ATTACHMENT NO. 5e

National Committee on Uniform Traffic Control Devices
TASK FORCE RECOMMENDATION
REVIEW OF NPA PUBLISHED JANUARY 2, 2008
VERSION OF MUTCD WITH CHANGES SHOWN IN BLUE AND
STRIKEOUTS SHOWN IN RED

TECHNICAL COMMITTEE: NCUTCD Regulatory/Warning Signs Technical Committee

DATE OF ACTION: June 2008 meeting

TASK FORCE MEMBERS: Andy Ramisch, Task Force Chair, Tom Heydel, Scott Kuznicki, Dennis Morford, Lee Roadifer, Eugene Russell, Roger Wentz

RWSTC APPROVAL DATE: 6-20-08
COUNCIL APPROVAL DATE: 6-21-08
ORIGIN OF REQUEST: RWSTC Task Force and RWSTC

MUTCD SECTIONS: Part 2C, Figures 2C, and Tables 2C.

SUMMARY:

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

The following is the actual complete text as published by FHWA in the NPA for the MUTCD. Blue text is new text. Strikeout-red is text eliminated. Green highlight are FHWA editorial comments.

Color Code: Approved by Council 6-21-08.

THE FOLLOWING IS THE NPA TEXT FOR PART 2C AS PUBLISHED BY FHWA

2007 NOTICE OF PROPOSED AMENDMENTS
MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
CHAPTER 2C. WARNING SIGNS

Section 2C.01 Function of Warning Signs
Section 2C.02 Application of Warning Signs
Section 2C.03 Design of Warning Signs
Section 2C.04 Size of Warning Signs
Section 2C.05 Placement of Warning Signs
Section 2C.06 Horizontal Alignment Warning Signs
Section 2C.07 Horizontal Alignment Signs (W1-1 through W1-5, W1-11, W1-15)
Section 2C.08 Advisory Speed Plaque (W13-1P)
Section 2C.09 Chevron Alignment Sign (W1-8)
Section 2C.10 Combination Horizontal Alignment/Advisory Speed Signs (W1-1a, W1-2a)
Section 2C.11 Combination Horizontal Alignment/Intersection Sign (W1-10 Series)
Section 2C.12 One-Direction Large Arrow Sign (W1-6)
Section 2C.13 Truck Rollover Warning Sign (W1-13)
Section 2C.14 Advisory Exit and Ramp Speed Signs (W13-2 and W13-3)
Section 2C.15 Combination Horizontal Alignment/Advisory Exit and Ramp Speed Signs (W13-6 and W13-7)
Section 2C.16 Hill Signs (W7-1, W7-1a)
Section 2C.17 HILL BLOCKS VIEW Sign (W7-6)
Section 2C.18 ROAD NARROWS Sign (W5-1)
Section 2C.19 NARROW BRIDGE Sign (W5-2)
Section 2C.20 ONE LANE BRIDGE Sign (W5-3)
Section 2C.21 Divided Highway Sign (W6-1)
Section 2C.22 Divided Highway Ends Sign (W6-2)
Section 2C.23 Freeway or Expressway Ends Signs (W19 Series)
Section 2C.24 Double Arrow Sign (W12-1)
Section 2C.25 DEAD END/NO OUTLET Signs (W14-1, W14-1a, W14-2, W14-2a)
Section 2C.26 Low Clearance Signs (W12-2 and W12-2a)
Section 2C.27 BUMP and DIP Signs (W8-1, W8-2)
Section 2C.28 SPEED HUMP Sign (W17-1)
Section 2C.29 PAVEMENT ENDS Sign (W8-3)
Section 2C.30 Shoulder and Uneven Lanes Signs (W8-4, W8-9, W8-17, and W8-23)
Section 2C.31 Surface Condition Signs (W8-5, W8-7, W8-8, W8-13, and W8-14)
Section 2C.32 Warning Signs and Plaques for Motorcyclists (W8-15, W8-15P, and W8-16)
Section 2C.33 NO CENTER STRIPE Sign (W8-12)
Section 2C.34 Weather Condition Signs (W8-18, W8-19, W8-21, and W8-22)
Section 2C.35 Advance Traffic Control Signs (W3-1, W3-2, W3-3, W3-4)
Section 2C.36 Advance Ramp Control Signal Signs (W3-7 and W3-8)
Section 2C.37 Reduced Speed Limit Ahead Signs (W3-5, W3-5a)
Section 2C.38 DRAWBRIDGE AHEAD Sign (W3-6)
Section 2C.39 Merge Signs (W4-1, W4-5)
Section 2C.40 Added Lane Signs (W4-3, W4-6)
Section 2C.41 Lane Ends Signs (W4-2, W4-7, W9-1, W9-2)
Section 2C.42 RIGHT (LEFT) LANE EXIT ONLY AHEAD Sign (W9-7)
Section 2C.01 Function of Warning Signs

Approved by Council 6-21-08

Support:

Warning signs call attention to unexpected conditions on or adjacent to a highway, street, public facility, or private property open to public travel and to situations that might not be readily apparent to road users. Warning signs alert road users to conditions that might call for a reduction of speed or an action in the interest of safety and efficient traffic operations.

Section 2C.02 Application of Warning Signs

Approved by Council 6-21-08

Standard:

The use of warning signs shall be based on an engineering study or on engineering judgment.

Guidance:
The use of warning signs should be kept to a minimum as the unnecessary use of warning signs tends to breed disrespect for all signs. In situations where the condition or activity is seasonal or temporary, the warning sign should be removed or covered when the condition or activity does not exist.

Support:

The categories of warning signs are shown in Table 2C-1.

Warning signs specified herein cover most of the conditions that are likely to be encountered. Additional warning signs for low-volume roads (as defined in Section 5A.01), temporary traffic control zones, school areas, highway-rail grade crossings, bicycle facilities, and highway-light rail transit grade crossings are discussed in Parts 5 through 10, respectively.

Option:

Word message warning signs other than those specified in this Manual may be developed and installed by State and local highway agencies.

Section 2C.03 Design of Warning Signs

Approved by Council 6-21-08 with revisions shown in yellow highlight.

Standard:

Except as noted in the Option below or unless specifically designated otherwise, all warning signs shall be diamond-shaped (square with one diagonal vertical) with a black legend and border on a yellow background unless specifically designated otherwise. Warning signs shall be designed in accordance with the sizes, shapes, colors, and legends contained in the “Standard Highway Signs and Markings” book (see Section 1A.11).

Option:

Oversized versions of diamond shaped warning signs may be rectangular.

Except for symbols on warning signs, minor modifications may be made to the design provided that the essential appearance characteristics are met. Modifications may be made to the symbols shown on combined horizontal alignment/intersection signs (see Section 2C.11) and intersection warning signs (see Section 2C.48) in order to approximate the geometric configuration of the intersecting roadway(s).

Guidance:

Warning signs regarding conditions associated with pedestrians, bicyclists, school buses, and schools may have a black legend and border on a fluorescent yellow-green background.

Standard:

Warning signs regarding conditions associated with school buses and schools shall have a black legend and border on a fluorescent yellow-green background (see Section 7B.07).

Section 2C.04 Size of Warning Signs

Approved by Council 6-21-08 with revisions shown in yellow highlight.

Standard:

Except as noted in Section 2A.11, the sizes for warning signs shall be as shown in Table 2C-2.
Guidance:
The Conventional Road size should be used on conventional roads.
The Freeway and Expressway sizes should be used for higher speed applications to provide larger signs for increased visibility and recognition.

Option:
The Minimum size may be used on low-speed roadways where the reduced legend size would be adequate for the warning or where physical conditions preclude the use of the other sizes.

Guidance:
Over-sized signs and larger sizes may be used for those special applications where speed, volume, or other factors result in conditions where increased emphasis, improved recognition, or increased legibility would be desirable.

Support:
Section 2A.11 contains information regarding the applicability of the various columns in Table 2C-2.

Standard:
The minimum size for all diamond-shaped warning signs facing traffic on multi-lane conventional roads, with speed limits 40 MPH or greater, shall be 900 x 900 mm (36 x 36 in).
The minimum size for supplemental warning plaques that are not included in Table 2C-2 shall be as shown in Table 2C-3.

Option:
Signs larger than those shown in Tables 2C-2 and 2C-3 may be used (see Section 2A.11).

Change Table 2C-2 note to include the allowance for speed limits 35 MPH or less not to require 36 x 36 size signs.

Section 2C.05 Placement of Warning Signs
Approved by Council 6-21-08 with revisions shown in yellow highlight.

Support:
For information on placement of warning signs, see Sections 2A.16 to 2A.21.

The total time needed to perceive and complete a reaction to a sign is the sum of the times necessary for Perception, Identification (understanding), Emotion (decision making), and Volition (execution of decision), and is called the PIEV time. The PIEV time can vary from several seconds for general warning signs to 6 seconds or more for warning signs requiring high road user judgment.

The time needed for detection, recognition, decision, and reaction is called the Perception-Response Time (PRT). Table 2C-4 lists suggested recommended sign placement distances for two conditions. This table is provided as an aid for determining warning sign location. The distances shown in Table 2C-4 can be adjusted for roadway features, other signing, and to improve visibility.

Guidance:
Warning signs should be placed so that they provide an adequate PIEV time PRT. The distances contained in Table 2C-4 are for guidance purposes and should be applied with engineering judgment. Warning signs should not be placed too far in advance of the condition,
such that drivers might tend to forget the warning because of other driving distractions, especially in urban areas.

Minimum spacing between warning signs with different messages should be based on the estimated PHV Time PRT for driver comprehension of and reaction to the second sign.

The effectiveness of the placement of warning signs should be periodically evaluated under both day and night conditions.

Option:

Warning signs that advise road users about conditions that are not related to a specific location, such as Deer Crossing or SOFT SHOULDER, may be installed in an appropriate location, based on engineering judgment, since they are not covered in Table 2C-4.

**Section 2C.06 Horizontal Alignment Warning Signs**

**Support:**

A variety of horizontal alignment warning signs (see Figure 2C-1), pavement markings (see Chapter 3B), and delineation (see Chapter 3D) can be used to advise motorists of a change in the roadway alignment. Uniform application of these traffic control devices with respect to the amount of change in the roadway alignment conveys a consistent message establishing driver expectancy and promoting effective roadway operations. The design and application of horizontal alignment warning signs to meet those requirements are addressed in Sections 2C.06 through 2C.15.

**Standard:**

In advance of horizontal curves on freeways, on expressways, and on roadways with more than 1,000 AADT that are functionally classified as arterials or collectors, horizontal alignment warning signs shall be used in accordance with Table 2C-5 based on the speed differential between the roadway’s posted or statutory speed limit and the horizontal curve’s advisory speed.

**Option:**

Horizontal Alignment Warning signs may also be used on other roadways or on arterial and collector roadways with less than 1,000 AADT based on engineering judgment.

