the damaged non-compliant device
26 in kind at the time of this maintenance activity if engineering judgment indicates that:

- 27 A. One compliant device in the midst of a series of adjacent non-compliant devices could
28 potentially be confusing to road users; and/or
29 B. The anticipated schedule for replacement of the whole series of non-compliant devices
30 will result in achieving timely compliance with the MUTCD.

31 32 33 34 35 **CHAPTER 1A. GENERAL**

36 **Section 1A.01 Purpose of Traffic Control Devices**

37 Support:

38 The purpose of traffic control devices, as well as the principles for their use, is to promote
39 highway safety and efficiency by providing for the orderly movement of all road users on streets,
40 ~~and~~ highways, bikeways, public facilities, and private property open to public travel throughout
41 the Nation.

42 Traffic control devices notify road users of regulations and provide warning and guidance
43 needed for the reasonably safe, uniform, and efficient operation of all elements of the traffic
44 stream in a manner intended to minimize the occurrences of crashes.

1 **Reason: It was recommended by RWSTC and approved by Council on January 2007**
2 **that “reasonably safe” could be retained in this Section since it pertains to the**
3 **general purpose of traffic control devices but should be deleted where it referred to**
4 **a specific device. However, the deletion in this Section is not totally objectionable.**
5 **The additional clause on “crashes” is unnecessary and superfluous text and should**
6 **be deleted.**
7

8 **Standard:**

9 **Traffic control devices or their supports shall not bear any advertising message or any**
10 **other message that is not related to traffic control.**

11 Support:

12 Tourist-oriented directional signs and Specific Service signs are not considered advertising;
13 rather, they are classified as motorist service signs.

14
15 **Section 1A.02 Principles of Traffic Control Devices**

16 Support:

17 This Manual contains the basic principles that govern the design and use of traffic control
18 devices for all streets, ~~and~~ highways, bikeways, public facilities, and private property open to
19 public travel regardless of type or class or the public agency or official having jurisdiction. This
20 Manual’s text specifies the restriction on the use of a device if it is intended for limited
21 application or for a specific system. It is important that these principles be given primary
22 consideration in the selection and application of each device.

23 Guidance:

24 To be effective, a traffic control device should meet five basic requirements:

- 25 A. Fulfill a need;
- 26 B. Command attention;
- 27 C. Convey a clear, simple meaning;
- 28 D. Command respect from road users; and
- 29 E. Give adequate time for proper response.

30 Design, placement, operation, maintenance, and uniformity are aspects that should be
31 carefully considered in order to maximize the ability of a traffic control device to meet the five
32 requirements listed in the previous paragraph. Vehicle speed should be carefully considered as an
33 element that governs the design, operation, placement, and location of various traffic control
34 devices.

35 Support:

36 The definition of the word “speed” varies depending on its use. The definitions of specific
37 speed terms are contained in Section 1A.13.

38 Guidance:

39 The actions required of road users to obey regulatory devices should be specified by State
40 statute, or in cases not covered by State statute, by local ordinance or resolution. Such statutes,
41 ordinances, and resolutions should be **edited to increase clarity** consistent with the “Uniform
42 Vehicle Code” (see Section 1A.11).

43 The proper use of traffic control devices should provide the reasonable and prudent road user
44 with the information necessary to ~~reasonably safely~~ efficiently and ~~lawfully~~ use the streets,
45 highways, pedestrian facilities, and bikeways efficiently and lawfully.

46 **Reason: Editorially revised to provide improved wording.**

1 Support:

2 Uniformity of the meaning of traffic control devices is vital to their effectiveness. The
3 meanings ascribed to devices in this Manual are in general accord with the publications
4 mentioned in Section 1A.11.

5 **Section 1A.03 Design of Traffic Control Devices**

6 Guidance:

7 Devices should be designed so that features such as size, shape, color, composition, lighting
8 or retroreflection, and contrast are combined to draw attention to the devices; that size, shape,
9 color, and simplicity of message combine to produce a clear meaning; that legibility and size
10 combine with placement to permit adequate time for response; and that uniformity, size,
11 legibility, and reasonableness of the message combine to command respect.

12 **Standard:**

13 ~~All symbols shall be unmistakably similar to or mirror images of the adopted symbol~~
14 ~~signs, all of which are shown in the “Standard Highway Signs and Markings” book (see~~
15 ~~Section 1A.11). Symbols and colors shall not be modified unless otherwise stated herein.~~
16 ~~All symbols and colors for signs not shown in the “Standard Highway Signs and Markings”~~
17 ~~book shall follow the procedures for experimentation and change described in Section~~
18 ~~1A.10. this paragraph was relocated to Section 2A.06~~

19 **Guidance:**

20 Aspects of a device’s [standard](#) design should be modified only if there is a demonstrated
21 need.

22 Support:

23 An example of modifying a device’s design would be to modify the ~~Side Road (W2-2)~~
24 [Combination Horizontal Alignment/Intersection \(W1-10\)](#) sign to show ~~a second offset~~
25 intersecting [side roads on both sides rather than on just one side of the major road within the](#)
26 [curve](#).

27 Option:

28 ~~Highway agencies may develop word message signs to notify road users of special~~
29 ~~regulations or to warn road users of a situation that might not be readily apparent. Unlike symbol~~
30 ~~signs and colors, new word message signs may be used without the need for experimentation.~~
31 ~~this text was relocated to Section 2A.06~~ With the exception of symbols and colors, minor
32 modifications in the specific design elements of a device may be made provided the essential
33 appearance characteristics are preserved. ~~Although the standard design of symbol signs cannot be~~
34 ~~modified, it may be appropriate to change the orientation of the symbol to better reflect the~~
35 ~~direction of travel. this text was relocated to Section 2A.06~~

36 **Section 1A.04 Placement and Operation of Traffic Control Devices**

37 Guidance:

38 Placement of a traffic control device should be within the road user’s view so that adequate
39 visibility is provided. To aid in conveying the proper meaning, the traffic control device should
40 be appropriately positioned with respect to the location, object, or situation to which it applies.
41 The location and legibility of the traffic control device should be such that a road user has
42 adequate time to make the proper response in both day and night conditions.

43 Traffic control devices should be placed and operated in a uniform and consistent manner.

44 Unnecessary traffic control devices should be removed. The fact that a device is in good
45 physical condition should not be a basis for deferring needed removal or change.

1 **Section 1A.05 Maintenance of Traffic Control Devices**

2 Guidance:

3 Functional maintenance of traffic control devices should be used to determine if certain
4 devices need to be changed to meet current traffic conditions.

5 Physical maintenance of traffic control devices should be performed to retain the legibility
6 and visibility of the device, and to retain the proper functioning of the device.

7 Support:

8 Clean, legible, properly mounted devices in good working condition command the respect of
9 road users.

10 **Section 1A.06 Uniformity of Traffic Control Devices**

11 Support:

12 Uniformity of devices simplifies the task of the road user because it aids in recognition and
13 understanding, thereby reducing perception/reaction time. Uniformity assists road users, law
14 enforcement officers, and traffic courts by giving everyone the same interpretation. Uniformity
15 assists public highway officials through efficiency in manufacture, installation, maintenance, and
16 administration. Uniformity means treating similar situations in a similar way. The use of
17 uniform traffic control devices does not, in itself, constitute uniformity. A standard device used
18 where it is not appropriate is as objectionable as a nonstandard device; in fact, this might be
19 worse, because such misuse might result in disrespect at those locations where the device is
20 needed and appropriate.

21 **Section 1A.07 Responsibility for Traffic Control Devices**

22 Standard:

23 The responsibility for the design, placement, operation, maintenance, and uniformity of
24 traffic control devices shall rest with the public agency or the official having jurisdiction.
25 23 CFR 655.603 adopts the Manual on Uniform Traffic Control Devices as the national
26 standard for all traffic control devices installed on any street, highway, or ~~bicycle-trail~~
27 bikeway, public facility, or private property open to public travel. When a State or other
28 Federal agency manual or supplement is required, that manual or supplement shall be in
29 substantial conformance with the ~~#National Manual on Uniform Traffic Control Devices~~
30 MUTCD. edited to increase consistency

31 23 CFR 655.603 also states that traffic control devices on all streets, ~~and~~ highways,
32 public facilities, and private property open to public travel in each State shall be in
33 substantial conformance with standards issued or endorsed by the Federal Highway
34 Administrator.

35 Support:

36 The Introduction of this Manual contains information regarding the meaning of substantial
37 conformance and the applicability of the MUTCD to private property open to public travel.

38 The “Uniform Vehicle Code” (see Section 1A.11) has the following provision in Section 15-
39 104 for the adoption of a uniform ~~M~~manual: edited to increase accuracy

40 “(a) The [State Highway Agency] shall adopt a manual and specification for a uniform
41 system of traffic control devices consistent with the provisions of this code for use upon
42 highways within this State. Such uniform system shall correlate with and so far as
43 possible conform to the system set forth in the most recent edition of the Manual on
44 Uniform Traffic Control Devices for Streets and Highways, and other standards issued or
45 endorsed by the Federal Highway Administrator.”

1 “(b) The Manual adopted pursuant to subsection (a) shall have the force and effect of
2 law.”

