

UNH T² Center Technical Note

2009 Revisions to MUTCD Is Your Department Ready?



According to the Manual on Uniform Traffic Control Devices (MUTCD), the manual defines the standards used by road managers nationwide to install and maintain traffic control devices on all public streets, highways, bikeways, and private roads open to public traffic (<http://mutcd.fhwa.dot.gov/index.htm>). The MUTCD is published by the Federal Highway Administration (FHWA), under 23 Code of Federal Regulations (CFR), Part 655, Subpart F.

The MUTCD was revised in December 2009. This article will identify some of these revisions as a starting point, but please be sure to visit the website to read all the changes:

http://mutcd.fhwa.dot.gov/kno_2009.htm

Organization

All definitions now appear in Part 1 (Section 1A.13) and not in other parts. Approximately **70 NEW DEFINITIONS** have been added and **35 EXISTING DEFINITIONS** have been revised. You will also find that meanings of text headings (Standard, Guidance, Option, Support) have been relocated and clarified in this section. Metric values have been removed from the text, figures, and tables.

Thus all dimensions and distances are provided in English units. Many sections have been “relocated” to other existing or new chapters. The Final Rule was published in the Federal Register on December 16, 2009.

Sign Colors

- Optional use of fluorescent colors including fluorescent red.
- Added purple for panels and plaques for electronic toll collection registration requirements.
- Removed yellow for school area signs.
- Required fluorescent yellow-green for school area signs.
- Optional use of fluorescent yellow-green color for pedestrian and bicycle application signs.

LEDs on Signs

- Optional for individual use within the border, or within the legend or symbol.
- Shall not be placed within the background of a sign.
- Shall not be grouped as a “de-facto” beacon.
- For STOP or YIELD signs, LEDs may be placed within one border width from border.

Street Name Signs

A **NEW** requirement is added to limit the only acceptable alternatives to green for the background color of Street Name signs to blue, brown, or

white to eliminate a wide variation in practice among jurisdictions. The white background is only allowed with a black legend.

A **NEW OPTION** is also added allowing the border to be omitted, as is common practice for post-mounted street name signs.

Colors are deemed inappropriate colors are being used because these are colors reserved for other traffic control device messages, or the colors used have poor contrast ratio between legend and background. The alternatives allow flexibility for communities in more densely developed areas to distinguish amongst themselves, providing additional navigational cues to road users.

There is a **NEW** table for letter heights on Street Name signs. See *MUTCD Table 2D-2* for recommended minimum sizes based on the mounting type, road classification, and speed limit.



Some Word Message Signs Are Deleted

The HILL, DIVIDED HIGHWAY, DIVIDED ROAD, DIVIDED HIGHWAY ENDS, DIVIDED ROAD ENDS, STOP AHEAD, YIELD AHEAD, AND SIGNAL AHEAD word signs are **DELETED** from the MUTCD because symbol signs have been in use for more than 35 years and word signs have become obsolete.

Community Wayfinding Guide Signs

NEW provisions are added regarding the use

of community wayfinding guide signs to direct road users to key local civic, cultural, visitor, and recreational sites and to other destinations within a city or a local urbanized or downtown area. Specific provisions regarding such design elements as background and legend colors, arrow placement, number of destinations, and general placement are included.



Regulatory Signs, Barricades & Gates

Larger sizes for certain signs on multi-lane roads with speed limits of 40 mph or more will enhance a driver's recognition.

Larger sizes for STOP signs for multi-lane roads require:

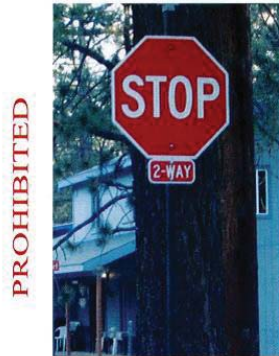
- 36" for any STOP sign facing a multi-lane approach,
- 36" for any multi-lane side road approach to a multi-lane road, and
- 36" for any side road approach to a multi-lane road with a speed limit of 45 mph or higher.

New guidance on factors to be considered when establishing intersection right-of-way control is based upon:

- * Vehicular, bicycle & pedestrian volumes
- * Number & angle of approaches
- * Approach speeds
- * Sight distance
- * Reported crash performance.

The use of 2-WAY, 3-WAY, and

4-WAY plaque is **PROHIBITED**. The ALL-WAY plaque remains as a “shall” if STOP signs are used on all approaches.



There is a **NEW** plaque that MAY be used with STOP signs under special conditions.

Signs on the back of STOP/YIELD signs and stickers and other messages on STOP/YIELD signs and posts cannot obscure the shape of a STOP or YIELD sign. For signs mounted back-to-back, STOP or YIELD signs should stay within the edges. Placing two STOP or YIELD signs on the same post for emphasis is now **PROHIBITED**.



Incorrect installation.