**Section 2C.06 2C.07 Horizontal Alignment Signs (W1-1 through W1-5, W1-11, W1-15)**

**Approved by Council 6-21-08 with revisions shown in yellow highlight.**

**Standard:**

When engineering judgment determines the need for Table 2C-5 indicates that a horizontal alignment sign (see Figure 2C-1) is optional, required or recommended, one of the W1-1 through W1-5, W1-10, W1-11 or W1-15 signs the sign installed in advance of the curve shall be used a Curve (W1-2) sign unless a different sign is recommended or allowed by the provisions of this Section.

**Guidance:**

A Turn (W1-1) sign should be used instead of a Curve sign in advance of curves that have advisory speeds of 50 km/h (30 mph) or less (see Figure 2C-2).

Where there are two changes in roadway alignment that are separated by a tangent distance of less than 180 m (600 ft), the Reverse Turn (W1-3) sign should be used instead of multiple Turn...
(W1-1) signs and the Reverse Curve (W1-4) sign should be used instead of multiple Curve (W1-2) signs.

A Winding Road (W1-5) sign should be used instead of multiple Turn (W1-1) or Curve (W1-2) signs where there are three or more changes in roadway alignment each separated by a tangent distance of less than 180 m (600 ft).

Option:

A Winding Road (W1-5) sign may be used instead of multiple Turn (W1-1) or Curve (W1-2) signs where there are three or more changes in roadway alignment each separated by a tangent distance of less than 180 m (600 ft).

The NEXT XX km (MILES) (W7-3a) supplemental distance plaque (see Section 2C.58) may be installed below the Winding Road sign where continuous roadway curves exist for a specific distance (see Section 2C.45).

The horizontal alignment Turn (W1-1), Curve (W1-2), Reverse Turn (W1-3), Reverse Curve (W1-4), or Winding Road (W1-5) signs (see Figure 2C-1) may be used in advance of situations where the horizontal roadway alignment changes. A One-Direction Large Arrow (W1-6) sign (see Figure 2C-1 and Section 2C.09) may be used on the outside of the turn or curve.

If the curve has a change in horizontal alignment of 135 degrees or more, the Hairpin Curve (W1-11) sign (see Figure 2C-1) may be used instead of a Curve sign.

If the curve has a change in horizontal alignment is of direction of approximately 270 degrees, such as on a cloverleaf interchange ramp, the 270-degree Loop (W1-15) sign (see Figure 2C-1) may be used instead of a Curve sign.

Guidance:

The application of these signs should conform to Table 2C-5.

When the Hairpin Curve sign or the 270-degree Loop sign is installed, either a One-Direction Large Arrow (W1-6) sign or Chevron Alignment (W1-8) signs should be installed on the outside of the turn or curve.

Option:

An Advisory Speed (W13-1) plaque (see Section 2C.46) may be used to indicate the speed for the change in horizontal alignment. The combination Horizontal Alignment/Advisory Speed sign (see Section 2C.07), combination Horizontal Alignment/Intersection sign (see Section 2C.08), or the Curve Speed sign (see Section 2C.36) may also be used.

If the reduction in speed is 20 km/h (15 mph) or greater, a supplemental combination Horizontal Alignment/Advisory Speed sign or Curve Speed (W13-5) sign may be installed as near as practical to the point of curvature. If the reduction in speed is 40 km/h (25 mph) or greater, one or more additional Curve Speed signs may be installed along the curve.

Comments: The Standard statement in this section is significantly revised from NCUTCD approved language. NCUTCD language was “A Curve (W1-2) sign (See Figure 2C-1) shall be used in accordance with Table 2C-5 to advise road users of a change in roadway alignment except as specified below”. Text as written in the NPA is satisfactory, except that the word “optional” needs to be added to account for all three possibilities.

There is a slight editorial change in the second Guidance statement. The order of the phrases has been changed. The revised version is acceptable.

The third Guidance statement in this section was an option statement in the NCUTCD approved version. It says a winding road sign should be used and our NCUTCD version...
Option:

The Advisory Speed (W13-P) plaque (see Figure 2C-1) may be used to supplement any warning sign to indicate the advisory speed for a condition.

Standard:

The use of the Advisory Speed plaque for horizontal curves shall be in accordance with the information shown in Table 2C-5. The Advisory Speed plaque shall also be used where an engineering study indicates a need to advise road users of the advisory speed for other roadway conditions.

If used, the Advisory Speed plaque shall carry the message XX km/h (XX MPH). The speed shown displayed edited to increase consistency shall be a multiple of 10 km/h or 5 mph.

Except in emergencies or when the condition is temporary, an Advisory Speed plaque shall not be installed until the advisory speed has been determined by an engineering study.

The Advisory Speed plaque shall only be used to supplement a warning sign and shall not be installed as a separate sign installation.

The advisory speed shall be determined by an engineering study that follows established engineering practices.

Guidance:

The advisory speed should be determined based on free-flowing traffic conditions.

Because changes in conditions, such as roadway geometrics, surface characteristics, or sight distance, might affect the advisory speed, each location should be periodically evaluated and the Advisory Speed plaque changed if necessary when conditions change.

Option:

The advisory speed may be the 85th percentile speed of free-flowing traffic, the speed corresponding to a 16-degree ball bank indicator reading, or the speed otherwise determined by an engineering study because of unusual circumstances.

Support:

A 10-degree ball bank indicator reading, formerly used in determining advisory speeds, is based on research from the 1930s. In modern vehicles, the 85th percentile speed on curves approximates a 16-degree reading. This is the speed at which most drivers' judgment recognizes incipient instability along a ramp or curve.

Option:

At or near a toll plaza, an Advisory Speed plaque may be installed independently below a warning sign of other warning signs at an appropriate location to indicate the recommended (non-regulatory) maximum speed at which vehicles can move through the plaza without stopping in an ETC Only lane while toll fee payment processing occurs.

Guidance:
The advisory speed displayed on the plaque should be based on an engineering study taking into account the geometry of the plaza and the lane to which it applies and other appropriate safety and operational factors.

Option:

For a toll plaza ETC Only lane, an Advisory Speed plaque under a warning sign for a toll plaza ETC Only lane may be installed independently over the applicable lane on the toll plaza canopy, on the approach end of the toll booth island, on the toll booth itself, or on a vertical element of the canopy structure. A downward or diagonally downward pointing arrow may be used to supplement the Advisory Speed plaque if an engineering study or engineering judgment indicates the arrow is needed to clarify the applicability of the plaque to a particular lane.

Guidance: Standard

An Advisory Speed plaque shall not be installed for a toll plaza lane at which a STOP (R1-1) sign is used.

Comments: The first Standard statement has been revised from the NCUTCD approved version. The NPA version is acceptable.

Comment: This Standard statement “The advisory speed shall be determined by an engineering study that follows established engineering practices.” was added from what NCUTCD approved. This is acceptable.

Reason: Change the “if used” to “where used” to match what was approved by NCUTCD. Eliminate use of “if used” as much as possible.

Reason for not allowing an advisory speed plaque to be mounted alone at Toll Plaza. Consistency for all applications of the advisory speed plaque needs to be followed. Parts 2C and Part 6 do not allow it alone. We should not compromise this position or it will lead to using it alone for Part 2C and Part 6 and lead to driver confusion.

Section 2C.10 2C.09  Chevron Alignment Sign (W1-8)

Approved by Council 6-21-08 with revisions shown in yellow highlight.

Option Standard:

The use of the Chevron Alignment (W1-8) sign (see Figures 2C-1 and 2C-2) to provide additional emphasis and guidance for a change in horizontal alignment may shall be used to provide additional emphasis and guidance for a change in horizontal alignment in accordance with the information shown in Table 2C-5.

Option:

A Chevron Alignment sign may be used as an alternate or supplement to standard delineators and edge lines as appropriate on curves or to the One Direction Large Arrow (W1-6) sign.

Standard:

The Chevron Alignment sign shall be a vertical rectangle. No border shall be used on the Chevron Alignment sign.

If used Where used. Chevron Alignment signs shall be installed on the outside of a turn or curve, in line with and at approximately a right angle to approaching traffic. Chevron
Alignment signs shall be installed at a minimum height of 1.2 m (4 ft), measured vertically from the bottom of the sign to the elevation of the near edge of the pavement.

Option:

A Chevron Alignment sign may be used on the far side of an intersection to inform drivers of a change of horizontal alignment for through traffic.

Guidance:

The approximate spacing of Chevron Alignment signs on the turn or curve measured from the point of curvature (PC) should be such that the road user always has at least two in view, until the change in alignment eliminates the need for the signs, as shown in Table 2C-6.

If used, Where used, Chevron Alignment signs should be visible for a sufficient distance to provide the road user with adequate time to react to the change in alignment.

Standard:

Chevron Alignment signs shall not be placed on the far side of a T-intersection facing traffic on the stem approach to warn drivers that a through movement is not physically possible, as this is the function of a Two-Direction (or One-Direction) Large Arrow sign.

Chevron Alignment signs shall not be used to mark obstructions within or adjacent to the roadway, as this is the function of an object marker (see Chapter 2L).

Comments/Reasons: Replaced pavement markings with edgelines in option statement – accept NPA language as is.

Eliminate the use of the words “if used” per Edit Committee.

Do not allow Chevron alignment signs for a T intersection. It is not a change in alignment.

Section 2C.07 2C.10 Combination Horizontal Alignment/Advisory Speed Signs (W1-1a, W1-2a)

Approved by Council 6-21-08 with revisions shown in yellow highlight.

Option:

The Turn (W1-1) sign or the Curve (W1-2) sign may be combined with the Advisory Speed (W13-1P) plaque (see Section 2C.08) to create a combination Turn/Advisory Speed (W1-1a) sign (see Figure 2C-1), or combination Curve/Advisory Speed (W1-2a) sign (see Figure 2C-1).

Standard:

When used, the combination Horizontal Alignment/Advisory Speed sign shall not be used alone and shall not be used as a substitute for a Horizontal Alignment sign and Advisory Speed plaque at the advance warning location. The combination Horizontal Alignment/Advisory Speed sign shall only be used as a supplement to other advance horizontal alignment warning signs in accordance with the information shown in Table 2C-5.

If used, Where If used, the combination Horizontal Alignment/Advisory Speed sign shall be installed at the beginning of the turn or curve.

Reason: Eliminate the use of the words “if used” per Edit Committee.

Section 2C.08 2C.11 Combination Horizontal Alignment/Intersection Sign (W1-10 Series)

Approved by Council 6-21-08
Option:

The Turn (W1-1) sign or the Curve (W1-2) sign may be combined with the Cross Road (W2-1) sign or the Side Road (W2-2 or W2-3) sign to create a combination Horizontal Alignment/Intersection (W1-10 series) sign (see Figure 2C-1) that depicts the condition where an intersection occurs within or immediately adjacent to a turn or curve.