3 All States have officially adopted the National MUTCD either in its entirety, with
4 supplemental provisions, or as a separate published document.

5
6 **Guidance:**

7 These individual State Manuals should be reviewed for specific provisions relating to that
8 State.

9 **Reason: Added to clarify to the casual reader that there is a need to review the specific State**
10 **Manuals for local requiremenmts.**

11 The National MUTCD has also been adopted by the National Park Service, the U.S. Forest
12 Service, the U.S. Military Command, the Bureau of Indian Affairs, the Bureau of Land
13 Management, and the U.S. Fish and Wildlife Service.

14 **Guidance:**

15 Additionally, States ~~are encouraged to~~ should adopt Section 15-116 of the “Uniform Vehicle
16 Code,” which states that, “No person shall install or maintain in any area of private property used
17 by the public any sign, signal, marking, or other device intended to regulate, warn, or guide traffic
18 unless it conforms with the State manual and specifications adopted under Section 15-104.”

19 **Section 1A.08 Authority for Placement of Traffic Control Devices**

20 **Standard:**

21 **Traffic control devices, advertisements, announcements, and other signs or messages**
22 **within the highway right-of-way shall be placed only as authorized by a public authority or**
23 **the official having jurisdiction, for the purpose of regulating, warning, or guiding traffic.**

24 **When the public agency or the official having jurisdiction over a street or highway has**
25 **granted proper authority, others such as contractors and public utility companies shall be**
26 **permitted to install temporary traffic control devices in temporary traffic control zones.**
27 **Such traffic control devices shall conform with the Standards of this Manual.**

28 **All regulatory traffic control devices shall be supported by laws, ordinances, or**
29 **regulations.**

30 **Support:**

31 Provisions of this Manual are based upon the concept that effective traffic control depends
32 upon both appropriate application of the devices and reasonable enforcement of the regulations.

33 Although some highway design features, such as curbs, median barriers, guardrails, impact
34 attenuators (crash cushions), speed humps or tables, and textured pavement, have a significant
35 impact on traffic operations and safety, they are not considered to be traffic control devices and
36 provisions regarding their design and use are generally not included in this Manual.

37 Certain types of signs and other devices that do not have any traffic control purpose are
38 sometimes placed within the highway right-of-way by or with the permission of the public agency
39 or the official having jurisdiction over the street or highway. Most of these signs and other
40 devices are not intended for use by road users in general, and their message is only important to
41 individuals who have been instructed in their meanings. These signs and other devices are not
42 considered to be traffic control devices and provisions regarding their design and use are not
43 included in this Manual. Among these signs and other devices are the following:

44 A. Devices whose purpose is to assist highway maintenance personnel. Examples include
45 markers to guide snowplow operators, devices that identify culvert and drop inlet

1 [locations, and devices that precisely identify highway locations for maintenance or](#)
2 [mowing purposes.](#)

3 [B. Devices whose purpose is to assist fire or law enforcement personnel. Examples include](#)
4 [markers that identify fire hydrant locations, signs that identify fire or water district](#)
5 [boundaries, speed measurement pavement markings, and small indicator lights to assist in](#)
6 [enforcement of red light violations.](#)

7 [C. Devices whose purpose is to assist utility company personnel and highway contractors,](#)
8 [such as markers that identify underground utility locations.](#)

9 [D. Signs posting local non-traffic ordinances.](#)

10 [E. Signs giving civic organization meeting information.](#)

11
12 Guidance:

13 **Standard:**

14 [Signs and other devices that do not have any traffic control purpose that are placed within the](#)
15 [highway right-of-way by or with the permission of the public agency or the official having](#)
16 [jurisdiction over the street or highway ~~should~~ shall not be located where they will ~~not~~ interfere](#)
17 [with, or detract from, traffic control devices.](#)

18 **Reason: Revised from Guidance to Standard inserting “shall not” because of the**
19 **importance of not blocking other control devices and the requirement provides the**
20 **jurisdictions more leverage in relocating these other devices.**

21 Guidance:

22 Any unauthorized traffic control device or other sign or message placed on the highway right-
23 of-way by a private organization or individual constitutes a public nuisance and should be
24 removed. All unofficial or nonessential traffic control devices, signs, or messages should be
25 removed.

26 **Section 1A.09 Engineering Study and Engineering Judgment**

27 **Standard:**

28 ~~This Manual describes the application of traffic control devices, but shall not be a legal~~
29 ~~requirement for their installation.~~

30 **Reason: This Standard is a general provision for all devices in the Manual whereas the**
31 **requirements for each specific device is specified in the Sections addressing that**
32 **device. It is superfluous to impose this general requirement relative to all devices**
33 **and then require the device in another part of the manual. This Standard is not**
34 **consistent with the Guidance Statement below.**

35 Guidance:

36 The decision to use a particular device at a particular location should be made [consistent with](#)
37 [the principles of this Manual and, if required by this Manual \(Delete Comma\)](#), on the basis of
38 either an engineering study or the application of engineering judgment. Thus, while this Manual
39 provides Standards, Guidance, and Options for design and application of traffic control devices,
40 this Manual should not be considered a substitute for engineering judgment.

41 Engineering judgment should be exercised in the selection and application of traffic control
42 devices, as well as in the location and design of the roads and streets that the devices
43 complement. Jurisdictions with responsibility for traffic control that do not have engineers on
44 their staffs [who are trained and/or experienced in traffic control devices](#) **added to increase**
45 **accuracy** should seek engineering assistance from others, such as the State transportation agency,
46 their county, a nearby large city, or a traffic engineering consultant.

47 **Section 1A.10 Interpretations, Experimentations, Changes, and Interim Approvals**

1 **Standard:**

2 **Design, application, and placement of traffic control devices other than those adopted in**
3 **this Manual shall be prohibited unless the provisions of this Section are followed.**

4 Support:

5 Continuing advances in technology will produce changes in the highway, vehicle, and road
6 user proficiency; therefore, portions of the system of traffic control devices in this Manual will
7 require updating. In addition, unique situations often arise for device applications that might
8 require interpretation or clarification of this Manual. It is important to have a procedure for
9 recognizing these developments and for introducing new ideas and modifications into the system.

10 **Standard: Support**

11 ~~Except as noted in the Option below, Requests for any interpretation, permission to~~
12 ~~experiment, interim approval, or change shall be sent submitted electronically to the~~
13 ~~Federal Highway Administration (FHWA), Office of Transportation Operations, MUTCD~~
14 ~~team.~~

15 **Guidance:**

16
17 Requests should be submitted electronically to the following e-mail address:
18 MUTCDofficialrequest@dot.gov.

19 Option:

20 ~~Although electronic submittal is strongly preferred by the FHWA, Requests for~~
21 ~~interpretations, permission to experiment, interim approvals, or changes may instead be mailed to~~
22 ~~the Office of Transportation Operations, HOTO-1, Federal Highway Administration, 1200 New~~
23 ~~Jersey Avenue, SE, Washington, DC 20590, if electronic submittal is not possible.~~

24
25 **Reason: There is no reason that this has to be a Standard and that it has to be submitted**
26 **electronically. It may not be convenient for some local jurisdictions. Make it Guidance and**
27 **also allow mailings.**

28 Support:

29 Communications regarding other MUTCD matters that are not related to official requests will
30 receive quicker attention if they are submitted electronically to the MUTCD Team Leader or to
31 the appropriate individual MUTCD team member. Their e-mail addresses are available through
32 the links contained on the “Who’s Who” page on the MUTCD website at
33 http://mutcd.fhwa.dot.gov/team.htm.

34 An interpretation includes a consideration of the application and operation of standard traffic
35 control devices, official meanings of standard traffic control devices, or the variations from
36 standard device designs.

37 Guidance:

38 Requests for an interpretation of this Manual should contain the following information:

- 39 A. A concise statement of the interpretation being sought;
- 40 B. A description of the condition that provoked the need for an interpretation;
- 41 C. Any illustration that would be helpful to understand the request; and
- 42 D. Any supporting research data that is pertinent to the item to be interpreted.

43 Support:

44 Requests to experiment include consideration of field deployment for the purpose of testing
45 or evaluating a new traffic control device, its application or manner of use, or a provision not
46 specifically described in this Manual.

1 A request for permission to experiment will be considered only when submitted by the public
2 agency or private toll facility responsible for the operation of the road or street on which the
3 experiment is to take place.

