



## BICYCLE No. 3

### TECHNICAL COMMITTEE RECOMMENDATION

**TECHNICAL COMMITTEE:** Bicycle Technical Committee

**DATE OF ACTION:** June 23rd, 2005 (*revised January 20th, 2006*)

**TOPIC:** Revision of Use of Bicycle Lane Signs  
Part 9 of the MUTCD

**ORIGIN OF REQUEST:** NCUTCD Bicycle Technical Committee

#### **SUMMARY:**

The Bicycle Technical Committee proposes that placement of the BIKE LANE (R3-17) sign along marked bicycle lanes be changed from a Standard (mandatory) to a Guidance (recommended) condition.

#### **DISCUSSION:**

Installation of Bicycle Lane Signs at periodic intervals along marked bicycle lanes was not required in pre-2003 editions of the MUTCD. In the 1988 edition, use of R3-17 signs along bicycle lanes was recommended, but not mandatory:

”The R3-16 and R3-17 signs should be used only in conjunction with the Preferential Lane Symbol pavement marking and erected at periodic intervals along the designated bicycle lane and in the vicinity of locations where the preferential lane symbol is used...”

However, use of the Preferential Lane Symbol marking on “designated bikeways...immediately after an intersection” was required by a Standard statement. “Designated Bicycle Lane” was defined as “A portion of a roadway or shoulder which has been designated for use by bicyclists...,” with no explicit mention of signs.

In the Millennium edition, a Standard statement in Chapter 9B required use of “Bicycle Lane [AHEAD] signs...in advance of the beginning of a marked bicycle lane” but at no other locations; installation of Bicycle Lane signs “at periodic intervals along the bicycle lane” was recommended in a Guidance statement. However, a new definition of “Bicycle Lane”, as “a portion of a roadway that has been designated by signs and pavement markings for preferential or exclusive use by bicyclists”, implied that signs were necessary for designation.

In the 2003 edition, the Standard statement in Chapter 9B was revised, deleting the requirement for use of signs in advance of the beginning of a marked bicycle lane but incorporating an explicit requirement for installation of the Bicycle Lane sign (R3-17) at periodic intervals along marked bicycle lanes. The definition of "Bicycle Lane" remained unchanged. The Standard statement for bicycle lane markings in Chapter 9C required that Bicycle Lane signs be used, "but the signs need not be adjacent to every symbol to avoid overuse of the signs."

The effect of the successive changes has been to establish a clear requirement for use of both markings *and* signs to designate a bicycle lane since the publication of the 2003 MUTCD. Bicycle lane symbol markings are to be placed "immediately after an intersection and at other locations as needed." Bicycle Lane signs "shall be placed at periodic intervals".

Whether the presence or absence of the R3-17 sign provides a clearly measurable benefit in indicating a designated bicycle lane has not been conclusively demonstrated. Since 1995, the Oregon Department of Transportation has solely used markings, without signs, to designate bicycle lanes. Oregon has not indicated that non-use of Bicycle Lane signs contributes to non-compliance with bicycle lanes, except possibly in areas where problems have been noticed with parking in bicycle lanes; in these locations, the R7-9 and R7-9a signs may be used.

Amending the MUTCD so as to make the use of Bicycle Lane signs with marked bicycle lanes a recommended but not mandatory condition would provide flexibility for jurisdictions that do not desire to use the R3-17 sign, without restricting the ability of jurisdictions that prefer to use the signs to continue to do so.

The Bicycle Technical Committee also proposes to change the minimum size of the R3-17 sign to 24" x 18" (600 mm x 450 mm), and to change the minimum size of the R3-17a and R3-17b to 24" x 8" (600 mm x 200 mm). It was the original intent of the NCUTCD Bicycle Technical Committee to establish these sizes as the minimum sizes in the 2003 MUTCD, but this was inadvertently overlooked during rulemaking. This will result in the minimum R3-17 size being consistent with the current size of the D11-1 BIKE ROUTE sign. The 24" x 18" size should provide more than adequate visibility at typical arterial traffic speeds, and can better fit in restricted locations in urban environments.

#### **COMMITTEE ACTION:**

The Bicycle Technical Committee recommends that the National Committee submit this proposal as developed by the NCUTCD BTC to sponsors for comment and approval.

**Approved unanimously by NCUTCD Council January 20th, 2006.**

Note: Deleted items are shown in ~~strikethrough red~~, and added text is shown in underline green.

1. Revise Section 1A.13 as follows:

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

Standard:

Unless otherwise defined herein, or in the other Parts of this Manual, definitions contained in the most recent edition of the "Uniform Vehicle Code," "AASHTO Transportation Glossary (Highway Definitions)," and other publications specified in Section 1A.11 are also incorporated and adopted by reference.

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

...

7. Bicycle Lane—a portion of a roadway that has been designated by ~~signs and~~ pavement markings and, if used, signs, for preferential or exclusive use by bicyclists.

2. Revise Section 9A.03 as follows:

Section 9A.03 Definitions Relating to Bicycles

Standard:

The following terms shall be defined as follows when used in Part 9:

...

2. Bicycle Lane—a portion of a roadway that has been designated by ~~signs and~~ pavement markings and, if used, signs, for preferential or exclusive use by bicyclists.