Guidance:

Elements of the combination Horizontal Alignment/Intersection sign related to horizontal alignment should conform to comply with the provisions of Section 2C.07, and elements related to intersection configuration should conform to comply with the provisions of Section 2C.48.

The symbol design should approximate the configuration of the intersecting roadway(s). No more than one Cross Road or two Side Road symbols should be displayed edited to increase consistency on any one combination Horizontal Alignment/Intersection sign.

Standard:

The use of the combination Horizontal Alignment/Intersection sign shall be in accordance with the information shown in Table 2C-5.

Section 2C.09 2C.12 One-Direction Large Arrow Sign (W1-6)

Approved by Council 6-21-08 with revisions shown in yellow highlight.

Option:

A One-Direction Large Arrow (W1-6) sign (see Figure 2C-1) may be used either as a supplement or alternative to Chevron Alignment signs in order to delineate a change in horizontal alignment (see Figure 2C-2).

A One-Direction Large Arrow (W1-6) sign may be used to supplement a Turn or Reverse Turn sign (see Figure 2C-2) to emphasize the abrupt curvature.

Standard:

The One-Direction Large Arrow sign shall be a horizontal rectangle with an arrow pointing to the left or right.

The use of the One-Direction Large Arrow sign shall be in accordance with the information shown in Table 2C-5.

If used, Where used, the One-Direction Large Arrow sign shall be installed on the outside of a turn or curve in line with and at approximately a right angle to approaching traffic.

The One-Direction Large Arrow sign shall not be used where there is no alignment change in the direction of travel, such as at the beginnings and ends of medians or at center piers.

The One-Direction Large Arrow sign directing traffic to the right shall not be used in the central island of a roundabout.

Guidance:

If used, Where used, the One-Direction Large Arrow sign should be visible for a sufficient distance to provide the road user with adequate time to react to the change in alignment.

Reason: eliminate “if used” per Edit committee.

Section 2C.11 2C.13 Truck Rollover Warning Sign (W1-13)

Approved by Council 6-21-08 with revisions shown in yellow highlight.

Standard:
**The use of the Truck Rollover Warning (W1-13) sign (see Figure 2C-1) on freeway and expressway ramps shall be in accordance with the information shown in Table 2C-5.**

**Option Guidance:**

A Truck Rollover Warning (W1-13) sign (see Figure 2C-1) may be used to warn drivers of vehicles with a high center of gravity, such as trucks, tankers, and recreational vehicles, of a curve or turn having geometric conditions that might contribute to a loss of control and overturn a rollover.

**Standard:**

When a Truck Rollover Warning (W1-13) sign is used, it shall be accompanied by an Advisory Speed (W13-1P) plaque indicating the recommended speed for vehicles with a higher center of gravity.

**Option:**

The Truck Rollover Warning sign may be displayed as a static sign, as a static sign supplemented by a flashing warning beacon, or as a changeable message sign activated by the detection of an approaching vehicle with a high center of gravity that is traveling in excess of the recommended speed for the condition.

**Support:**

The curved arrow on the Truck Rollover Warning sign shows the direction of roadway curvature. The truck tips in the opposite direction.

**Comment:** editorial changes from NCU/TC approved version.

Section 2C.36 2C.14 Advisory Exit, and Ramp, and Curve Speed Signs (W13-2, and W13-3, W13-5)

Approved by Council 6-21-08 with revisions shown in yellow highlight.

**Standard:**

Advisory Exit, Speed (W13-2) and Advisory Ramp, and Curve Speed (W13-3) signs (see Figure 2C-1) shall be vertical rectangles. The advisory Exit Speed (W13-2), Ramp Speed (W13-3), or Curve Speed (W13-5) signs (see Figure 2C-5) shall be used where engineering judgment indicates the need to advise road users of the recommended speed on an exit, a ramp, or a curve. The use of Advisory Exit Speed and Advisory Ramp Speed signs on freeway and expressway ramps shall be in accordance with the information shown in Table 2C-5.

**Guidance:**

When used, the Advisory Exit Speed sign should be installed along the deceleration lane and the advisory speed displayed should be based on an engineering study. When a Truck Rollover (W1-13) sign (see Section 2C.13) is also installed for the ramp, the advisory exit speed should be based on the truck advisory speed for the horizontal alignment using recommended engineering practices.

When used, the Advisory Exit Speed sign should be visible in time for the road user to make a reasonably safe slowing decelerate and make an exiting maneuver.

**Support:**

Table 2C-4 lists recommended advance sign placement distances for deceleration to various advisory speeds.

**Guidance:**
Where used, the **Advisory** Ramp Speed sign should be visible in time for the road user to reduce to the recommended installed on the ramp to confirm the ramp advisory speed.

Where used, Chevron Alignment (W1-8) signs and/or One-Direction Large Arrow (W1-6) signs should be installed on the outside of the exit curve as described in Sections 2C.09 and 2C.12.

**Option:**

Where there is a need to remind road users of the recommended advisory speed, a horizontal alignment warning sign with an advisory speed plaque may be installed at or beyond the beginning of the exit curve or on the outside of the curve, provided that it is apparent that the sign applies only to exiting traffic. These signs may also be used at intermediate points along the ramp, especially if the ramp curvature changes and the subsequent curves on the ramp have a different advisory speed than the initial ramp curve.

**Support:**

Figure 2C-3 shows an example of advisory speed signing for an exit ramp.

**Option:**

One or more Ramp Speed signs may be used along the deceleration lane, beyond the gore, or along the ramp (see Figure 2C-7). Based on engineering judgment, the Ramp Speed sign may be installed on the inside or outside of the curve to enhance its visibility.

A Turn (W1-1) or Curve (W1-2) sign with an Advisory Speed (W13-1) plaque may be used in place of a Ramp Speed sign if it is located such that it clearly does not apply to drivers on the main roadway.

A Curve Speed sign may be used at and beyond the beginning of a curve following a Horizontal Alignment and Advisory Speed sign combination, or when there is a need to remind road users of the recommended speed, or where the recommended speed changes because of a change in curvature (see Section 2C.06). Based on engineering judgment, the Curve Speed sign may be installed on the inside or outside of the curve to enhance its visibility.

— The advisory speed may be the 85th percentile speed of free flowing traffic, the speed corresponding to a 16 degree ball bank indicator reading, or the speed otherwise determined by an engineering study because of unusual circumstances.

**Support:**

A 10 degree ball bank indicator reading, formerly used in determining advisory speeds, is based on research from the 1920s. In modern vehicles, the 85th percentile speed on curves approximates a 16 degree reading. This is the speed at which most drivers’ judgment recognizes incipient instability along a ramp or curve.

**Section 2C.15 Combination Horizontal Alignment/Advisory Exit and Ramp Speed Signs (W13-6 and W13-7)**

**Approved by Council 6-21-08**

**Option:**

A horizontal alignment sign (see Section 2C.07) may be combined with an Advisory Exit Speed or Advisory Ramp Speed sign to create a combination Horizontal Alignment/Advisory Exit Speed (W13-6) sign or a combination Horizontal Alignment/Advisory Ramp Speed (W13-7) sign (see Figure 2C-1). These combination signs may be used where the severity of the exit ramp...
curvature might not be apparent to road users in the deceleration lane or where the curvature
needs to be specifically identified as being on the exit ramp rather than on the mainline.

Section 2C.12 2C.16 Hill Signs (W7-1, W7-1a, W7-1b)

Approved by Council 6-21-08 with revisions shown in yellow highlight.

Guidance:

The Hill (W7-1) sign (see Figure 2C-4) should be used in advance of a downgrade where the
length, percent of grade, horizontal curvature, and/or other physical features require special
precautions on the part of road users.

The Hill sign and supplemental grade (W7-3\textsuperscript{P}) plaque (see Section 2C.60) used in
combination, or the W7-1b W7-1a sign used alone, should be installed in advance of downgrades
for the following conditions:

A. 5\% grade that is more than 900 m (3,000 ft) in length,
B. 6\% grade that is more than 600 m (2,000 ft) in length,
C. 7\% grade that is more than 300 m (1,000 ft) in length,
D. 8\% grade that is more than 230 m (750 ft) in length, or
E. 9\% grade that is more than 150 m (500 ft) in length.

These signs should also be installed for steeper grades or where crash experience and field
observations indicate a need.

Supplemental plaques (see Section 2C.60) and larger signs should be used for emphasis or
where special hill characteristics exist. On longer grades, the use of the Hill sign with a distance
(W7-3a\textsuperscript{P}) plaque or the combination distance/grade (W7-3b\textsuperscript{P}) plaque at periodic intervals of
approximately 1.6 km (1 mi) spacing should be considered.

Standard:

When If the percent grade is shown displayed edited to increase consistency on a
supplemental plaque, the message X\% plaque shall be placed below the inclined ramp/truck
symbol Hill (W7-1) or the word message HILL (W7-1a) sign. edited to increase clarity

Option:

The word message HILL (W7-1a) sign may be used as an alternate to the symbol (W7-1)
sign. The percent grade message may be included within these signs.

A USE LOW GEAR (W7-2P) or TRUCKS USE LOWER GEAR (W7-2bP) supplemental
plaque (see Figure 2C-4) may be used to indicate a situation where downshifting as well as
braking might be advisable.

Section 2C.13 Truck Escape Ramp Signs (W7-4 Series) relocated to Section 2F.12

Approved by Council 6-21-08 with revisions shown in yellow highlight.

RWSTC: Retain these as warning signs, not to be relocated to Section 2F.12.

These signs warn the driver/truck driver of an upcoming safety
feature that mitigates a potential safety hazard.

Section 2C.14 2C.17 HILL BLOCKS VIEW Sign (W7-6)

Approved by Council 6-21-08
Option:
A HILL BLOCKS VIEW (W7-6) sign (see Figure 2C-4) may be used in advance of a crest vertical curve to advise road users to reduce speed as they approach and traverse the hill as only limited stopping sight distance is available.

Guidance:
When a HILL BLOCKS VIEW sign is used, it should be supplemented by an Advisory Speed (W13-1P) plaque indicating the recommended speed for traveling over the hillcrest based on available stopping sight distance.

Section 2C.15 2C.18 ROAD NARROWS Sign (W5-1) Approved by Council 6-21-08

Guidance:
A ROAD NARROWS (W5-1) sign (see Figure 2C-5) should be used in advance of a transition on two-lane roads where the pavement width is reduced abruptly to a width such that vehicles traveling in opposite directions cannot simultaneously travel through the narrow portion of the roadway without reducing speed.

Option:
Additional emphasis may be provided by the use of object markers and delineators (see Chapters 2L and 3D). The Advisory Speed (W13-1P) plaque (see Section 2C.08) may be used to indicate the recommended speed.

Section 2C.16 2C.19 NARROW BRIDGE Sign (W5-2) Approved by Council 6-21-08

Guidance:
A NARROW BRIDGE (W5-2) sign (see Figure 2C-5) should be used in advance of any bridge or culvert having a two-way roadway clearance width of 4.9 to 5.5 m (16 to 18 ft), or any bridge or culvert having a roadway clearance less than the width of the approach travel lanes. Additional emphasis should be provided by the use of object markers, delineators, and/or pavement markings.