4 A diagram indicating the process for experimenting with traffic control devices is shown in
5 Figure 1A-1.

6 Guidance:

7 The request for permission to experiment should contain the following:

- 8 A. A statement indicating the nature of the problem.
- 9 B. A description of the proposed change to the traffic control device or application of the
10 traffic control device, how it was developed, the manner in which it deviates from the
11 standard, and how it is expected to be an improvement over existing standards.
- 12 C. Any illustration that would be helpful to understand the traffic control device or use of
13 the traffic control device.
- 14 D. Any supporting data explaining how the traffic control device was developed, if it has
15 been tried, in what ways it was found to be adequate or inadequate, and how this choice
16 of device or application was derived.
- 17 E. A legally binding statement certifying that the concept of the traffic control device is not
18 protected by a patent or copyright. (An example of a traffic control device concept would
19 be countdown pedestrian signals in general. Ordinarily an entire general concept would
20 not be patented or copyrighted, but if it were it would not be acceptable for
21 experimentation unless the patent or copyright owner signs a waiver of rights acceptable
22 to the FHWA. An example of a patented or copyrighted specific device within the
23 general concept of countdown pedestrian signals would be a manufacturer's design for its
24 specific brand of countdown signal, including the design details of the housing or
25 electronics that are unique to that manufacturer's product. As long as the general concept
26 is not patented or copyrighted, it is acceptable for experimentation to incorporate the use
27 of one or more patented devices of one or several manufacturers.)
- 28 F. The time period and location(s) of the experiment.
- 29 G. A detailed research or evaluation plan that must provide for close monitoring of the
30 experimentation, especially in the early stages of its field implementation. The
31 evaluation plan should include before and after studies as well as quantitative data
32 describing the performance of the experimental device.
- 33 H. An agreement to restore the site of the experiment to a condition that complies with the
34 provisions of this Manual within 3 months following the end of the time period of the
35 experiment. This agreement must also provide that the agency sponsoring the
36 experimentation will terminate the experimentation at any time that it determines
37 significant safety concerns are directly or indirectly attributable to the experimentation.
38 The FHWA's Office of Transportation Operations has the right to terminate approval of
39 the experimentation at any time if there is an indication of safety concerns. If, as a result
40 of the experimentation, a request is made that this Manual be changed to include the
41 device or application being experimented with, the device or application will be
42 permitted to remain in place until an official rulemaking action has occurred.
- 43 I. An agreement to provide semiannual progress reports for the duration of the
44 experimentation, and an agreement to provide a copy of the final results of the
45 experimentation to the FHWA's Office of Transportation Operations within 3 months
46 following completion of the experimentation. The FHWA's Office of Transportation
47 Operations has the right to terminate approval of the experimentation if reports are not
48 provided in accordance with this schedule.

49 Support:

1 A change includes consideration of a new device to replace a present standard device, an
2 additional device to be added to the list of standard devices, or a revision to a traffic control
3 device application or placement criteria.

4 Guidance:

5 Requests for a change to this Manual should contain the following information:

- 6 A. A statement indicating what change is proposed;
- 7 B. Any illustration that would be helpful to understand the request; and
- 8 C. Any supporting research data that is pertinent to the item to be reviewed.

9 Support: **revisions to the interim approval process were to improve clarity**

10 ~~Requests for~~ Interim approval ~~include consideration of allowing~~ allows interim use, pending
11 official rulemaking, of a new traffic control device, a revision to the application or manner of use
12 of an existing traffic control device, or a provision not specifically described in this Manual. The
13 FHWA issues an Interim Approval by official memorandum signed by the Associate
14 Administrator for Operations and posts this memorandum on the MUTCD website. ~~If granted,~~
15 The issuance by FHWA of an interim approval will typically result in the traffic control device or
16 application being placed into the next scheduled rulemaking process for revisions to this Manual.
17 ~~The device or application will be permitted to remain in place, under any conditions established~~
18 ~~in the interim approval, until an official rulemaking action has occurred.~~

19 Interim approval is considered based on the results of successful experimentation, results of
20 analytical or laboratory studies, and/or review of non-U.S. experience with a traffic control device
21 or application. Interim approval considerations include an assessment of relative risks, benefits,
22 ~~and~~ costs, impacts, and other factors.

23 Interim approval allows for optional use of a traffic control device or application and does not
24 create a new mandate or recommendation for use. Interim approval includes conditions that
25 jurisdictions agree to comply with in order to use the traffic control device or application until an
26 official rulemaking action has occurred.

27 **Standard:**

28 A jurisdiction desiring to use a traffic control device for which FHWA has issued an
29 interim approval shall request permission from FHWA.

30 Guidance:

31 The request for permission to place a traffic control device under an interim approval should
32 contain the following:

- 33 ~~A. A statement indicating the nature of the problem.~~
- 34 ~~B. A description of the proposed change to the traffic control device or application of the~~
35 ~~traffic control device, how it was developed, the manner in which it deviates from the~~
36 ~~standard, and how it is expected to be an improvement over existing standards.~~
- 37 A. The location(s) A description of where ~~it~~ the device will be used, ~~and any illustration that~~
38 ~~would be helpful to understand the traffic control device or use of the traffic control~~
39 ~~device.~~ such as a list of specific locations or highway segments or types of situations, or a
40 statement of the intent to use the device jurisdiction-wide;
- 41
- 42 B. An agreement to abide by the specific conditions for use of the device as contained in the
43 FHWA's interim approval document;
- 44 C. An agreement to maintain and continually update a list of locations where the device has
45 been installed; and
- 46 D. An agreement to:

- 1 1. Restore the site(s) of the interim approval to a condition that complies with the
- 2 provisions in this Manual within 3 months following the issuance of a Final Rule on
- 3 this traffic control device; and
- 4 2. ~~This agreement must also provide that the agency sponsoring the interim approval~~
- 5 ~~will~~ Terminate use of the device or application installed under the interim approval at
- 6 any time that it determines significant safety concerns are directly or indirectly
- 7 attributable to the device or application. The FHWA’s Office of Transportation
- 8 Operations has the right to terminate the interim approval at any time if there is an
- 9 indication of safety concerns.

10 Option:

11 A State may submit a request for the use of a device under interim approval for all

12 jurisdictions in that State, as long as the request contains the information listed in the Guidance

13 above.

14 ~~Standard~~ Guidance:

15 ~~Once an interim approval is granted to any jurisdiction for a particular traffic control device~~

16 ~~or application, subsequent jurisdictions shall be granted interim approval for that device or~~

17 ~~application by submitting a letter to the FHWA’s Office of Transportation Operations indicating~~

18 ~~they will abide by Item F above and the specific conditions contained in the original interim~~

19 ~~approval.~~

20 A local jurisdiction using a traffic control device or application under an interim

21 approval that was granted by FHWA either directly to that jurisdiction or on a statewide

22 basis based on the State’s request should inform the State of the locations of such use.

23 Option:

24 A device or application installed by a jurisdiction under an interim approval may remain in

25 place, under any conditions established in the interim approval, until an official rulemaking action

26 has occurred.

27 Support:

28 A diagram indicating the process for incorporating new traffic control devices into this

29 Manual is shown in Figure 1A-2.

30 ~~Procedures for revising this Manual are set out in the Federal Register of June 30, 1983 (48~~

31 ~~FR 30145).~~ **deleted because these procedures are no longer used**

32 For additional information concerning interpretations, experimentation, changes, or interim

33 approvals, ~~write to the FHWA, 400 Seventh Street, SW, HOTO, Washington, DC 20590, or~~ visit

34 the MUTCD website at <http://mutcd.fhwa.dot.gov>.

35 **Section 1A.11 Relation to Other Publications**

36 **Standard:**

37 **To the extent that they are incorporated by specific reference, the latest editions of the**

38 **following publications, or those editions specifically noted, shall be a part of this Manual:**

39 **“Standard Highway Signs and Markings” book (FHWA); and “Color Specifications for**

40 **Retroreflective Sign and Pavement Marking Materials” (appendix to subpart F of Part 655**

41 **of Title 23 of the Code of Federal Regulations).**

42 Support:

43 The “Standard Highway Signs and Markings” book includes standard alphabets and symbols

44 for ~~highway~~ **deleted to increase consistency** signs and pavement markings.

1 For information about the above publications, visit the Federal Highway Administration’s
2 MUTCD website at <http://mutcd.fhwa.dot.gov>, or write to the FHWA, ~~400 Seventh Street, SW,~~
3 [1200 New Jersey Avenue, SE](http://www.fhwa.dot.gov), HOTO, Washington, DC 20590.

4 [The 2000 FHWA publication entitled “Roundabouts-An Informational Guide” \(FHWA-RD-](http://www.fhwa.dot.gov)
5 [00-067\) is available at <http://www.fhwa.dot.gov/safety/00068.htm>, or write to the FHWA, 1200 New](http://www.fhwa.dot.gov)
6 [Jersey Avenue, SE, HSA-1, Washington, DC 20590.](http://www.fhwa.dot.gov)

7 The [2001 FHWA](http://www.fhwa.dot.gov) publication entitled “Federal-Aid Highway Program Guidance on High
8 Occupancy Vehicle (HOV) Lanes” is available at
9 <http://www.fhwa.dot.gov/operations/hovguide01.htm>, or write to the FHWA, ~~400 Seventh Street,~~
10 ~~SW,~~ [1200 New Jersey Avenue, SE](http://www.fhwa.dot.gov), HOTM, Washington, DC 20590.