A **NEW NO STRAIGHT THROUGH** symbolic sign is added using the Canadian standard symbol. The sign is useful at four-legged intersections where the prohibited through movement is onto a road that does not have a “Do Not Enter” condition.

And don’t forget those roundabouts where **NEW** roundabout directional arrows should be installed on central islands and roundabout circulation signs used as drivers approach (at mini-roundabouts combine these with a YIELD sign). Chevron signs may be mounted at a 4 foot height.

A **NEW** table (at top of next paragraph) recommends spacing of chevron signs.

Advisory Speed mph)	Curve Radius (feet)	Sign Spacing (feet)
15 or less	Less than 200	40
20 to 30	200 to 400	80
35 to 45	401 to 700	120
50 to 60	701 to 1,250	160
More than 60	More than 1,250	200

There are **NEW** optional signs for enforcement of start of turn lanes -- R3-20L and R3-20R indicate when a left or right turn lane begins. The two **NEW** plaques to the right may be mounted with regulatory signs.

Pedestrians and Shoulders

Directions for pedestrians have been improved with overhead crossing signs R1 -9 and R1 -9a. Follow regulations of in-street pedestrian crossing signs for placement locations. Backgrounds may be fluorescent yellow or yellow-green. Remember that supports for in-street crossing signs must be designed to bend over and bounce back when struck.

A **NEW SHOULDER DROP-OFF** supplemental plaque may be mounted below a W8-17 sign. **NEW NO SHOULDER** and **SHOULDER ENDS** word message signs have been added to warn drivers that shoulders do not exist along the roadway or that the shoulder ends. Inconsistencies were found in the legends of signs currently in use. These signs are **OPTIONAL**.

A **NEW Combined Bicycle/Pedestrian** sign and a **NEW TRAIL X-ING** supplemental plaque are added to provide warning of a shared-use path crossing that is used by both bicyclists and pedestrians. Under the provisions of the 2003 MUTCD, as shown in the photo on the right, agencies needed to use both a pedestrian crossing signal and a bicycle crossing sign. This **NEW** sign combines both messages onto a single sign.



W11-15
W11-15P



NEW Signs and Plaques Warn of Conditions that Primarily Affect Motorcycles

A **NEW GROOVED PAVEMENT** sign (W8-15), a **NEW METAL BRIDGE DECK** sign (W8-16), and a supplemental plaque (W8-15p) can warn motorcyclists of dangerous road surface conditions. Table 2C-4 in the MUTCD provides guidelines for advance placement of these warning signs based on posted speeds and conditions. A motorcycle (W8-15p) plaque **MAY** be mounted below or above a W8-15 or W8-16 sign if the warning is intended primarily for motorcyclists.

NEW Offset Side Roads & Double Side Roads

Intersection warning symbol signs are added, based on a study that showed variants of the W2-2 sign depicting offset side roads or two closely spaced side roads are used in many states. However, the relative distance between the two side roads and the relative stroke widths of the roadways varies significantly. As a result, uniform designs have been added to MUTCD and there is now a maximum of three side roads depicted with a maximum of two on the same side.

Headlight Use Signs R16-5 to R16-11

Some States require motorists to turn on their vehicle headlights under certain weather conditions as a safety measure on roadways experiencing high crash rates or in special situations such as driving through tunnels. This is **OPTIONAL**.

Alignments and heights

CLARIFICATION OF SECTION 2C.06—HORIZONTAL ALIGNMENT OF WARNING SIGNS (Paragraph 2) and TABLE 2C-5

FHWA has issued an official interpretation under the designation “2(09)-2(1) -- Determination of Speed Differential for Curve Warning Signs and Plaques.” This will give agencies the flexibility to determine, based on engineering judgment, which speed value to use for the tangent approach to a horizontal curve (posted or statutory speed limit, 85th percentile speed or prevailing speed) in applying Table 2C-5. When it is determined that a curve warning sign with an advisory speed plaque will be installed for an approach to a curve, the decision as to which speed value to use shall be documented in the engineering study that is required in Section 2C.08 for the determination of the advisory speed.

The text of Sections 2A.18 and 2A.19 have been clarified and Figures 2A-2 and 2A-3 have been revised to conform to the text to clarify the minimum horizontal offset from the edge of a travel lane and/or shoulder.

Part 9: Traffic Control for Bicycle Facilities

A **NEW** shared lane pavement marking is added, along with Guidance on placement and spacing. This new pavement marking assists bicyclists in determining the appropriate line of travel, and cues motorists to pass with sufficient clearance. The purpose of this new marking is to reduce the number and severity of bicycle-vehicle crashes, particularly crashes involving bicycles colliding with suddenly opened doors of parallel parked vehicles. When repainting these graphics, pay attention to matching the refreshed logo with a previous application.

Figure 9-C in the MUTCD illustrates the word, symbol and arrow pavement markings for bicycle lanes.

Reference:

This article was reprinted with permission from Mass Interchange, Volume 24, Number 3, Summer 2010, MA LTAP.