Option:
A NARROW BRIDGE sign may be used in advance of a bridge or culvert on which the approach shoulders are narrowed or eliminated.

Section 2C.17 2C.20 ONE LANE BRIDGE Sign (W5-3) Approved by Council 6-21-08

Guidance:
A ONE LANE BRIDGE (W5-3) sign (see Figure 2C-5) should be used on two-way roadways in advance of any bridge or culvert:

A. Having a clear roadway width of less than 4.9 m (16 ft), or
B. Having a clear roadway width of less than 5.5 m (18 ft) when commercial vehicles constitute a high proportion of the traffic, or
C. Having a clear roadway width of 5.5 m (18 ft) or less where the sight distance is limited on the approach to the structure.

Additional emphasis should be provided by the use of object markers, delineators, and/or pavement markings.

Section 2C.18 2C.21 Divided Highway (Road) Sign (W6-1)

Approved by Council 6-21-08

Guidance:

A Divided Highway (W6-1) symbol edited to increase consistency sign (see Figure 2C-5) should be used on the approaches to a section of highway (not an intersection or junction) where the opposing flows of traffic are separated by a median or other physical barrier.

Option:

The word message DIVIDED HIGHWAY (W6-1a) or DIVIDED ROAD (W6-1b) sign (see Figure 2C-3) may be used as an alternate to the symbol sign.

Standard:

The Divided Highway (W6-1) sign shall not be used instead of a Keep Right (R4-7 series) sign on the nose of a median island.

Section 2C.19 2C.22 Divided Highway (Road) Ends Sign (W6-2)

Approved by Council 6-21-08 with revisions shown in yellow highlight

Guidance:

A Divided Highway Ends (W6-2) symbol edited to increase consistency sign (see Figure 2C-5) should be used in advance of the upstream end of a section of physically divided highway (not an intersection or junction) as a warning of two-way traffic ahead.

Option:

The Two-Way Traffic (W6-3) symbol edited to increase consistency sign (see Section 2C.45) may should be used to give warning and notice of the transition to a two-lane, two-way section.

The word message DIVIDED HIGHWAY ENDS (W6-2a) or DIVIDED ROAD ENDS (W6-2b) sign (see Figure 2C-3) may be used as an alternate to the symbol sign.

Reason: Upstream could be confusing.

Section 2C.23 Freeway or Expressway Ends Signs (W19 Series)

Approved by Council 6-21-08 with revisions shown in yellow highlight

Option:

A FREEWAY ENDS XX km (MILES) (W19-1) sign or a FREEWAY ENDS (W19-3) sign (see Figure 2C-5) may be used in advance of the downstream end of a freeway.

An EXPRESSWAY ENDS XX km (MILES) (W19-2) sign or an EXPRESSWAY ENDS (W19-4) sign (see Figure 2C-5) may be used in advance of the downstream end of an expressway.

The rectangular W19-1 and W19-2 signs may be post-mounted or may be mounted overhead for increased emphasis.

Guidance:
If the reason that the freeway is ending is that the next portion of the freeway is not yet constructed and as a result all traffic must use an exit ramp to leave the freeway, an ALL TRAFFIC MUST EXIT (W19-5) sign (see Figure 2C-5) should be used in addition to the Freeway Ends signs in advance of the downstream end of the freeway.

Reason: Downstream could be confusing.

Section 2C.20 2C.24 Double Arrow Sign (W12-1)

Approved by Council 6-21-08

Option:

The Double Arrow (W12-1) sign (see Figure 2C-5) may be used to advise road users that traffic is permitted to pass on either side of an island, obstruction, or gore in the roadway. Traffic separated by this sign may either rejoin or change directions.

Guidance:

If used on an island, the Double Arrow sign should be mounted near the approach end.

If used in front of a pier or obstruction, the Double Arrow sign should be mounted on the face of, or just in front of, the obstruction. Where stripe markings are used on the obstruction, they should be discontinued to leave a 75 mm (3 in) space around the outside of the sign.

Section 2C.24 2C.25 DEAD END/NO OUTLET Signs (W14-1, W14-1a, W14-2, W14-2a)

Approved by Council 6-21-08

Option:

The DEAD END (W14-1) sign (see Figure 2C-5) may be used at the entrance of a single road or street that terminates in a dead end or cul-de-sac. The NO OUTLET (W14-2) sign (see Figure 2C-5) may be used at the entrance to a road or road network from which there is no other exit.

DEAD END (W14-1a) or NO OUTLET (W14-2a) signs (see Figure 2C-5) may be used in combination with Street Name (D3-1) signs (see Section 2D.45) to warn turning traffic that the cross street ends in the direction indicated by the arrow.

At locations where the cross street does not have a name, the W14-1a or W14-2a signs may be used alone in place of a street name sign.

Standard:

The DEAD END (W14-1a) and NO OUTLET (W14-2a) signs shall be horizontal rectangles with an arrow pointing to the left or right.

When the W14-1 or W14-2 sign is used, the sign shall be posted as near as practical to the entry point or at a sufficient advance distance to permit the road user to avoid the dead end or no outlet condition by turning off, if possible, at the nearest intersecting street.

The DEAD END (W14-1a) or NO OUTLET (W14-2a) signs shall not be used instead of the W14-1 or W14-2 signs where traffic can proceed straight through the intersection into the dead end street or no outlet area.

Section 2C.22 2C.26 Low Clearance Signs (W12-2 and W12-2p W12-2a)

Approved by Council 6-21-08
Standard:
The Low Clearance (W12-2) sign (see Figure 2C-5) shall be used to warn road users of clearances less than 300 mm (12 in) above the statutory maximum vehicle height.

Guidance:
The actual clearance should be shown displayed edited to increase consistency on the Low Clearance sign to the nearest 25 mm (1 in) not exceeding the actual clearance. However, in areas that experience changes in temperature causing frost action, a reduction, not exceeding 75 mm (3 in), should be used for this condition.

Where the clearance is less than the legal maximum vehicle height, the W12-2 sign with a supplemental distance plaque should be placed at the nearest intersecting road or wide point in the road at which a vehicle can detour or turn around.

In the case of an arch or other structure under which the clearance varies greatly, two or more signs should be used as necessary on the structure itself to give information as to the clearances over the entire roadway.

Clearances should be evaluated periodically, particularly when resurfacing operations have occurred.

Option:
The Low Clearance sign may be installed on or in advance of the structure. If a sign is placed on the structure, it may be a rectangular shape (W12-2p W12-2a) with the appropriate legend (see Figure 2C-5).

Section 2C.23 2C.27 BUMP and DIP Signs (W8-1, W8-2)

Approved by Council 6-21-08

Guidance:
BUMP (W8-1) and DIP (W8-2) signs (see Figure 2C-6) should be used to give warning of a sharp rise or depression in the profile of the road.

Option:
These signs may be supplemented with an Advisory Speed plaque (see Section 2C.08).

Standard:
The DIP sign shall not be used at a short stretch of depressed alignment that might momentarily hide a vehicle.

Guidance:
A short stretch of depressed alignment that might momentarily hide a vehicle should be treated as a no-passing zone when centerline center line striping is provided on a two-lane or three-lane road (see Section 3B.02).

Section 2C.24 2C.28 SPEED HUMP Sign (W17-1)

Approved by Council 6-21-08

Guidance:
The SPEED HUMP (W17-1) sign (see Figure 2C-6) should be used to give warning of a vertical deflection in the roadway that is designed to limit the speed of traffic.
If used, the SPEED HUMP sign should be supplemented by an Advisory Speed plaque (see Section 2C.08).

Option:

If a series of speed humps exists in close proximity, an Advisory Speed plaque may be eliminated on all but the first SPEED HUMP sign in the series.

The legend SPEED BUMP may be used instead of the legend SPEED HUMP on the W17-1 sign.

Support:

Speed humps generally provide more gradual vertical deflection than speed bumps. Speed bumps limit the speed of traffic more severely than speed humps. Other forms of speed humps include speed tables and raised intersections. However, these differences in engineering terminology are not well known by the public, so for signing purposes these terms are interchangeable.

Section 2C.25 2C.29 PAVEMENT ENDS Sign (W8-3)

Approved by Council 6-21-08

Guidance:

A PAVEMENT ENDS (W8-3) word message sign (see Figure 2C-6) should be used where a paved surface changes to either a gravel treated surface or an earth road surface.

Option:

An Advisory Speed plaque (see Section 2C.08) may be used when the change in roadway condition requires a reduced speed.

Section 2C.26 2C.30 Shoulder and Uneven Lanes Signs (W8-4, W8-9, and W8-9a W8-17, and W8-23)

Approved by Council 6-21-08 with revisions shown in yellow highlight.

Option:

The NO SHOULDER (W8-23) sign (see Figure 2C-6) may be used to warn road users that a shoulder does not exist along a portion of the roadway.

The SHOULDER ENDS (W8-X) sign (see Figure 2C-6) may be used to warn that a shoulder is ending.

The NO SHOULDER (W8-Z) sign (see Figure 2C-6) may be used to warn of the lack of a shoulder on a short segment of a roadway without a shoulder.

The SOFT SHOULDER (W8-4) sign (see Figure 2C-6) may be used to warn of a soft shoulder condition.

The LOW SHOULDER (W8-9) sign (see Figure 2C-6) may be used to warn of a shoulder condition where there is an elevation difference of less than 75 mm (3 in) between the shoulder and the travel lane.

Guidance:

The Shoulder Drop Off (W8-9a W8-17) sign (see Figure 2C-6) should be used when an unprotected shoulder drop-off, adjacent to the travel lane, exceeds 75 mm (3 in) in depth for a significant continuous length along the roadway, based on engineering judgment.
A SHOULDER DROP-OFF (W8-17P) supplemental plaque (see Figure 2C-6) may be mounted below the W8-17 sign. The SHOULDER DROP-OFF (W8-17a) word message sign (see Figure 2C-6) may be used instead of the W8-17 sign.

A Shoulder Drop Off (W8-17) – An UNEVEN LANES (W8-XX) sign with an UNEVEN LANES (W8-11P) supplemental plaque (see Figure 2C-6) may be used to warn of a difference in elevation between travel lanes.

Standard:

- When used, shoulder **and uneven lanes** signs shall be placed in advance of the condition (see Table 2C-4).

Guidance:

- Additional shoulder or uneven lanes signs should be placed at appropriate intervals along the road where the condition continually exists. [relocated to end of Section](#)

Comments: SSW –12 Synthesis of Signs – “No shoulder” and “shoulder ends” signs were discussed at RWSTC in January 2008 and approved by RWSTC.

- Reason: Change the wording to that approved by RWSTC in January 2008 to provide for the situations indicated with no shoulder and shoulder ending.