11 [The 2001 FHWA publication entitled “Designing Sidewalks and Trails for Access—Part 2—](http://www.fhwa.dot.gov)
12 [Best Practices Design Guide” \(FHWA-EP-01-027\) is available by writing to the FHWA, 1200](http://www.fhwa.dot.gov)
13 [New Jersey Avenue, SE, HEP, Washington, DC 20590.](http://www.fhwa.dot.gov)

14 [The 2003 FHWA publication entitled “Travel Better, Travel Longer: A Pocket Guide to](http://www.fhwa.dot.gov)
15 [Improving Traffic Control and Mobility for Our Older Population” \(FHWA-OP-03-098\) is](http://www.fhwa.dot.gov)
16 [available at <http://mutcd.fhwa.dot.gov/pdfs/PocketGuide0404.pdf>, or write to the FHWA, 1200](http://www.fhwa.dot.gov)
17 [New Jersey Avenue, SE, HOTO, Washington, DC 20590.](http://www.fhwa.dot.gov)

18 [The January 2006 FHWA publication entitled “Ramp Management and Control Handbook”](http://www.fhwa.dot.gov)
19 [\(FHWA-HOP-06-001\) is available at](http://www.fhwa.dot.gov)
20 http://ops.fhwa.dot.gov/publications/ramp_mgmt_handbook/manual/manual/default.htm, or write
21 [to the FHWA, 1200 New Jersey Avenue, SE, HOTM, Washington, DC 20590.](http://ops.fhwa.dot.gov/publications/ramp_mgmt_handbook/manual/manual/default.htm)

22 Other publications that are useful sources of information with respect to the use of this
23 Manual are listed below. See Page i of this Manual for ordering information for the following
24 publications ([later editions might also be available as useful sources of information](#)):

- 25 1. [“AAA School Safety Patrol Operations Manual,” 2006 Edition \(AAA\)](#)
- 26 2. [“A Policy on Geometric Design of Highways and Streets,” ~~2001~~ 2004 **edited to reference**](#)
27 [current edition](#) Edition (American Association of State Highway and Transportation
28 Officials—AASHTO)
- 29 3. [“Guide for the Development of Bicycle Facilities,” 1999 Edition \(AASHTO\)](#)
- 30 4. [“Guide to Metric Conversion,” 1993 Edition \(AASHTO\)](#)
- 31 5. [“Guidelines for the Selection of Supplemental Guide Signs for Traffic Generators](#)
32 [Adjacent to Freeways,” 2001 Edition \(AASHTO\)](#)
- 33 6. [“Guidelines for the Selection of Supplemental Guide Signs for Traffic Generators](#)
34 [Adjacent to Freeways, 4th Edition / Guide Signs, Part II: Guidelines for Airport Guide](#)
35 [Signing / Guide Signs, Part III: List of Control Cities for Use in Guide Signs on Interstate](#)
36 [Highways,” Item Code: GSGLC-4, 2001 Edition \(AASHTO\) **added to increase accuracy**](#)
37 [and to assist reader in finding this document on AASHTO’s website](#)
- 38 7. [“Roadside Design Guide,” ~~2001-2006~~ Edition \(AASHTO\) **Reason: Editorially Updated**](#)
- 39 8. [“Standard Specifications for Movable Highway Bridges,” 1988 Edition \(AASHTO\)](#)
- 40 9. [“Traffic Engineering Metric Conversion Folders—Addendum to the Guide to Metric](#)
41 [Conversion,” 1993 Edition \(AASHTO\)](#)
- 42 10. [“2000 AREMA Communications & Signals Manual,” American Railway Engineering &](#)
43 [Maintenance-of-Way Association \(AREMA\)](#)
- 44 ~~11. “Designing Sidewalks and Trails for Access—Part 2—Best Practices Design Guide,”~~
45 ~~2001 Edition (FHWA) [Publication No. FHWA-EP-01-027]~~
- 46 11. [“Practice for Roadway Lighting,” RP-8, 2001, Illuminating Engineering Society \(IES\)](#)
- 47 12. [“Safety Guide for the Prevention of Radio Frequency Radiation Hazards in the Use of](#)
48 [Commercial Electric Detonators \(Blasting Caps\),” Safety Library Publication No. 20,](#)
49 [July 2001 Edition, Institute of Makers of Explosives](#)

13. [“American National Standard for High-Visibility Public Safety Vests,” \(ANSI/ISEA 207-2006\), 2006 Edition \(International Safety Equipment Association—ISEA\)](#)
14. “American National Standard for High-Visibility Safety Apparel [and Headwear](#),” **added to improve accuracy** (ANSI/ISEA ~~107-1999~~ 107-2004), ~~1999~~ 2004 Edition, (ISEA) ~~—The Safety Equipment Association~~ **edited to increase consistency**
15. “Manual of Traffic Signal Design,” 1998 Edition (Institute of Transportation Engineers—ITE)
16. “Manual of Transportation Engineering Studies,” 1994 Edition (ITE)
17. “Pedestrian Traffic Control Signal Indications,” [Part 1—1985 Edition; Part 2 \(LED Pedestrian Traffic Signal Modules\)—2004 Edition](#) (ITE)
18. “Preemption of Traffic Signals ~~at or~~ Near Railroad ~~Grade~~ Crossings ~~with Active Warning Devices~~,” [2006 Edition](#) (ITE)
19. “Purchase Specification for Flashing and Steady Burn Warning Lights,” 1981 Edition (ITE)
- ~~19. “School Trip Safety Program Guidelines,” 1984 Edition (ITE)~~
20. “Traffic Detector Handbook,” 1991 Edition (ITE)
21. “Traffic Engineering Handbook,” ~~1999-2008~~ Edition (ITE) **Reason: Editorially Updated**
22. “Traffic Signal Lamps,” 1980 Edition (ITE)
23. “Traffic Control Devices Handbook,” 2001 Edition (ITE)
24. “Vehicle Traffic Control Signal Heads,” Part 1—1985 Edition; Part 2 ([LED Circular Signal Supplement](#))—~~1998~~ 2005 Edition; Part 3 ([LED Vehicular Arrow Traffic Signal Supplement](#))—2004 Edition (ITE)
25. “Uniform Vehicle Code (UVC) and Model Traffic Ordinance,” 2000 Edition (National Committee on Uniform Traffic Laws and Ordinances)
26. “Occupational Safety and Health Administration Regulations (Standards - 29 CFR), General Safety and Health Provisions - 1926.20,” amended June 30, 1993, Occupational Safety and Health Administration (OSHA)
27. “Highway Capacity Manual,” 2000 Edition (Transportation Research Board—TRB)
28. “Recommended Procedures for the Safety Performance Evaluation of Highway Features,” (NCHRP Report 350), 1993 Edition (~~Transportation Research Board—~~ TRB) **edited to increase consistency**
29. “Accessible Pedestrian Signals,” A-37, 1998 Edition, U.S. Architectural and Transportation Barriers Compliance Board (The U.S. Access Board)
30. “Building a True Community—Final Report—Public Rights-of-Way Access Advisory Committee (PRWAAC),” 2001 Edition (The U.S. Access Board)
31. “The Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (ADAAG),” July 1998 Edition (The U.S. Access Board)
32. **“Changeable Message Sign Operation and Messaging Handbook”, August 2004 Edition, (FHWA), Publication No. FHWA-OP-03-070.**
- Reason: This is the reference document supporting Part 2M , Changeable Message Signs.**
- ~~32. “Highway Rail Intersection Architecture,” U.S. Department of Transportation, Federal Railroad Administration (USDOT/FRA)~~
33. PROWAG Public Rights of Way Guidelines
34. AASHTO Guide for the Planning, Design and Operations of Pedestrian Facilities

Section 1A.12 Color Code

Support:

1 The following color code establishes general meanings for ~~10~~ 11 colors of a total of 13 colors
2 that have been identified as being appropriate for use in conveying traffic control information.
3 ~~Central values and~~ edited to increase accuracy, as there are no central values specified for the
4 ~~various colors~~ Tolerance limits for each color are contained in 23 CFR Part 655, Appendix to
5 ~~Subpart F and~~ are available ~~from~~ at the Federal Highway Administration's ~~400 Seventh Street,~~
6 ~~SW, HOTO, Washington, DC 20590, and at FHWA's~~ MUTCD website at
7 <http://mutcd.fhwa.dot.gov> or by writing to the FHWA, Office of Safety Research and
8 [Development \(HRD-T-301\)](mailto:Development@FHWA), 6300 Georgetown Pike, McLean, VA 22101.

9 The ~~three~~ two colors for which general meanings have not yet been assigned are being
10 reserved for future applications that will be determined only by FHWA after consultation with the
11 States, the engineering community, and the general public. The meanings described in this
12 Section are of a general nature. More specific assignments of colors are given in the individual
13 Parts of this Manual relating to each class of devices.