3. Revise Table 9B-1 as follows:

Bike Lane	R3-17	—	<del>750600 x 600450</del> <u>(3024 x 2418)</u>
Bicycle Lane Supplemental Plaques	R3-17a,b	—	<del>750600 x 300200</del> <u>(3024 x 128)</u>

4. Revise Section 9B.04 as follows:

Section 9B.04 Bicycle Lane Signs (R3-17, R3-17a, R3-17b)

Standard:

The BIKE LANE (R3-17) sign, if used (see Figure 9B-2), shall be used only in

conjunction with marked bicycle lanes as described in Section 9C.04, ~~and shall be placed at periodic intervals along the bicycle lanes.~~

Guidance:

Bicycle Lane signs (R3-17, R3-17a and R3-17b) should be used in advance of the beginning of a marked bicycle lane, at the end of the bicycle lane, and at periodic intervals.

The BIKE LANE (R3-17) sign spacing should be determined by engineering judgment based on prevailing speed of bicycle and other traffic, block length, distances from adjacent intersections, and other considerations.

The AHEAD (R3-17a) sign (see Figure 9B-2) should be mounted directly below a R3-17 sign in advance of the beginning of a marked bicycle lane.

The ENDS (R3-17b) sign (see Figure 9B-2) should be mounted directly below a R3-17 sign at the end of a marked bicycle lane.

**5. Revise Section 9C.04 as follows:**

**Section 9C.04 Markings For Bicycle Lanes**

Guidance:

~~Longitudinal pavement markings should be used to define bicycle lanes.~~

Support:

Pavement markings designate that portion of the roadway for preferential use by bicyclists. Markings inform all road users of the restricted nature of the bicycle lane.

Examples of bicycle lane markings at right-turn lanes are shown in Figures 9C-1, 9C-3, and 9C-4. Examples of pavement markings for bicycle lanes on a two-way street are shown in Figure 9C-5. Pavement symbols and markings for bicycle lanes are shown in Figure 9C-6.

Standard:

Longitudinal pavement markings shall be used to define bicycle lanes.

~~If used, the bicycle lane symbol marking (see Figure 9C-6) shall be placed immediately after an intersection and at other locations as needed.~~ The bicycle lane symbol marking shall be white. If the bicycle lane symbol marking is used in conjunction with other word or symbol messages, it shall precede them.

~~If the word or symbol pavement markings shown in Figure 9C-6 are used, Bicycle Lane signs (see Section 9B.04) shall also be used, but the signs need not be adjacent to every symbol to avoid overuse of the signs.~~

**A through bicycle lane shall not be positioned to the right of a right turn only lane.**

**Support:**

A bicyclist continuing straight through an intersection from the right of a right turn lane would be inconsistent with normal traffic behavior and would violate the expectations of right-turning motorists.

**Guidance:**

If used, the bicycle lane symbol marking (see Figure 9C-6) should be placed at the beginning of a bike lane and at periodic intervals based on engineering judgment.

When the right through lane is dropped to become a right turn only lane, the bicycle lane markings should stop at least 100 feet before the beginning of the right turn lane. Through bicycle lane markings should resume to the left of the right turn only lane.

An optional through-right turn lane next to a right turn only lane should not be used where there is a through bicycle lane. If a capacity analysis indicates the need for an optional through-right turn lane, the bicycle lane should be discontinued at the intersection approach.

Posts or raised pavement markers should not be used to separate bicycle lanes from adjacent travel lanes.

**Support:**

Using raised devices creates a collision potential for bicyclists by placing fixed objects immediately adjacent to the travel path of the bicyclist. In addition, raised devices can prevent vehicles turning right from merging with the bicycle lane, which is the preferred method for making the right turn. Raised devices used to define a bicycle lane can also cause problems in cleaning and maintaining the bicycle lane.

**Option:**

If the word or symbol pavement markings shown in Figure 9C-6 are used, Bicycle Lane signs (see Section 9B.04) may also be used. To avoid overuse of the signs, the signs need not be adjacent to every symbol.

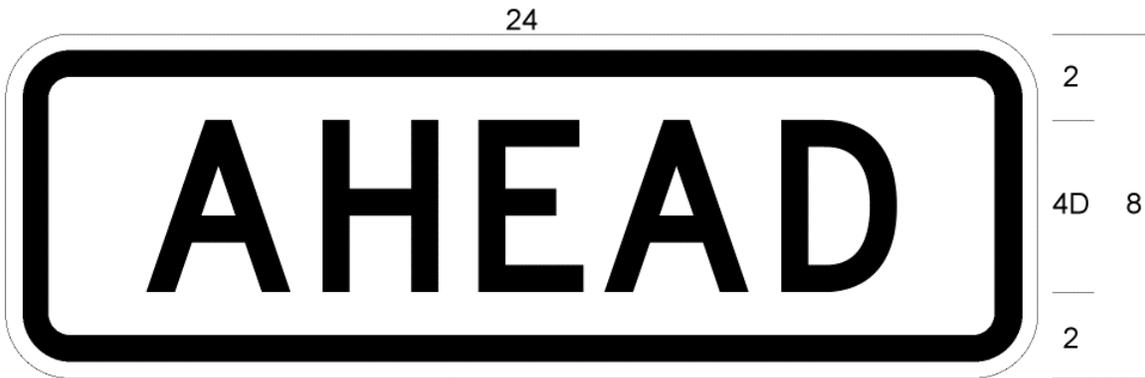
**Standard:**

**Bicycle lanes shall not be provided on the circular roadway of a roundabout intersection.**

SHS figures



R3-17



R3-17a,b