- Reason: The UNEVEN LANES warning sign is more appropriate than using a Shoulder drop off symbol to depict uneven lanes. The word message is more appropriate for this application.

Section 2C.27 2C.31 Slippery When Wet Sign (W8-5) Surface Condition Signs (W8-5, W8-7, W8-8, W8-13, and W8-14)  

Approved by Council 6-21-08 with revisions shown in yellow highlight.

Option:

- The Slippery When Wet (W8-5) sign (see Figure 2C-6) may be used to warn that an unexpected slippery condition might exist. Supplemental plaques with legends such as ICE, WHEN WET, STEEL DECK, or EXCESS OIL may be used with the W8-5 sign to indicate the reason that the slippery conditions might be present.

- The LOOSE GRAVEL (W8-7) sign (see Figure 2C-6) may be used to warn of loose gravel on the roadway surface.

- The ROUGH ROAD (W8-8) sign (see Figure 2C-6) may be used to warn of a rough roadway surface.

- The BRIDGE ICES BEFORE ROAD (W8-13) sign (see Figure 2C-6) may be used in advance of bridges to advise bridge users of winter weather conditions. The BRIDGE ICES BEFORE ROAD sign may be removed or covered during seasons of the year when its message is not relevant. [this paragraph was relocated from Section 2C.28](#)

- The FALLEN ROCKS Falling Rocks (W8-14) sign (see Figure 2C-6) may be used in advance of an area that is adjacent to a hillside, mountain, or cliff where rocks frequently fall onto
the roadway. A FALLING ROCKS (W8-14P) supplemental plaque (see Figure 2C-6) may be mounted below the W8-14 sign.

Guidance:
When used, a Slippery When Wet Surface Condition signs should be placed in advance of the beginning of the affected section (see Table 2C-4), and additional signs should be placed at appropriate intervals along the road where the condition exists.

Reason: Fallen Rocks is more appropriate

Section 2C.32 Warning Signs and Plaques for Motorcyclists (W8-15, W8-15P, and W8-16)
Approved by Council 6-21-08

Support:
The signs and plaques described in this Section are intended to give motorcyclists advance notice of surface conditions that might adversely affect their ability to maintain control of their motorcycle under wet or dry conditions. The use of some of the advance surface condition warning signs described in Section 2C.31, such as Slippery When Wet, LOOSE GRAVEL, or ROUGH ROAD, can also be helpful to motorcyclists if those conditions exist.

Option:
If a portion of a street or highway features a roadway pavement surface that is grooved or textured instead of smooth, such as a grooved skid resistance treatment for a horizontal curve or a brick pavement surface, a GROOVED PAVEMENT (W8-15) sign (see Figure 2C-6) may be used to provide advance warning of this condition to motorcyclists, bicyclists, and other road users. Alternate legends such as TEXTURED PAVEMENT or BRICK PAVEMENT may also be used on the W8-15 sign.

If a bridge or a portion of a bridge includes a metal or grated surface, a METAL BRIDGE DECK (W8-16) sign (see Figure 2C-6) may be used to provide advance warning of this condition to motorcyclists, bicyclists, and other road users.

A Motorcycle (W8-15P) plaque (see Figure 2C-6) may be mounted below a W8-15 or W8-16 sign if the warning is intended to be directed primarily to motorcyclists.

Section 2C.28 2C.33 BRIDGE ICES BEFORE ROAD Sign (W8-13) NO CENTER STRIPE Sign (W8-12)
Approved by Council 6-21-08

Option:
A BRIDGE ICES BEFORE ROAD (W8-13) sign (see Figure 2C-4) may be used in advance of bridges to advise bridge users of winter weather conditions. The BRIDGE ICES BEFORE ROAD sign may be removed or covered during seasons of the year when its message is not relevant.

This paragraph and the previous paragraph were combined and relocated to Section 2C.31.
The NO CENTER STRIPE (W8-12) sign (see Figure 2C-6) may be used to warn of a roadway without center line pavement markings.

Section 2C.34 Weather Condition Signs (W8-18, W8-19, W8-21, and W8-22)

Approved by Council 6-21-08 with revisions shown in yellow highlight.

Option:

The ROAD MAY FLOOD (W8-18) sign (see Figure 2C-6) may be used to warn road users that a section of roadway is subject to frequent flooding. A Depth Gauge (W8-19) sign (see Figure 2C-6) may also be installed within a roadway section that frequently floods.

Standard:

If used, the Depth Gauge sign shall be in addition to the ROAD MAY FLOOD sign, shall be placed at the location where the flood waters are expected to be the deepest, and shall be mounted at a height such that the bottom of the sign is at the approximate elevation of the roadway.

Guidance:

The ROAD MAY FLOOD (W8-18) sign (see Figure 2C-6) should be installed in advance of roadway locations that are frequently flooded.

Option:

The Depth Gauge (W8-19) sign (see Figure 2C-6) may be installed at roadway locations that are frequently flooded.

Standard:

When used, the Depth Gauge (W8-19) sign shall indicate the depth of the water at the deepest point on the roadway. The Depth Gauge (W8-19) sign shall be supplemented with a ROAD MAY FLOOD sign.

Guidance:

The Depth Gauge (W8-19) sign should be supplemented with a DEPTH or FEET warning plaque (W16-Xp) (see Figure 2C-6).

Option:

The GUSTY WINDS AREA (W8-21) sign (see Figure 2C-6) may be used to warn road users that wind gusts frequently occur along a section of highway that are strong enough to impact the stability of trucks, recreational vehicles, and other vehicles with high centers of gravity. A NEXT XX km (MILES) (W7-3a) supplemental plaque may be mounted below the W8-21 sign to inform road users of the length of roadway that frequently experiences strong wind gusts.

The WATCH FOR FOG FOI AREA (W8-22) sign (see Figure 2C-6) may be used to warn road users that foggy conditions frequently reduce visibility along a section of highway. A NEXT XX km (MILES) (W7-3a) supplemental plaque may be mounted below the W8-22 sign to inform road users of the length of roadway that frequently experiences foggy conditions.

Comments: Gusty winds area and watch for fog signs have been added by NPA.
Reason for change: To be per SSW-17 Synthesis of Signs approved by Council June 2007.

Section 2C.29 2C.35 Advance Traffic Control Signs (W3-1, W3-2, W3-3, W3-4)

Approved by Council 6-21-08

Standard:

The Advance Traffic Control symbol signs (see Figure 2C-6) include the Stop Ahead (W3-1), Yield Ahead (W3-2), and Signal Ahead (W3-3) signs. These signs shall be installed on an approach to a primary traffic control device that is not visible for a sufficient distance to permit the road user to respond to the device (see Table 2C-4). The visibility criteria for a traffic control signal shall be based on having a continuous view of at least two signal faces for the distance specified in Table 4D-1.

Support:

Permanent obstructions causing the limited visibility might include roadway alignment or structures. Intermittent obstructions might include foliage or parked vehicles.

Guidance:

Where intermittent obstructions occur, engineering judgment should determine the treatment to be implemented.

Option:

An Advance Traffic Control sign may be used for additional emphasis of the primary traffic control device, even when the visibility distance to the device is satisfactory.

Word messages (W3-1a, W3-2a, W3-3a) may be used as alternates to the Advance Traffic Control symbol signs.

A supplemental street name plaque (see Section 2C.61) may be installed above or below an Advance Traffic Control sign.

A warning beacon may be used with an Advance Traffic Control sign.

A BE PREPARED TO STOP (W3-4) sign (see Figure 2C-6) may be used to warn of stopped traffic caused by a traffic control signal or in advance of a section of roadway that regularly experiences traffic congestion.

Standard:

When a BE PREPARED TO STOP sign is used in advance of a traffic control signal, it shall be used in addition to a Signal Ahead sign.

Option:

The BE PREPARED TO STOP sign may be supplemented with a warning beacon (see Section 4L.03).

Guidance:

When the warning beacon is interconnected with a traffic control signal or queue detection system, the BE PREPARED TO STOP sign should be supplemented with a WHEN FLASHING (W16-13P) plaque (see Figure 2C-14).

Support:

Section 2C.39 contains information regarding the use of a NO MERGE AREA (W4-5P) supplemental plaque in conjunction with a Yield Ahead sign.

Section 2C.36 Advance Ramp Control Signal Signs (W3-7 and W3-8)
Option:

A RAMP METER AHEAD (W3-7) sign (see Figure 2C-6) may be used to warn road users that a freeway entrance ramp is metered and that they will encounter a ramp control signal (see Chapter 4I).

Guidance:

When the ramp control signals are operated only during certain periods of the day, a RAMP METERED WHEN FLASHING (W3-8) sign (see Figure 2C-6) should be installed in advance of the ramp control signal at the entrance to the ramp or on the arterial approaching the ramp, and on the ramp, to alert road users to the presence and operation of ramp meters.

Standard:

The RAMP METERED WHEN FLASHING sign shall be supplemented with a warning beacon (see Section 4L.03) that flashes when the ramp control signal is in operation.

Comments: Synthesis of Signs SSW-6 approved by Council, June 2007. NPA language changed from that approved. Recommend changes shown. Council rejected the use of the RAMP METERED AHEAD WHEN FLASHING sign, since ramp meters are not 24/7 operations. However, it is possible that a 24/7 operation could exist. Therefore, accept NPA language for the RAMP METERED AHEAD WHEN FLASHING sign.

Reason: Many states use the RAMP METERED WHEN FLASHING sign at the entrance to the ramp rather than the arterial. Allowance needs to be made for either method. Both provide effective information to the driver. The changes noted are per that approved by NCUTCD.

Section 2C.30 Reduced Speed Reduction Limit Ahead Signs (W3-5, W3-5a)

the name of this sign was revised to be consistent with the Stop Ahead, Yield Ahead, and Signal Ahead names

Approved by Council 6-21-08

Guidance:

A Reduced Speed Reduction Limit Ahead (W3-5 or W3-5a) sign (see Figure 2C-7) should be used to inform road users of a reduced speed zone where the speed limit is being reduced by more than 20 km/h or by more than 10 mph, or where engineering judgment indicates the need for advance notice to comply with the posted speed limit ahead.

Standard:

If used, Reduced Speed Reduction Limit Ahead signs shall be followed by a Speed Limit (R2-1) sign installed at the beginning of the zone where the speed limit applies.
The speed limit displayed on the Reduced Speed Limit Ahead sign shall be identical to the speed limit displayed on the subsequent Speed Limit sign.

Section 2C.38 DRAWBRIDGE AHEAD Sign (W3-6)

Approved by Council 6-21-08

Standard:

A DRAWBRIDGE AHEAD (W3-6) sign (see Figure 2C-6) shall be used in advance of movable bridge signals and gates (see Section 4J.02) to give warning to road users, except in urban conditions where such signing would not be practical.