14 **Standard:**

15 The general meaning of the 13 colors shall be as follows:

- 16 A. Black—regulation
- 17 B. Blue—road user services guidance, tourist information, and evacuation route
- 18 C. Brown—recreational and cultural interest area guidance
- 19 D. Coral—unassigned
- 20 E. Fluorescent Pink—incident management
- 21 F. Fluorescent Yellow-Green—pedestrian warning, bicycle warning, playground
22 warning, school bus and school warning
- 23 G. Green—indicated movements permitted, direction guidance
- 24 H. Light Blue—unassigned
- 25 I. Orange—temporary traffic control
- 26 J. Purple—~~unassigned~~ [electronic toll collection \(ETC\)](#)
- 27 K. Red—stop or prohibition
- 28 L. White—regulation
- 29 M. Yellow—warning

30
31 **Section 1A.13 Definitions of Words and Phrases in This Manual**

32 **Standard:**

33 Unless otherwise defined [herein in this Section](#), or in ~~the~~ other Parts of this Manual,
34 ~~definitions contained~~ [words or phrases shall have the meaning\(s\) as defined](#) in the most
35 recent editions of the “Uniform Vehicle Code,” “AASHTO Transportation Glossary
36 (Highway Definitions),” and other publications [specified listed](#) in Section 1A.11 ~~are also~~
37 ~~incorporated and adopted by reference.~~

38
39 [It is the recommendation of the Edit Committee that all definitions shall only be](#)
40 [included in Section 1A.13 and nowhere else, for the ease of users finding the applicable](#)
41 [definition. It is suggested that the following support statement appear in the Introduction](#)
42 [of each part referring users to Section 1A.13 for appropriate definitions:](#)

43
44 [Definitions and acronyms pertaining to this Part are provided in Sections 1A.13 and](#)
45 [1A.14.](#)
46

1 The following words and phrases, when used in this Manual, shall have the following
2 meanings:

- 3 1. Active Grade Crossing Warning System—the flashing-light signals, with or without
4 warning gates, together with the necessary control equipment used to inform road
5 users of the approach or presence of trains at highway-rail or highway-light rail
6 transit grade crossings.
- 7 2. Alley—a street or highway intended to provide access to the rear or side of lots or
8 buildings in urban areas and not intended for the purpose of through vehicular
9 traffic.
- 10 3. Approach—all lanes of traffic moving towards an intersection or a midblock
11 location from one direction, including any adjacent parking lane(s).
- 12 4. Arterial Highway (Street)—a general term denoting a highway primarily used by
13 through traffic, usually on a continuous route or a highway designated as part of an
14 arterial system.
- 15 5. Average Annual Daily Traffic (AADT)—the total volume of traffic passing a point
16 or segment of a highway facility in both directions for one year divided by the
17 number of days in the year. Normally, periodic daily traffic volumes are adjusted
18 for hours of the day counted, days of the week, and seasons of the year to arrive at
19 average annual daily traffic.

20 Average Daily Traffic (ADT) – The average 24 hour volume being the total volume
21 during a stated period divided by the number of days in that period. Normally, it
22 would be periodic daily traffic volumes over several days not adjusted for days of
23 the week or seasons of the year.

24
25 Reason: It was requested that ADT be added since it is used in the MUTCD and this
26 edition of the Manual is defining AADT.

- 27
- 28 6. Average Day—a day representing traffic volumes normally and repeatedly found at
29 a location. Where volumes are primarily influenced by employment, the average
30 day is typically a weekday. When volumes are primarily influenced by
31 entertainment or recreation, the average day is typically a weekend day.
- 32 7. Barrier-Separated Lane—a preferential lane or other special purpose lane that is
33 separated from the adjacent general purpose lane(s) by a physical barrier.
- 34 8. Beacon—a highway traffic signal with one or more signal sections that operates in a
35 flashing mode.
- 36 9. Bicycle—a pedal-powered vehicle upon which the human operator sits.
- 37 10. Bicycle Lane—a portion of a roadway that has been designated for preferential or
38 exclusive use by bicyclists by pavement markings and, if used, signs for preferential
39 or exclusive use by bicyclists.

40 Reason: Revised to be consistent with Section 9A.03.

- 41 11. Bikeway—a generic term for any road, street, path, or way that in some manner is
42 specifically designated for bicycle travel, regardless of whether such facilities are
43 designated for the exclusive use of bicycles or are to be shared with other
44 transportation modes. repeated from Section 9A.03 since “bikeway” is now used in
45 the Introduction
- 46
- 47 12. Buffer-Separated Lane—a preferential lane or other special purpose lane that is
48 separated from the adjacent general purpose lane(s) by a pattern of standard
49 longitudinal pavement markings that is wider than a normal or wide lane line
50 marking. The buffer area might include channelizing devices such as tubular

1 markers, **rumble strips, textured pavement**, or traversable curbs, but does not
2 include a physical barrier.

3 **Reason: Added to complete possible acceptable methods.**

- 4 13. ~~Centerline~~ Center Line Markings—the yellow pavement marking line(s) that
5 delineates the separation of traffic lanes that have opposite directions of travel on a
6 roadway. These markings need not be at the geometrical center of the pavement.
- 7 14. Changeable Message Sign—a sign that is capable of displaying more than one
8 message (one of which might be a “blank” display), changeable manually, by remote
9 control, or by automatic control. These signs are referred to as Dynamic Message
10 Signs in the National Intelligent Transportation Systems (ITS) Architecture.
- 11 15. Channelizing Line Markings—a wide or double solid white line used to form islands
12 where traffic in the same direction of travel is permitted on both sides of the island.
- 13 16. Circular Intersection—an intersection that has an island, generally circular in
14 design, located in the center of the intersection where traffic passes to the right of
15 the island. Circular intersections include roundabouts, rotaries, and traffic circles.
- 16 17. Circulatory Roadway—the roadway within a circular intersection on which traffic
17 travels in a counterclockwise direction around an island in the center of the circular
18 intersection.
- 19 18. Clear Zone—the total roadside border area, starting at the edge of the traveled way,
20 that is available for an errant driver to stop or regain control of a vehicle. This area
21 might consist of a shoulder, a recoverable slope, and/or a nonrecoverable,
22 traversable slope with a clear run-out area at its toe.
- 23 19. Collector Highway—a term denoting a highway that in rural areas connects small
24 towns and local highways to arterial highways, and in urban areas provides land
25 access and traffic circulation within residential, commercial, and business areas and
26 connects local highways to the arterial highways.
- 27 20. Concurrent Flow ~~HOV~~ Preferential Lane—~~an HOV~~ a preferential lane that is
28 operated in the same direction as the adjacent mixed flow lanes, separated from the
29 adjacent general purpose freeway lanes by a standard lane stripe, painted buffer, or
30 barrier.
- 31 21. Contiguous Lane—a lane, preferential or otherwise, that is separated from the
32 adjacent lane(s) only by a normal or wide lane line marking.
- 33 22. Conventional Road—a street or highway other than a low-volume road (as defined
34 in Section 5A.01), expressway, or freeway.
- 35 23. ~~Contraflow~~ Counter-flow Lane—a lane operating in a direction opposite to the
36 normal flow of traffic designated for peak direction of travel during at least a
37 portion of the day. ~~Contraflow~~ Counter-flow lanes are usually separated from the
38 off-peak direction lanes by ~~plastic pylons~~ tubular markers or other flexible
39 channelizing devices, or by moveable or permanent barrier. **edited to increase**
40 **consistency**
- 41 24. Crashworthy—a characteristic of a roadside appurtenance that has been
42 successfully crash tested in accordance with a national standard such as the
43 National Cooperative Highway Research Program Report 350, “Recommended
44 Procedures for the Safety Performance Evaluation of Highway Features.”
- 45 25. Crosswalk—(a) that part of a roadway at an intersection included within the
46 connections of the lateral lines of the sidewalks on opposite sides of the highway
47 measured from the curbs or in the absence of curbs, from the edges of the
48 traversable roadway, and in the absence of a sidewalk on one side of the roadway,
49 the part of a roadway included within the extension of the lateral lines of the
50 sidewalk at right angles to the centerline; (b) any portion of a roadway at an
51 intersection or elsewhere distinctly indicated as a pedestrian crossing by pavement

- 1 [marking](#) **added to increase clarity** lines on the surface, which ~~may~~ [might](#) be
2 supplemented by contrasting pavement texture, style, or color.
- 3 26. Crosswalk Lines—white pavement marking lines that identify a crosswalk.
- 4 27. Delineator—a retroreflective device mounted on the roadway surface or at the side
5 of the roadway in a series to indicate the alignment of the roadway, especially at
6 night or in adverse weather.
- 7 28. Detectable—having a continuous edge within 150 mm (6 in) of the surface so that
8 pedestrians who have visual disabilities can sense its presence and receive usable
9 guidance information.
- 10 29. Dynamic Envelope—the clearance required for the train and its cargo overhang due
11 to any combination of loading, lateral motion, or suspension failure.
- 12 30. Edge Line Markings—white or yellow pavement marking lines that delineate the
13 right or left edge(s) of a traveled way.
- 14 [31. Electronic Toll Collection \(ETC\)—a system for collection of toll fees via equipment
15 that communicates wirelessly with transponders mounted in vehicles \(moving or
16 stopped\) to automatically deduct the toll fee from a pre-paid toll account.](#)
- 17 32. End-of-Roadway Marker—a device used to warn and alert road users of the end of
18 a roadway in other than temporary traffic control zones.
- 19 33. Engineering Judgment—the evaluation of available pertinent information, and the
20 application of appropriate principles, Standards, Guidance, and practices as
21 contained in this Manual and other sources, for the purpose of deciding upon the
22 applicability, design, operation, or installation of a traffic control device.
23 Engineering judgment shall be exercised by an engineer, or by an individual
24 working under the supervision of an engineer, through the application of
25 procedures and criteria established by the engineer. Documentation of engineering
26 judgment is not required.
- 27 34. Engineering Study—the comprehensive analysis and evaluation of available
28 pertinent information, and the application of appropriate principles, Standards,
29 Guidance, and practices as contained in this Manual and other sources, for the
30 purpose of deciding upon the applicability, design, operation, or installation of a
31 traffic control device. An engineering study shall be performed by an engineer, or
32 by an individual working under the supervision of an engineer, through the
33 application of procedures and criteria established by the engineer. An engineering
34 study shall be documented.
- 35 35. Expressway—a divided highway with partial control of access.
- 36 [36. Flagger—a person who actively controls the flow of vehicular traffic into and/or
37 through a temporary traffic control zone using hand-signaling devices or an
38 Automated Flagger Assistance Device \(AFAD\).](#)
- 39 37. Flashing—an operation in which a [light source, such as a signal indication,](#) is turned
40 on and off repetitively. **revised to account for other types of flashing lights such as
41 TTC warning lights, RR flashing lights, gate lights, and lights on STOP/SLOW
42 paddles**
- 43 38. Freeway—a divided highway with full control of access.
- 44 [39. Gate—an automatically-operated or manually-operated traffic control device that is
45 used to physically obstruct road users such that they cannot proceed past a
46 particular point on a roadway or pathway, or such that they cannot enter a
47 particular ramp, lane, roadway, or facility.](#)
- 48 40. Guide Sign—a sign that shows route designations, destinations, directions,
49 distances, services, points of interest, or other geographical, recreational, or cultural
50 information.

- 1 41. High-Occupancy Vehicle (HOV)—a motor vehicle carrying at least two or more
2 persons, including carpools, vanpools, and buses.
- 3 42. Highway—a general term for denoting a public way for purposes of travel by
4 vehicular travel, including the entire area within the right-of-way.
- 5 43. Highway-Light Rail Transit Grade Crossing—the general area where a highway
6 and a light rail transit’s right-of-way cross at the same level, within which are
7 included the light rail transit tracks, highway, and traffic control devices for traffic
8 traversing that area.
- 9 44. Highway-Rail Grade Crossing—the general area where a highway and a railroad’s
10 right-of-way cross at the same level, within which are included the railroad tracks,
11 highway, and traffic control devices for highway traffic traversing that area.
- 12 45. Highway Traffic Signal—a power-operated traffic control device by which traffic is
13 warned or directed to take some specific action. These devices do not include
14 ~~signals at toll plazas~~, power-operated signs, steadily-illuminated pavement markers,
15 warning lights (see Section 6F.79), or steady burning electric lamps.
- 16 46. HOV Lane—any preferential lane designated for exclusive use by high-occupancy
17 vehicles for all or part of a day—including a designated lane on a freeway, other
18 highway, street, or independent roadway on a separate right-of-way.
- 19 47. Hybrid Signal—a special type of highway traffic signal that is intentionally placed
20 in a dark mode (no indications displayed) between periods of operation and, when
21 operated, displays both steady and flashing traffic control signal indications.
- 22 48. Inherently Low Emission Vehicle (ILEV)—any kind of vehicle that, because of
23 inherent properties of the fuel system design, will not have significant evaporative
24 emissions, even if its evaporative emission control system has failed.
- 25 49. Interchange—a system of interconnecting roadways providing for traffic movement
26 between two or more highways that do not intersect at grade.
- 27 50. Intermediate Interchange—an interchange with an urban or rural route that is not
28 a major or minor interchange as defined herein.
- 29 51. Intersection—intersection is defined as follows:
- 30 (a) The area embraced within the prolongation or connection of the lateral curb
31 lines, or if none, the lateral boundary lines of the roadways of two highways that
32 join one another at, or approximately at, right angles, or the area within which
33 vehicles traveling on different highways that join at any other angle might come
34 into conflict.
- 35 (b) The junction of an alley or driveway with a roadway or highway shall not
36 constitute an intersection.
- 37 (c) If a highway includes two roadways that are 9 m (30 ft) or more apart, then
38 every crossing of each roadway of such divided highway by an intersecting
39 highway shall be a separate intersection; in the event such intersecting highway
40 also includes two roadways that are 9 m (30 ft) or more apart, then every
41 crossing of two roadways of such highways shall be a separate intersection (see
42 definition of Median). However, regardless of the distance between the separate
43 intersections as defined herein, where a stopping point has not been designated
44 on the roadway (within the median) between the separate intersections, the two
45 intersections and the roadway (median) between them shall be deemed to be one
46 intersection.
- 47
- 48
- 49 (d) Where a stopping point is designated on a roadway approaching an intersection
50 as defined in Items (a) and (c) above, a vehicle of which any part is legally

beyond said designated stopping point shall be deemed to be legally in the intersection.

(e) A vehicle, which is deemed to have or which has legally entered the intersection as defined in Items (a) and (c) above, upon departing said intersection shall be deemed to still be legally in the intersection until:

(1) The rear of the vehicle and any attached trailer(s) clears the intersection; or

(2) Where a marked or unmarked associated crosswalk is present, the rear of the vehicle and any attached trailer(s) clears said crosswalk.

52. **Island**—a defined area between traffic lanes for control of vehicular movements or for pedestrian refuge. It includes all end protection and approach treatments. Within an intersection area, a median or an outer separation is considered to be an island.
53. **Lane Line Markings**—white pavement marking lines that delineate the separation of traffic lanes that have the same direction of travel on a roadway.
54. **Lane-Use Control Signal**—a signal face displaying indications to permit or prohibit the use of specific lanes of a roadway or to indicate the impending prohibition of such use.
55. **Legend**—see sign legend
56. **Logo**—a distinctive emblem, ~~symbol~~, or trademark that identifies a commercial business and/or the product or service offered by the business.
57. **Longitudinal Markings**—pavement markings that are generally placed parallel and adjacent to the flow of traffic such as lane lines, ~~centerlines~~ center lines, edge lines, channelizing lines, and others.
58. **Major Interchange**—an interchange with another freeway or expressway, or an interchange with a high-volume multi-lane highway, principal urban arterial, or major rural route where the interchanging traffic is heavy or includes many road users unfamiliar with the area.
59. **Major Street**—the street normally carrying the higher volume of vehicular traffic.
60. Managed Lane—a highway lane or set of lanes, or a highway facility, for which variable operational strategies such as direction of travel, tolling, pricing, and/or vehicle type or occupancy requirements are implemented and managed in real-time in response to changing conditions.
61. **Median**—the area between two roadways of a divided highway measured from edge of traveled way to edge of traveled way. The median excludes turn lanes. The median width might be different between intersections, interchanges, and at opposite approaches of the same intersection.
62. **Minor Interchange**—an interchange where traffic is local and very light, such as interchanges with land service access roads. Where the sum of the exit volumes is estimated to be lower than 100 vehicles per day in the design year, the interchange is classified as local.
63. **Minor Street**—the street normally carrying the lower volume of vehicular traffic.
64. Multi-lane—more than one lane moving in the same direction. A multi-lane street, highway, or roadway has a basic cross-section comprised of two or more through lanes in one or both directions. A multi-lane approach has two or more lanes moving towards the intersection, including turning lanes. added to improve clarity
65. **Object Marker**—a device used to mark obstructions within or adjacent to the roadway.

- 1 66. **Occupancy Requirement**—any restriction that regulates the use of a facility or one
2 or more lanes of a facility for any period of the day based on a specified number of
3 persons in a vehicle.
- 4 67. **Occupant**—a person driving or riding in a car, truck, bus, or other vehicle.
- 5 68. **Open Road Electronic Toll Collection**—a system designed to allow electronic toll
6 collection (ETC) from vehicles traveling at normal highway speeds.
- 7 69. **Opposing traffic**—vehicles that are traveling in the opposite direction. At an
8 intersection, vehicles that are entering an intersection from an approach that is
9 approximately straight ahead would be considered to be opposing traffic, but
10 vehicles that are entering an intersection from the left or the right from an approach
11 that is approximately perpendicular would not be considered to be opposing traffic.
- 12 70. **Pathway**—a general term denoting a public way for purposes of travel by
13 authorized users outside the traveled way and physically separated from the
14 roadway by an open space or barrier and either within the highway right-of-way or
15 within an independent alignment. Pathways include shared-use paths, but are
16 exclusive of sidewalks.
- 17 71. **Paved**—a bituminous surface treatment, mixed bituminous concrete, or Portland
18 cement concrete roadway surface that has both a structural (weight bearing) and a
19 sealing purpose for the roadway.
- 20 72. **Pedestrian**—a person ~~afoot~~ on foot, in a wheelchair, on skates, or on a skateboard.
- 21 73. **Pedestrian Facilities**—a general term denoting improvements and provisions made
22 to accommodate or encourage walking.
- 23 74. **Pictograph**—a pictorial representation used to identify a governmental jurisdiction,
24 an area of jurisdiction, a governmental agency, a military base or branch of
25 service, or a governmental-approved university or college. ~~or a government-~~
26 approved institution.
- 27 **Reason:** The government approved institution has been deleted because Institutions can
28 cover a broad range of establishments and it appears desirable to limit the
29 application at this time.
- 30 75. **Platoon**—a group of vehicles or pedestrians traveling together as a group, either
31 voluntarily or involuntarily, because of traffic signal controls, geometrics, or other
32 factors.
- 33 76. **Preferential Lane**—a highway lane reserved for the exclusive use of one or more
34 specific types of vehicles . ~~or road user groups. or number of occupants.~~
- 35 **Reason:** It is not road user groups that could be the local hoofers, etc. ,it is the occupants.
36
- 37 77. **Principal Legend**—place names, street names, and route numbers placed on guide
38 signs.
- 39 78. **Private Property Open to Public Travel**—toll roads and roads within shopping
40 centers, parking lot areas, airports, sports arenas, and other similar business and/or
41 recreation facilities that are privately owned but where the public is allowed to
42 travel without access restrictions. Private gated properties where access is
43 restricted and private highway-rail grade crossings shall not be included in this
44 definition.
- 45 79. **Public Facility** – any parking lot, parking garage, or accessway to or within such
46 facilities, under the jurisdiction of and maintained by a public agency and where the
47 public is invited to travel without access restrictions.
- 48 80. **Public Road**—any road, ~~or~~ street, or public facility under the jurisdiction of and
49 maintained by a public agency and open to public travel.
- 50 81. **Raised Pavement Marker**—a device ~~with a height of at least 10 mm (0.4 in)~~
51 mounted on or in a road surface that has a height generally not exceeding approximately 25