Section 2C.31 2C.39 Merge Signs (W4-1, W4-5)

Approved by Council 6-21-08

Option:

A Merge (W4-1) sign (see Figure 2C-8) may be used to warn road users on the major roadway that merging movements might be encountered in advance of a point where lanes from two separate roadways converge as a single traffic lane and no turning conflict occurs.

A Merge sign may also be installed on the side of the entering roadway to warn road users on the entering roadway of the merge condition.

Guidance:

The Merge sign should be installed on the side of the major roadway where merging traffic will be encountered and in such a position as to not obstruct the road user’s view of entering traffic.

Where two roadways of approximately equal importance converge, a Merge sign should be placed on each roadway.

When a Merge sign is to be installed on an entering roadway that curves before merging with the major roadway, such as a ramp with a curving horizontal alignment as it approaches the major roadway, the Entering Roadway Merge (W4-5) sign (see Figure 2C-8) should be used to better portray the actual geometric conditions to road users on the entering roadway.

The Merge sign should not be used where two roadways converge and merging movements are not required.

The Merge sign should not be used in place of a Lane Ends sign (see Section 2C.41) where lanes of traffic moving on a single roadway must merge because of a reduction in the actual or usable pavement width (see Section 2C.41).

Option:

An Entering Roadway Merge (W4-5) sign with a NO MERGE AREA (W4-5P) supplemental plaque (see Figure 2C-8) mounted below it may be used to warn road users on an entering roadway that they will encounter an abrupt merging situation without an acceleration lane at the downstream end of the ramp.

For a yield-controlled channelized right-turn movement onto a roadway without an acceleration lane, a NO MERGE AREA (W4-5P) supplemental plaque may be mounted below a Yield Ahead (W3-2) sign and/or below a YIELD (R1-2) sign when engineering judgment indicates that road users would expect an acceleration lane to be present.
Section **2C.32** 2C.40  **Added Lane Signs (W4-3, W4-6)**

Approved by Council 6-21-08

Guidance:

The Added Lane (W4-3) sign (see Figure 2C-8) should be installed in advance of a point where two roadways converge and merging movements are not required. When possible, the Added Lane sign should be placed such that it is visible from both roadways; if this is not possible, an Added Lane sign should be placed on the side of each roadway.

When an Added Lane sign is to be installed on a roadway that curves before converging with another roadway that has a tangent alignment at the point of convergence, the Entering Roadway Added Lane (W4-6) sign (see Figure 2C-8) should be used to better portray the actual geometric conditions to road users on the curving roadway.

Section **2C.33** 2C.41  **Lane Ends Signs (W4-2, W4-7, W9-1, W9-2)**

Approved by Council 6-21-08 with revisions shown in yellow highlight

Guidance:

The LANE ENDS MERGE LEFT (RIGHT) (W9-2) word sign, or the Lane Ends (W4-2) symbol sign, should be used to warn of the reduction in the number of traffic lanes in the direction of travel on a multi-lane highway (see Figure 2C-8).

Option:

The RIGHT (LEFT) LANE ENDS (W9-1) word sign (see Figure 2C-8) may be used in advance of the Lane Ends (W4-2) symbol sign or the LANE ENDS MERGE LEFT (RIGHT) (W9-2) word sign as additional warning or to emphasize that the traffic lane is ending and that a merging maneuver will be required.

The THRU TRAFFIC MERGE LEFT (RIGHT) (W4-7) sign (see Figure 2C-8) may be used as a supplement to other warning and/or regulatory signs to warn road users in the right-hand (left-hand) lane that their lane is about to become a mandatory turn or exit lane.

The THRU TRAFFIC MERGE LEFT (RIGHT) (W4-7) sign (see Figure 2C-8) may be used when it is desirable to indicate that thru traffic should move out of a lane that will become a mandatory turn or exit lane or will be occupied by large volumes of entering traffic.

On one-way streets or on divided highways where the width of the median will permit, two Lane Ends signs may be placed facing approaching traffic, one on the right-hand side and the other on the left-hand side or median.

Support:

The reduction in the number of traffic lanes may also be delineated with roadway edge lines (see Section 3B.09) and/or roadway delineation (see Chapter 3D). Section 3B.09 contains information regarding the use of pavement markings in conjunction with a lane reduction.

Guidance:
Where an extra lane has been provided for slower moving traffic (see Section 2B.39), a Lane Ends word sign or a Lane Ends (W4-2) symbol sign should be installed in advance of the downstream end of the extra lane.

Lane Ends signs should not be installed in advance of the downstream end of an acceleration lane.

Reason: The Synthesis of Signs SSW-10 approved by Council in June 2007 is per the revised language shown.

Section 2C.42 RIGHT (LEFT) LANE EXIT ONLY AHEAD Sign (W9-7)
Approved by Council 6-21-08 with revisions shown in yellow highlight.

Delete this section.

Option:

The RIGHT (LEFT) LANE EXIT ONLY AHEAD (W9-7) sign (see Figure 2C-8) may be used to provide advance warning to road users that traffic in the right-hand (left-hand) lane of a roadway that is approaching a grade-separated interchange will be required to depart the roadway on an exit ramp at the next interchange.

Standard:

The W9-7 sign shall be a horizontal rectangle with a black legend and border on a yellow background.

Guidance:

If used, the W9-7 sign should be installed upstream from the first overhead guide sign that contains an EXIT ONLY sign panel or upstream from the first RIGHT (LEFT) LANE MUST EXIT (R3-33) regulatory sign, whichever is furthest upstream from the exit.

Support:

Section 2B.23 contains information regarding a regulatory sign that can also be used for lane drops at grade-separated interchanges.

REASON: Section 2B.23 includes a regulatory sign for this application. The language per NPA says this sign is used when traffic is required to depart the roadway. Therefore, this sign should only be in Part 2B as a regulatory sign. NPA has added the regulatory sign in Section 2B.23. Council approved language for Section 2B.23.

Section 2C.43 Toll Road Begins Signs (W9-4 and W9-5)
Approved by Council 6-21-08 with revisions shown in yellow highlight.

Deleted per GMI recommendation.

Guidance:

The TOLL ROAD BEGINS XX km (MILE) (W9-4) warning sign (see Figure 2C-9) should be used on a non-tolled highway that transitions to become a tolled highway. This sign should be installed approximately 1.6 km (1 mi) in advance of the start of the tolled section of highway.
The LAST EXIT BEFORE TOLL (W16-16P) plaque (see Section 2C.68) should also be used on the appropriate guide signs for the last exit upstream from the point where the tolled highway section begins.

Option:
Additional W9-4 warning signs may be installed upstream from and downstream from the recommended sign at 1.6 km (1 mi), such as at 3.2 km (2 mi) and 800 m (0.5 mi) in advance of the start of the tolled section of highway.

The TOLL ROAD BEGINS (W9-5) warning sign (see Figure 2C-9) may be installed at or near the point where the tolled highway section begins.

Standard:
The W9-4 and W9-5 signs shall each be a horizontal rectangle with a black legend and border on a yellow background.

Section 2C.44 Stop Ahead Pay Toll Sign (W9-6)
Approved by Council 6-21-08 with revisions shown in yellow highlight.

Standard:
The Stop Ahead Pay Toll (W9-6) sign shall be a horizontal rectangle with a black legend and border on a yellow background. The legend shall include the distance to the toll plaza and, except for toll-ticket facilities, the toll fee for passenger or 2-axle vehicles (see Figure 2C-9). Where the toll fee for passenger or 2-axle vehicles is variable by time of day, a changeable message element shall be incorporated into the W9-6 sign to display the toll fee in effect.

Guidance:
The Stop Ahead Pay Toll (W9-6) sign should be installed overhead at approximately 1.6 km (1 mi) and 800 m (0.5 mi) in advance of mainline toll plazas at which some or all lanes are required to come to a stop to pay a toll fee (see Sections 2E.56 and 2E.57).

Option:
If there is insufficient space for the W9-6 sign at the 1.6 km (1 mi) or 800 m (0.5 mi) advance locations, the Stop Ahead Pay Toll (W9-6P) plaque (see Section 2C.69) may be installed at those advance locations above the appropriate guide sign(s) that relate to toll payment types.

An additional W9-6 sign may be installed approximately 3.2 km (2 mi) in advance of a mainline toll plaza. This sign may be either overhead or post-mounted.

If the visibility of a ramp toll plaza at which some or all lanes are required to come to a stop to pay a toll fee is limited, the W9-6 sign may also be installed in advance of the ramp toll plaza.

Reason for changes: The changes shown are from the G/MI Committee Recommendations

Section 2C.34 2C.45 Two-Way Traffic Sign (W6-3)
Approved by Council 6-21-08

Guidance:
A Two-Way Traffic (W6-3) sign (see Figure 2C-8) should be used to warn road users of a transition from a multi-lane divided section of roadway to a two-lane, two-way section of roadway.

A Two-Way Traffic (W6-3) sign with an AHEAD (W16-9P) plaque (see Figure 2C-14) should be used to warn road users of a transition from a one-way street to a two-lane, two-way section of roadway (see Figure 2B-17, Sheet 2 of 2).

Option:

The Two-Way Traffic sign may be used at intervals along a two-lane, two-way roadway and may be used to supplement the Divided Highway (Road) Ends (W6-2) sign discussed in Section 2C.22.

Section 2C.46 Two-Way Traffic on a Three-Lane Roadway Sign (W6-5 and W6-6)

Approved by Council 6-21-08 with revisions shown in yellow highlight.

Option:

A Two-Way Traffic on a Three-Lane Roadway (W6-5 or W6-6) sign (see Figure 2C-8) may be used in advance at the beginning of and at intervals along a three-lane, two-way section of roadway that permanently has one lane of traffic in one direction and two lanes of traffic in the other direction.

A Two-Way Traffic on a Three-Lane Roadway sign with an AHEAD (W16-9P) plaque (see Figure 2C-14) may be used to warn road users of a transition from a one-way street to a three-lane, two-way section of roadway that permanently has one lane of traffic in one direction and two lanes of traffic in the other direction.

Standard:

If a Two-Way Traffic on a Three-Lane Roadway sign is used, the sign that is used in each direction shall be consistent with the pavement markings on the three-lane roadway.

The Two-Way Traffic on a Three-Lane Roadway sign shall not be used for three-lane roadways that have a reversible lane or a two-way left-turn lane for a center lane.

Section 2C.35 2C.47 NO PASSING ZONE Sign (W14-3)

Approved by Council 6-21-08

Standard:

The NO PASSING ZONE (W14-3) sign (see Figure 2C-8) shall be a pennant-shaped isosceles triangle with its longer axis horizontal and pointing to the right. When used, the NO PASSING ZONE sign shall be installed on the left side of the roadway at the beginning of no-passing zones identified by either grammar – more than two choices pavement markings or Do Not Pass signs or both (see Sections 2B.34 and 3B.02).