- 1 mm (1 in) above the road surface and that is intended to be used as a positioning
2 guide or to supplement or substitute for pavement markings ~~or to mark the position~~
3 ~~of a fire hydrant.~~
- 4 82. Regulatory Sign—a sign that gives notice to road users of traffic laws or regulations.
- 5 83. Retroreflectivity—a property of a surface that allows a large portion of the light
6 coming from a point source to be returned directly back to a point near its origin.
- 7 84. Right-of-Way [Assignment]—the permitting of vehicles and/or pedestrians to
8 proceed in a lawful manner in preference to other vehicles or pedestrians by the
9 display of sign or signal indications.
- 10 85. Road—see Roadway.
- 11 86. Road User—a vehicle operator, bicyclist, or pedestrian, including persons with
12 disabilities, within the highway, on a public facility, or on private property open to
13 public travel ~~including persons with disabilities.~~
14 **Reason: Deleted since definition of pedestrian includes people with disabilities.**
- 15 87. Roadway—that portion of a highway improved, designed, or ordinarily used for
16 vehicular travel and parking lanes, but exclusive of the sidewalk, berm, or shoulder
17 even though such sidewalk, berm, or shoulder is used by persons riding bicycles or
18 other human-powered vehicles. In the event a highway includes two or more
19 separate roadways, the term roadway as used herein shall refer to any such
20 roadway separately, but not to all such roadways collectively.
- 21 88. Roadway Network—a geographical arrangement of intersecting roadways.
- 22 89. Roundabout ~~Intersection~~—a circular intersection with yield control ~~of all entering~~
23 ~~traffic, channelized approaches, and appropriate geometric curvature, such that~~
24 ~~travel speeds on the circulatory roadway are typically less than 50 km/h (30 mph) at~~
25 entry, which permits a vehicle on the circulatory roadway to proceed, and with
26 deflection of the approaching vehicle counter-clockwise around a central island.
- 27 90. Rumble Strip—a series of intermittent, narrow, transverse areas of rough-textured,
28 slightly raised, or depressed road surface that ~~is installed~~ extend across the travel
29 lane to alert road users to unusual traffic conditions or are located along the
30 shoulder or within islands formed by pavement markings to alert road users that
31 they are leaving the travel lanes or are located along roadway center lines. **edited to**
32 **be consistent with the various uses of this phrase in Parts 3 and 6**
33 **Reason: Added to cover present usage.**
- 34 91. Rural Highway—a type of roadway normally characterized by lower volumes,
35 higher speeds, fewer turning conflicts, and less conflict with pedestrians.
- 36 92. Safe-Positioned—the positioning of emergency vehicles at an incident in a manner
37 that attempts to protect both the responders performing their duties and road users
38 traveling through the incident scene, ~~while minimizing, to the extent practical,~~
39 ~~disruption of the adjacent flow of traffic.~~
40 **Reason: Added to clarify intent.**
- 41 93. School—a public or private educational institution recognized by the State
42 education authority for one or more grades K through 12 or as otherwise defined by
43 the State.
- 44 94. School Zone—a designated roadway segment approaching, adjacent to, and beyond
45 school buildings or grounds, or along which school related activities occurs, ~~where~~
46 special traffic law enforcement activities ~~or increased fines for traffic violations are~~
47 authorized.
- 48 **Reason: Editorial revision read better and clarify intent.**

- 1 95. Shared Roadway—a roadway that is officially designated and marked as a bicycle
2 route, but which is open to motor vehicle travel and upon which no bicycle lane is
3 designated.
- 4 96. Shared-Use Path—a bikeway outside the traveled way and physically separated
5 from motorized vehicular traffic by an open space or barrier and either within the
6 highway right-of-way or within an independent alignment. Shared-use paths are
7 also used by pedestrians (including skaters, users of manual and motorized
8 wheelchairs, and joggers) and other authorized motorized and non-motorized users.
- 9 97. Sidewalk—that portion of a street between the curb line, or the lateral line of a
10 roadway, and the adjacent property line or on easements of private property that is
11 paved or improved and intended for use by pedestrians.
- 12 98. Sign—any traffic control device that is intended to communicate specific
13 information to road users through a word or symbol legend. Signs do not include
14 highway traffic control **edited to increase accuracy** signals, pavement markings,
15 delineators, or channelization devices.
- 16 99. Sign Assembly—a group of signs, located on the same support(s), that supplement
17 one another in conveying information to road users.
- 18 100. Sign Illumination—either internal or external lighting that shows similar color by
19 day or night. Street or highway lighting shall not be considered as meeting this
20 definition.
- 21 101. Sign Legend—all word messages, logos, **pictographs**, and symbol designs that are
22 intended to convey specific meanings. The border, if any, on a sign is not considered
23 to be a part of the legend. **added to increase clarity**
- 24 102. Sign Panel—a separate panel or piece of material containing a word or symbol
25 legend that is affixed to the face of a sign.
- 26 103. Signing—individual signs or a group of signs, not necessarily on the same
27 support(s), that supplement one another in conveying information to road users.
28 **added because we use the word “signing,” which is not found in a standard**
29 **dictionary, instead of “signage,” which is defined in a standard dictionary**
- 30 104. Speed—speed is defined based on the following classifications:
- 31 (a) Advisory Speed—a recommended speed for all vehicles operating on a section of
32 highway and based on the highway design, operating characteristics, and
33 conditions.
- 34 (b) Average Speed—the summation of the instantaneous or spot-measured speeds at
35 a specific location of vehicles divided by the number of vehicles observed.
- 36 (c) Design Speed—a selected speed used to determine the various geometric design
37 features of a roadway.
- 38 (d) 85th-Percentile Speed—the speed at or below which 85 percent of the motor
39 vehicles travel.
- 40 (e) Operating Speed—a speed at which a typical vehicle or the overall traffic
41 operates. Operating speed might be defined with speed values such as the
42 average, pace, or 85th-percentile speeds.
- 43 (f) ~~Pace Speed—the highest speed within a specific range of speeds that represents~~
44 ~~more vehicles than in any other like range of speed. The range of speeds~~
45 ~~typically used is 10 16~~ km/h or 10 mph speed range representing the speeds of
46 the largest percentage of vehicles in the traffic stream.

48 **Reason: The Pace statistic was based on a 10 mph speed increment with the percentage**
49 **in pace established on that 10 mph. To be equivalent, the metric value should be 16**
50 **km/h.**

1
2 (g) High Speed – when used in a general context within the provisions of this Manual
3 shall mean highway speeds of 70 80 km/h (45 50 mph) or greater unless otherwise
4 specified.

5 (h) Low Speed – when used in a general context within the provisions of this Manual
6 shall mean highway speeds of 50 km/h (30 mph) or less unless otherwise specified.
7

8 **Reason:** The terms high and low speed are used extensively throughout the Manual and
9 need to be defined. The other option would be to specify speed either above (high) or
10 below (low) a certain speed rather than using text that says either “high” or “low”.
11

12 (g) Posted Speed—the speed limit determined by law or regulation added to
13 increase accuracy and ~~shown~~ displayed edited to increase consistency on Speed
14 Limit signs.

15 (h) Statutory Speed—a speed limit established by legislative action that typically is
16 applicable for highways with specified design, functional, jurisdictional and/or
17 location characteristic and is not necessarily ~~shown~~ displayed edited to increase
18 consistency on Speed Limit signs.

19 105. Speed Limit—the maximum (or minimum) speed applicable to a section of highway
20 as established by law or regulation. added to increase accuracy

21 106. Speed Measurement Markings—a white transverse pavement marking placed on
22 the roadway to assist the enforcement of speed regulations.