Section 2C.36 Advisory Exit, Ramp, and Curve Speed Signs (W13-2, W13-3, W13-5) relocated to Section 2C.14

Section 2C.37 2C.48 Intersection Warning Signs (W2-1 through W2-6 W2-8)

Approved by Council 6-21-08
Option:

A Cross Road (W2-1) symbol, Side Road (W2-2 or W2-3) symbol, T-Symbol (W2-4), or Y-Symbol (W2-5) sign (see Figure 2C-10) may be used in advance of an intersection to indicate the presence of an intersection and the possibility of turning or entering traffic. The Circular Intersection (W2-6) symbol sign accompanied by an educational TRAFFIC CIRCLE (W16-12p) plaque (see Figure 2C-10) may be installed in advance of a circular intersection (see Figures 2B-24 through 2B-26).

An educational plaque (see Figure 2C-10) with a legend such as TRAFFIC CIRCLE (W16-12P) or ROUNDABOUT (W16-17P) may be mounted below a Circular Intersection symbol sign.

The relative importance of the intersecting roadways may be shown by different widths of lines in the symbol.

An advance street name plaque (see Section 2C.61) may be installed above or below an Intersection Warning sign.

Guidance:

The Intersection Warning sign should illustrate and depict the general configuration of the intersecting roadway, such as cross road, side road, T-intersection, or Y-intersection.

Intersection Warning signs, other than the Circular Intersection (W2-6) symbol sign and the T-intersection (W2-4) symbol sign should not be used on approaches controlled by STOP signs, YIELD signs, or signals. The Circular Intersection (W2-6) symbol sign should be installed on the approach to a YIELD sign-controlled roundabout intersection.

If an Intersection Warning sign is used where the side roads are not opposite of each other, the symbol for the intersection should indicate a slight Offset Side Roads (W2-7) symbol (see Figure 2C-10) should be used instead of the Cross Road symbol.

If an Intersection Warning sign is used where two closely-spaced side roads are on the same side of the highway, the Double Side Roads (W2-8) symbol (see Figure 2C-10) should be used instead of the Side Road symbol.

Section 2C.38 2C.49 Two-Direction Large Arrow Sign (W1-7)

Approved by Council 6-21-08

Standard:

The Two-Direction Large Arrow (W1-7) sign (see Figure 2C-10) shall be a horizontal rectangle.

If used, it shall be installed on the far side of a T-intersection in line with, and at approximately a right angle to, traffic approaching traffic from the stem of the T-intersection.

The Two-Direction Large Arrow sign shall not be used where there is no change in the direction of travel such as at the beginnings and ends of medians or at center piers.

The Two-Direction Large Arrow sign directing traffic to the left and right shall not be used in the central island of a roundabout.

Guidance:
The Two-Direction Large Arrow sign should be visible for a sufficient distance to provide the road user with adequate time to react to the intersection configuration.

Section 2C.39 2C.50 Traffic Signal Signs (W25-1, W25-2)

Approved by Council 6-21-08

Standard:

Unless a separate left-turn signal face, a flashing yellow arrow signal face, or a flashing red arrow signal face added to increase consistency with Part 4 is provided and is operated as described in Sections 4D.18 through 4D.20, if the possibility exists that a steady added to increase accuracy CIRCULAR YELLOW signal indication could be displayed to an approach from which drivers are turning left permissively without the simultaneous display of a steady added to increase accuracy CIRCULAR YELLOW signal indication to the opposing approach (see Section 4D.10), either a W25-1 or a W25-2 sign (see Figure 2C-10) shall be installed near the left-most signal head. If the operation described in the previous sentence occurs on a cycle-by-cycle basis during all times that the traffic control signal is operated in the stop-and-go mode, the ONCOMING TRAFFIC HAS EXTENDED GREEN (W25-1) sign shall be used; if the operation occurs only occasionally, the ONCOMING TRAFFIC MAY HAVE EXTENDED GREEN (W25-2) sign shall be used.

The W25-1 and W25-2 signs shall be vertical rectangles.


Approved by Council 6-21-08 with revisions shown in yellow highlight

Option:

Vehicular Traffic (W8-6, W11-1, W11-5, W11-5a, W11-8, W11-10, W11-11, W11-12P, W11-14, W11-XX, and W11-15) signs (see Figure 2C-11) may be used to alert road users to locations where unexpected entries into the roadway by trucks, bicyclists, farm vehicles, emergency vehicles, golf carts, horse-drawn vehicles, or other vehicles might occur. The TRUCK CROSSING (W8-6) word message sign may be used as an alternate to the Truck Crossing symbol (W11-10) sign. The combined Bicycle/Pedestrian (W11-15) sign may be used where both bicyclists and pedestrians might be crossing the roadway, such as at an intersection with a shared-use path. A TRAIL XING (W11-15P) supplemental plaque (see Figure 2C-11) may be mounted below the W11-15 sign.

The TRAIL CROSSING (W11-XX) sign may be used to warn of multi-use path crossings where pedestrians, bicyclists, and other user groups might cross.

Support:

These locations might be relatively confined or might occur randomly over a segment of roadway.

Guidance:

Vehicular Traffic signs should be used only at locations where the road user’s sight distance is restricted, or the condition, activity, or entering traffic would be unexpected.

If the condition or activity is seasonal or temporary, the Vehicular Traffic sign should be removed or covered when the condition or activity does not exist.

Option:
Supplemental plaques (see Section 2C.56) with legends such as AHEAD, XX METERS (XX FEET), NEXT XX km (NEXT XX MILES), or SHARE THE ROAD may be mounted below Vehicular Traffic signs to provide advance notice to road users of unexpected entries.

**Standard:**
When used at the crossing, the Bicycle (W11-1) and Golf Cart (W11-11) signs shall be supplemented with a diagonal downward pointing arrow (W16-7P) plaque (see Figure 2C-14) showing the location of the crossing.

**Guidance:**
The Bicycle (W11-1) and Combination Bicycle/Pedestrian (W11-15) signs and related supplemental plaques should have a fluorescent yellow-green background with a black legend and border.

**Standard:**
The Emergency Vehicle (W11-8) sign with the EMERGENCY SIGNAL AHEAD (W11-12P) supplemental plaque (see Figure 2C-11) shall be placed in advance of all emergency-vehicle traffic control signals (see Chapter 4G).

**Option:**
The Emergency Vehicle (W11-8) sign, or a word message sign indicating the type of emergency vehicle (such as rescue squad), may be used in advance of the emergency vehicle station when no emergency-vehicle traffic control signal is present.

**A Warning Beacon** (see Section 4L.03) and a supplemental WHEN FLASHING (W16-13P) plaque (see Figure 2C-14) may be used with any Vehicular Traffic sign to indicate specific periods when the condition or activity is present or is likely to be present.

**Support:**
Section 2A.15 contains information regarding enhanced sign conspicuity.

**Reason:** The pedestrian warning sign (Section 2C.52) requires a diagonal pointing downward arrow; therefore, the combination ped/bike warning sign shall require it also. The FYG is a should condition for consistency with Section 2C.52 ped warning sign.

**Comment:** Combination bicycle/pedestrian warning sign to be replaced with version suggested by Pedestrian/Bicycle Technical Committee.

SSW-26 Synthesis of Signs reviewed the combination bicycle-ped sign for Recreational trail crossing. What happens if Recreational trail includes equestrian or snowmobiles?
Allow use of word message “Recreational Trail Crossing” as option.

**Section 2C.41 2C.52 Nonvehicular Signs (W11-2, W11-3, W11-4, W11-6, W11-7, W11-9, and W11-16 through W11-22)**

Approved by Council 6-21-08 with revisions shown in yellow highlight.

**Option:**
Nonvehicular (W11-2, W11-3, W11-4, W11-6, W11-7, W11-9, and W11-16 through W11-22) signs (see Figure 2C-12) may be used to alert road users in advance of locations where
unexpected entries into the roadway or shared use of the roadway by pedestrians, animals, and
other crossing activities might occur.

Support:
These conflicts might be relatively confined, or might occur randomly over a segment of
roadway.

Guidance:
When used in advance of a pedestrian crossing, the Pedestrian (W11-2) and Wheelchair
(W11-9) warning signs should be supplemented with supplemental plaques (see Section 2C.43)
with the legend AHEAD, XX METERS (XX FEET), or NEXT XX km (NEXT XX MILES) to
provide advance notice to road users of crossing activity.

Option:
When used in advance of a crossing, Nonvehicular warning signs, other than Pedestrian
(W11-2) and Wheelchair (W11-9) signs, may be supplemented with supplemental plaques (see
Section 2C.56) with the legend AHEAD, XX METERS (XX FEET), or NEXT XX km (NEXT
XX MILES) to provide advance notice to road users of crossing activity.

Standard:
When used at the crossing, Nonvehicular signs shall be supplemented with a diagonal
downward pointing arrow (W16-7P) plaque (see Figure 2C-14) showing the location of the
crossing.

Option:
The crossing location may be defined with crosswalk markings (see Section 3B.18).

Standard:
School signs and their related supplemental plaques shall have a fluorescent yellow-
green background with a black legend and border (see Section 7B.07).

Guidance:
Pedestrian, Bicycle, and School Playground signs and their related supplemental plaques should have a fluorescent yellow-green background with a black legend and border.

Guidance:
When a fluorescent yellow-green background is used, a systematic approach featuring one
background color within a zone or area should be used. The mixing of standard yellow and
fluorescent yellow-green backgrounds within a selected site area should be avoided.

Nonvehicular signs should be used only at locations where the crossing activity is unexpected
or at locations not readily apparent.

Option:
A Warning Beacon (see Section 4L.03) and a supplemental WHEN FLASHING (W16-13P)
plaque (see Figure 2C-14) may be used with any Nonvehicular sign to indicate specific periods
when the condition or activity is likely to be present or is actually present.

Support:
Section 2A.15 contains information regarding enhanced sign conspicuity.

Reason for change: to be consistent with vehicular signs and school signs

Section 2C.42 2C.53  Playground Sign (W15-1)
The Playground (W15-1) sign (see Figure 2C-12) may be used to give advance warning of a designated children’s playground that is located adjacent to the road.

Guidance:

The Playground sign should have a fluorescent yellow-green background with a black legend and border.

Guidance:

If the access to the playground area requires a roadway crossing, the application of crosswalk pavement markings (see Section 3B.18) and Nonvehicular signs (see Section 2C.52) should be considered.

Section 2C.54 NEW TRAFFIC PATTERN AHEAD Sign (W23-2)

Approved by Council 6-21-08

Option:

A NEW TRAFFIC PATTERN AHEAD (W23-2) sign (see Figure 2C-6) may be used on the approach to an intersection or along a section of roadway to provide advance warning of a change in traffic patterns, such as revised lane usage, roadway geometry, or signal phasing.

Guidance:

The NEW TRAFFIC PATTERN AHEAD sign should be removed when the traffic pattern returns to normal, when the changed pattern is no longer considered to be new, or within six months.

Section 2C.55 Warning Signs on Median Barriers for Preferential Lanes

Approved by Council 6-21-08 with revisions shown in yellow highlight.