23 107. Speed Zone—a section of highway with a speed limit that is established by law or
24 regulation. added to increase accuracy but which might be different from a
25 legislatively specified statutory speed limit.

26 108. Splitter Island—a median island used to separate opposing directions of traffic
27 entering and exiting a roundabout.

28 109. Stop Line—a solid white pavement marking line extending across approach lanes to
29 indicate the point at which a stop is intended or required to be made.

30 110. Street—see Highway.

31 111. Symbol—the approved design of a pictorial representation of a specific traffic
32 control message for signs, pavement markings, traffic control signals, or other
33 traffic control devices, as shown in the MUTCD.

34 112. Temporary Traffic Control Zone—an area of a highway where road user conditions
35 are changed because of a work zone or incident by the use of temporary traffic
36 control devices, flaggers, uniformed law enforcement officers, or other authorized
37 personnel.

38 113. Traffic—pedestrians, bicyclists, ridden or herded animals, vehicles, streetcars, and
39 other conveyances either singularly or together while using for purposes of travel
40 any highway, public facility, or private property open to public travel ~~for purposes~~
41 ~~of travel.~~

42 114. Traffic Control Device—a sign, signal, marking, or other device used to regulate,
43 warn, or guide traffic, placed on, over, or adjacent to a street, highway, public
44 facility, private property open to public travel, pedestrian facility, or shared-use
45 path by authority of a public agency or official having jurisdiction.

46 115. Traffic Control Signal (Traffic Signal)—any highway traffic signal by which traffic
47 is alternately directed to stop and permitted to proceed.

- 1 116. Train—one or more locomotives coupled, with or without cars, that operates on
2 rails or tracks and to which all other traffic must yield the right-of-way by law at
3 highway-rail grade crossings.
- 4 117. Transverse Markings—pavement markings that are generally placed perpendicular
5 and across the flow of traffic such as shoulder markings, word and symbol
6 markings, stop lines, crosswalk lines, speed measurement markings, parking space
7 markings, and others.
- 8 118. Traveled Way—the portion of the roadway for the movement of vehicles, exclusive
9 of the shoulders, berms, sidewalks, and parking lanes.
- 10 119. Turn Bay—a lane for the exclusive use of turning vehicles that is formed on the
11 approach to the location where the turn is to be made. In most cases where turn
12 bays are provided, drivers who desire to turn must move out of a through lane into
13 the newly formed turn bay in order to turn. A through lane that becomes a turn
14 lane is considered to be a drop lane rather than a turn bay.
- 15
- 16
- 17 120. Urban Street—a type of street normally characterized by relatively low speeds, wide
18 ranges of traffic volumes, narrower lanes, frequent intersections and driveways,
19 significant pedestrian traffic, and more businesses and houses.
- 20 121. Vehicle—every device in, upon, or by which any person or property can be
21 transported or drawn upon a highway, except trains and light rail transit operating
22 in exclusive or semiexclusive alignments. Light rail transit operating in a mixed-use
23 alignment, to which other traffic is not required to yield the right-of-way by law, is a
24 vehicle.
- 25 122. Warning Light—a portable, powered, yellow, lens-directed, enclosed light that is
26 used in a temporary traffic control zone in either a steady burn or a flashing mode.
27 added to assist the reader
- 28 123. Warning Sign—a sign that gives notice to road users of a situation that might not be
29 readily apparent.
- 30 124. Warrant—a warrant describes threshold conditions to the engineer in evaluating
31 the potential safety and operational benefits of traffic control devices and is based
32 upon average or normal conditions. Warrants are not a substitute for engineering
33 judgment. The fact that a warrant for a particular traffic control device is met is
34 not conclusive justification for the installation of the device.
- 35 125. Worker—a person on foot whose duties place him or her within the right-of-way of
36 a street, **or** highway **or** pathway, such as street, **or** highway **or** pathway construction
37 and maintenance forces, survey crews, utility crews, responders to incidents within
38 the street, **or** highway **or** pathway right-of-way, and law enforcement personnel
39 when directing traffic, investigating crashes, and handling lane closures, obstructed
40 roadways, and disasters within the right-of-way of a street, **or** highway **or** pathway.
41 **Reason: Added pathway since these workers can also be subjected to potential harm.**
- 42 126. Wrong-Way Arrow—a slender, elongated, white pavement marking arrow placed
43 upstream from the ramp terminus to indicate the correct direction of traffic flow.
44 Wrong-way arrows are intended primarily to warn wrong-way road users that they
45 are going in the wrong direction.
- 46 127. Yield Line—a row of solid white isosceles triangles pointing toward approaching
47 vehicles extending across approach lanes to indicate the point at which the yield is
48 intended or required to be made.

49 Section 1A.14 Meanings of Acronyms and Abbreviations in This Manual **this**
50 **section added to assist readers**

1 Standard:

2 The following acronyms and abbreviations, when used in this Manual, shall have the
3 following meanings:

4 **AAA – American Automobile Association**

- 5 1. AADT—annual average daily traffic
6 2. AASHTO—American Association of State Highway and Transportation Officials
7 3. ADT—average daily traffic
8 4. AFAD—Automated Flagger Assistance Device
9 5. ANSI—American National Standards Institute

10 **AREMA – American Railway Engineering and Maintenance-of-Way Association**

- 11 6. CFR—Code of Federal Regulations
12 7. CMS—changeable message sign
13 8. dBA—A-weighted decibels
14 9. EPA—Environmental Protection Agency
15 10. ETC—electronic toll collection
16 11. EV—electric vehicle
17 12. FHWA—Federal Highway Administration
18 13. FRA—Federal Railroad Administration
19 14. FTA—Federal Transit Administration
20 15. HOT—high occupancy tolls
21 16. HOTM—Highways-Office of Travel Management
22 17. HOTO—Highways-Office of Transportation Operations
23 18. HOV—high-occupancy vehicle

24 **IES – Illuminating Engineering Society**

- 25 19. ILEV—inherently low emission vehicle
26 20. ISEA—International Safety Equipment Association
27 21. ITE—Institute of Transportation Engineers
28 22. ITS—intelligent transportation systems
29 23. km/h—kilometers per hour
30 24. LED—light emitting diode
31 25. LP—liquid petroleum
32 26. MPH or mph—miles per hour
33 27. MUTCD—Manual on Uniform Traffic Control Devices
34 28. NCHRP—National Cooperative Highway Research Program

35 **NCUTCD – National Committee on Uniform Traffic Control Devices**

36 **OSHA – Occupational Safety and Health Administration**

- 37 29. PRT—perception-response time
38 30. RV—recreational vehicle
39 31. TDD—telecommunication devices for the deaf
40 32. TRB—Transportation Research Board
41 33. TTC—temporary traffic control
42 34. ~~U.S.~~ US—United States
43 35. ~~U.S.C.~~ USC --United States Code

44 **Reason: Periods deleted from acronyms.**

- 45 36. USDOT—United States Department of Transportation
46 37. UVC—Uniform Vehicle Code
47 38. VPH or vph—vehicles per hour

48

1 Reason: These other organizations are mentioned in the MUTCD in a similar manner
2 as the ones listed above.

3 Section ~~1A.14~~ 1A.15 Abbreviations Used on Traffic Control Devices

4 Standard:

5 When the word messages shown in Table 1A-1 need to be abbreviated in connection
6 with traffic control devices, the abbreviations shown in Table 1A-1 shall be used.

7 ~~The abbreviations shown in Table 1A-2 shall be used only on Portable Changeable~~
8 ~~Message signs. When the word messages shown in Table 1A-2 need to be abbreviated on a~~
9 ~~Portable Changeable Message sign, the abbreviations shown in Table 1A-2 shall be used.~~

10 Guidance:

11 ~~The abbreviations for the words listed in Table 1A-2 that also show a prompt word should not~~
12 ~~be used in connection with on traffic control devices a Portable Changeable Message sign unless~~
13 ~~the prompt word shown in Table 1A-2 either precedes or follows the abbreviation.~~

14 Reason: This text pertains to Portable Changeable Message Signs that are now covered in
15 Part 6F and accordingly should be deleted in Part 1A.

16 Standard:

17 The abbreviations shown in Table 1A-3 shall not be used in connection with traffic
18 control devices because of their potential to be misinterpreted by road users.

19 Guidance:

20 ~~Where~~ If multiple abbreviations are permitted in Tables 1A-1 ~~or 1A-2~~, the same abbreviation
21 should be used throughout a single jurisdiction.

22 Except as otherwise provided in Table 1A-1 ~~or 1A-2~~ or unless absolutely necessary to avoid
23 confusion, periods, commas, apostrophes, question marks, ampersands, and other punctuation
24 marks or characters that are not letters or numerals should not be used in any abbreviation.

25 Reason: Delete the word “absolutely” since it is “all inclusive” and imposes a
26 superfluous requirement and it has been recommended that Table 1A-2 be relocated
27 to Chapter 6F . Appropriate text should included in Chapter 6F for the Table.

28
29 **Table 1A-2. Abbreviations That Shall Only be Used on Portable**
30 **Changeable Message Signs (Sheet 1 of 2 and Sheet 2 of 2) should be**
31 **relocated to Part 6F – Portable Changeable Message Signs.**