Option:

When a warning sign applicable only to a preferential lane is installed on a median barrier with limited lateral clearance to the adjacent travel lanes or shoulders, the warning sign may have a vertical rectangular shape. For a High Occupancy Vehicle lane, such signs may be used instead of using the HOV Plaque (W16-11P) (see Section 2C.64) with a standard diamond-shaped warning sign.

Standard:

When a vertical rectangular-shaped warning sign applicable only to a preferential lane is installed on a median barrier, the top portion of the sign shall be comprised of a white symbol or legend denoting the type of preferential lane (such as the diamond symbol for HOV or the legend BUS LANE) on a black background with a white border, and the bottom portion of the sign shall be comprised of the standard word message or symbol of the standard warning sign as a black legend on a yellow background with a black border (see Figure 2C-13).

Guidance:

Where lateral clearance is limited, such as when a post-mounted warning sign applicable only to a preferential lane is installed on a median barrier, the edges of the sign should not project beyond the outer edges of the barrier.

Option:
Where lateral clearance is limited, a post-mounted warning sign applicable only to a preferential lane installed on a median barrier may be skewed up to 45 degrees in order to fit within the barrier width or may be mounted at a height of 4.3-5.4 m (14-17 ft) or more above the roadway.

Reason: to be consistent with section 2A mounting heights.

Section 2C.43 2C.56 Use of Supplemental Warning added in this section and the next section to increase accuracy Plaques

Approved by Council 6-21-08

Option:
A supplemental warning plaque may be displayed with a warning sign when engineering judgment indicates that road users require additional information beyond that contained in the main message of the warning sign.

Standard:
Supplemental warning plaques shall be used only in combination with warning or regulatory signs. They shall not be mounted alone or displayed alone. If used, a supplemental warning plaque shall be installed on the same post(s) as the warning or regulatory sign that it supplements.

Section 2C.44 2C.57 Design of Supplemental Warning Plaques

Approved by Council 6-21-08

Standard:
A supplemental warning plaque shall have the same color legend, border, and background as the warning sign with which it is displayed. Supplemental warning plaques shall be square or rectangular.

Section 2C.45 2C.58 Distance Plaques (W16-2 series, W16-3 series, W16-4P, W7-3aP)

Approved by Council 6-21-08

Option:
The Distance Ahead (W16-2 series and W16-3 series) plaques (see Figure 2C-14) may be used to inform the road user of the distance to the condition indicated by the warning sign.
The Next Distance (W7-3aP and W16-4P) plaques (see Figures 2C-4 and 2C-14) may be used to inform road users of the length of roadway over which the condition indicated by the warning sign exists.

Section 2C.46 Advisory Speed Plaque (W13-1) relocated to Section 2C.08

Section 2C.47 2C.59 Supplemental Arrow Plaques (W16-5P, W16-6P, W16-7p)

Approved by Council 6-21-08
Guidance:

If the condition indicated by a warning sign is located on an intersecting road and the distance between the intersection and condition is not sufficient to provide adequate advance placement of the warning sign, a Supplemental Arrow (W16-5P, or W16-6P, W16-7P) plaque (see Figure 2C-14) should be used below the warning sign.

Standard:

Supplemental Arrow plaques (see Figure 2C-11) deleted because figure reference is given in previous paragraph shall have the same legend design as the Advance Turn Arrow and Directional Arrow auxiliary signs (see Sections 2D.28 and 2D.29) except that they shall have a black legend and border on a yellow or fluorescent yellow-green background, as appropriate.

Section 2C.48 2C.60 Hill-Related Plaques (W7-2 Series, W7-3 Series)

Approved by Council 6-21-08

Guidance:

Hill-Related (W7-2 series, W7-3 series) plaques (see Figure 2C-4) or other appropriate legends and larger signs should be used for emphasis or where special hill characteristics exist.

On longer grades, the use of the distance plaque (W7-3aP or W7-3bP) at periodic intervals of approximately 1.6 km (1 mi) spacing should be considered.

Section 2C.49 2C.61 Advance Street Name Plaque (W16-8P, W16-8aP)

Approved by Council 6-21-08 with revisions shown in yellow highlight.

Option:

An Advance Street Name (W16-8P or W16-8aP) plaque (see Figure 2C-14) may be used with any Intersection sign (W2 series) or Advance Traffic Control (W3 series) sign to identify the name of the intersecting street.

Standard:

The lettering on Advance Street Name plaques shall be composed of a combination of lower-case letters with initial upper-case letters.

When two street names are used on the Advance Street Name plaque, directional arrows shall be used adjacent to the street names.

Guidance:

If two street names are used on the Advance Street Name plaque, the street names and associated arrows should be displayed in the following order:

A. For a single intersection, the name of the street to the left should be displayed above the name of the street to the right; or

B. For two sequential intersections, such as where the plaque is used with an Offset Side Roads (W2-7) or a Double Side Road (W2-8) symbol sign, the name of the first street encountered should be displayed above the name of the second street encountered, and the arrow associated with the second street encountered should be an advance arrow, such as the arrow shown on the W16-6P arrow plaque (see Figure 2C-14).
Reason: To account for sideroads that have different names.

Section 2C.50 2C.62  CROSS TRAFFIC DOES NOT STOP Plaque (W4-4P)

Approved by Council 6-21-08

Option:

The CROSS TRAFFIC DOES NOT STOP (W4-4P) plaque (see Figure 2C-10) may be used in combination with a STOP sign when engineering judgment indicates that conditions are present that are causing or could cause drivers to misinterpret the intersection as an all-way stop.

Alternate messages (see Figure 2C-10) such as TRAFFIC FROM LEFT (RIGHT) DOES NOT STOP (W4-4aP) or ONCOMING TRAFFIC DOES NOT STOP (W4-4bP) may be used when such messages more accurately describe the traffic controls established at the intersection.

Guidance:

Plaques with the appropriate alternative messages of TRAFFIC FROM LEFT (RIGHT) where STOP signs control all but one approach to the intersection.

Standard:

If the a W4-4P plaque or a plaque with an alternative message is used, it shall be installed mounted below the STOP sign.

Section 2C.51 2C.63  SHARE THE ROAD Plaque (W16-1P)

Approved by Council 6-21-08

Option:

In situations where there is a need to warn drivers to watch for other slower forms of transportation traveling along the highway, such as bicycles, golf carts, horse-drawn vehicles, or farm machinery, a SHARE THE ROAD (W16-1P) plaque (see Figure 2C-14) may be used.

Standard:

A W16-1P plaque shall not be used alone. If the W16-1P plaque is used, it shall be installed below either a Vehicular Traffic sign (see Section 2C.51) or a Nonvehicular sign (see Section 2C.52).

Section 2C.52 2C.64  High-Occupancy Vehicle (HOV) Plaque (W16-11P)

Approved by Council 6-21-08

Option:

In situations where there is a need to warn drivers in an HOV lane of a specific condition, a HOV (W16-11P) plaque (see Figure 2C-14) may be used. The HOV plaque may be used to differentiate a warning sign specific for HOV lanes when the sign is also visible to traffic on the adjoining general purpose roadway. Among the warning signs that may be possible applications of the HOV plaque are the Advisory Speed, Advisory Exit Speed, Added Lane, and Merge signs.

The diamond symbol may be used instead of the word message HOV on the W16-11P plaque. When appropriate, the words LANE or ONLY may be used on this plaque.
Support:
Section 2C.55 contains information regarding warning signs that can be mounted on barriers for HOV or other types of preferential lanes.

Section 2C.53 2C.65 Photo Enforced Plaque (W16-10P)
Approved by Council 6-21-08

Option:
A Photo Enforced (W16-10P) plaque or a PHOTO ENFORCED (W16-10aP) word message plaque (see Figure 2C-14) may be mounted below a warning sign to advise road users that the regulations associated with the condition being warned about (such as a traffic control signal or a toll plaza) are being enforced by photographic equipment.

Standard:
If used below a warning sign, the Photo Enforced (W16-10P or W16-10aP) plaque shall be a rectangle with a black legend and border on a yellow background.

Section 2C.66 METRIC Plaque (W16-14P)
Approved by Council 6-21-08 with revisions shown in yellow highlight.

Guidance Standard:
A METRIC (W16-14P) plaque (see Figure 2C-14) should be mounted above a Weight Limit sign that shows the load limits in metric units.

Reason: For consistency with other metric signs.

Section 2C.67 NEW Plaque (W16-15P)
Approved by Council 6-21-08 with revisions shown in yellow highlight.

Option:
A NEW (W16-15P) plaque (see Figure 2C-14) may be mounted above a regulatory sign when a new regulation takes effect in order to alert road users to the new traffic regulation. A NEW plaque may also be mounted above an advance warning sign (such as a Signal Ahead sign for a newly-installed traffic control signal) for a new traffic regulation.

Guidance:
The NEW plaque should be removed no later than 6 months after the regulation has been in effect.

Standard:
The NEW plaque shall not be used alone.

Reason: A plaque is not used alone.

Section 2C.68 LAST EXIT BEFORE TOLL Plaque (W16-16P)
Approved by Council 6-21-08
Guidance:
The LAST EXIT BEFORE TOLL (W16-16P) plaque (see Figure 2C-9) should be used to notify road users of the last exit from a highway before it becomes a facility on which toll payments are required. The plaque should be installed above or below the appropriate guide signs for the exit (see Sections 2E.29 and 2E.32).

Standard:
The W16-16P plaque shall have a black legend and border on a yellow background.

Section 2C.69 Stop Ahead Pay Toll Plaque (W9-6P)
Approved by Council 6-21-08

Option:
The Stop Ahead Pay Toll (W9-6P) plaque (see Figure 2C-9) may be installed above the appropriate guide sign(s) relating to toll payment types at the 1.6 km (1 mi) and/or 800 m (0.5 mi) advance locations on the approach to a toll plaza if there is insufficient space for the W9-6 sign (see Section 2C.44) at those advance locations.

Standard:
The W9-6P plaque shall be a horizontal rectangle with black legend and border on a yellow background. The legend shall include the distance to the toll plaza and, except for toll-ticket facilities, the toll fee for passenger or 2-axle vehicles. Where the toll fee for passenger or 2-axle vehicles is variable by time of day, a changeable message element shall be incorporated into the W9-6P plaque to display the toll fee in effect.

Option:
The distance to the toll plaza may be omitted from the W9-6P plaque if the distance is displayed on the guide sign that the plaque accompanies.

Review of Tables and Figures:
Table 2C-2 - Add Multi lane column for 36 x 36 size signs for consistency with table 2B-2 method of depicting sign sizes.
Table 2C-5 – Make changes shown
Figure 2C-8 – eliminate W9-7 sign. This sign should be regulatory.
Figure 2C-11 – Add W11-XX word message for Multi-use path option.
Figure 2C-12 – Revise W11-21 to be more accurate depiction.
See other changes on figures review.