



# National Committee on Uniform Traffic Control Devices

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Item No.: 24B-BIK-05

## NCUTCD PROPOSAL FOR CHANGES TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES

**COMMITTEE / TASK FORCE:** Bicycle Technical Committee  
**ITEM NUMBER:** 24B-BIK-05  
**TOPIC:** Providing Bicycle Turn Box Regulatory and Guide Signs for Bicycle Right Turns  
**ORIGIN OF REQUEST:** Bicycle Technical Committee  
**AFFECTED SECTIONS OF MUTCD:** Section 9A.02 Standardization of Application for Signs  
Section 9B.18 Two-State Bicycle Turn Box Regulatory Signing (R9-23 Series)  
Section 9D.13 Two-Stage Bicycle Turn Box Guide Signs (D11-20 Series)

### DEVELOPMENT HISTORY:

Approved by Bicycle TC: 06/27/2024  
Approved by NCUTCD Council:

*This is a proposal for recommended changes to the MUTCD that has been developed by a technical committee or joint task force of the NCUTCD. The NCUTCD is distributing it to its sponsoring organizations for review and comment. Sponsor comments will be considered in revising the proposal prior to NCUTCD Council consideration. This proposal does not represent a revision of the MUTCD and does not constitute official MUTCD standards, guidance, or options. If approved by the NCUTCD Council, the recommended changes will be submitted to FHWA for consideration for inclusion in a future MUTCD revision. The MUTCD can be revised only through the federal rulemaking process.*

### SUMMARY:

In July 2017 FHWA issued an Interim Approval for optional use of Two-Stage Bicycle Turn Boxes (IA-20). This approval provided traffic control devices to facilitate alternative methods for bicyclists on the curb side of traffic to turn left (or right if the facility is located to the left of general travel lanes) without a bicyclist merging across a physical barrier or facing a difficult merge across multiple lanes of potentially higher-speed traffic. The two-stage turn box also encourages bicyclists to stay within on-street bicycle facilities rather than use the sidewalk and crosswalks around intersections, thus reducing conflicts with pedestrians. This proposal includes provisions for both bicycle left turns and bicycle right turns.

### DISCUSSION:

The FHWA Interim Approval IA-20 provided traffic control devices to facilitate bicycle turns at intersections.

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The most common application of a two-stage bicycle turn box is to facilitate a bicycle left turn from the right edge of the roadway. In some cases, a bicycle right turn box is needed to facilitate a bicycle right turn from the left side of the roadway such as for a two-way separated bicycle lane. IA-20 provided “bicycle left turn” and “bicycle right turn” versions for both regulatory and guide signs.

The 2023 MUTCD Section 9B.18 Two-Stage Bicycle Turn Box Regulatory Signing (R9-23 Series) Figure 9B-1 and Section 9D.13 Two-Stage Bicycle Turn Box Guide Signs (D11-20 Series) Figure 9D-1 Sheet 3 of 3 provide only for a “bicycle left turn” sign. Without clarity that right turn boxes and bicycle right turn signs are permitted, as is provided in IA-20 (and is also clearly indicated for other similar signs in the 2023 MUTCD), some users may interpret that the 2023 MUTCD does not permit them. Since there continues to be a need to provide Two-Stage Bicycle Right Turn Boxes when facilities are provided on the left side of the roadway, this proposal includes provisions for a “bicycle right turn” version of both the regulatory and guide Two-Stage Bicycle Turn Box signs as contained in IA-20.

**RECOMMENDED MUTCD CHANGES:**

The following present the proposed changes to the current MUTCD within the context of the current MUTCD language. Proposed additions to the MUTCD are shown in blue underline and proposed deletions from the MUTCD are shown in ~~red strikethrough~~. Changes previously approved by NCUTCD Council (but not yet adopted by FHWA) are shown in green double underline for additions and ~~green double strikethrough~~ for deletions. In some cases, background comments may be provided with the MUTCD text. These comments are indicated by bracketed white text in shaded green. Deletions made by a technical committee or task force after initial distribution to sponsoring organizations are shown in ~~highlighted red strikethrough and Helvetica text~~. Additions made by a technical committee or task force after initial distribution to sponsoring organizations are shown in underline blue and Helvetica text.

PART 9 TRAFFIC CONTROL FOR BICYCLE FACILITIES

CHAPTER 9A. GENERAL

Section 9A.02 Standardization of Application for Signs

Table 9A-1 Bicycle Facility Sign and Plaque Minimum Sizes (Sheet 1 of 3)

Sign or Plaque	Sign Designation	Section	Off Roadway <sup>1,5</sup>	Roadway <sup>2,5</sup>
Stop	R1-1	9B.01	18 x 18	—
Yield	R1-2	9B.01	18 x 18 x 18	—
Bike Lane (plaque)	R3-5hP	9B.04	—	30 x 12
Except Bicycles (plaque)	R3-7bP	9B.02	—	24 x 12
Advance Intersection Lane Control with Bike Lane	R3-8x Series	9B.03	—	Varies x 36
Bike Lane	R3-17	9B.04	—	24 x 18
Ahead, Ends (plaques)	R3-17aP, R3-17bP	9B.04	—	24 x 9
Movement Restriction	R4-1,2,3,7,16	9B.24	12 x 18	—
Begin Right Turn Lane Yield to Bikes	R4-4	9B.05	—	36 x 30
Bicycle Passing Clearance	R4-19	9B.15	—	30 x 30
Bicycle Wrong Way	R5-1b	9B.06	12 x 18	12 x 18
No Motor Vehicles	R5-3	9B.07	24 x 24	24 x 24
No Bicycles	R5-6	9B.08	18 x 18	—
On Freeway (plaque)	R5-10dP	9B.17	—	24 x 6
	R7-9,9a	9B.09	—	12 x 18
	R7-10	9B.10	—	12 x 18
	R9-3	9B.08	18 x 18	—
	R9-3cP	9B.06	12 x 12	12 x 12
	R9-5	9B.11	12 x 18	12 x 18
	R9-6	9B.12	12 x 18	12 x 18
Shared-Use Path Restriction	R9-7	9B.13	12 x 18*	—
No Skaters	R9-13	9B.08	18 x 18	18 x 18
No Equestrians	R9-14	9B.08	18 x 18	18 x 18
No Snowmobiles	R9-15	9B.08	18 x 18	18 x 18
No All-Terrain Vehicles	R9-16	9B.08	18 x 18	18 x 18
Bicycles Allowed Use of Full Lane	R9-20	9B.14	—	30 x 30
Bicycles Use Shoulder Only	R9-21	9B.16	—	24 x 30
Bicycles Must Exit	R9-22	9B.17	—	24 x 30
Bicycle All Turns from Bike Lane	R9-23	9B.18	—	12 x 18
Bicycle Left Turn from Bike Lane	R9-23a	9B.18	—	12 x 18
Bicycle Left Turn Must Use Turn Box	R9-23b, R9-23c	9B.18	—	12 x 18
Bicycle All Turns	R9-24,24a	9B.19	—	24 x 6
Bicycle U and Left Turns	R9-25,25a,25b	9B.19	—	24 x 9
Bicycle U Turn	R9-26,26a,26b	9B.19	—	24 x 6
Bicycle Left Turn	R9-27,27a,27b	9B.19	—	24 x 6
Push Button for Green	R10-4	9B.20	9 x 12	9 x 12
Left Turn Yield to Bicycle	R10-12b	9B.21	—	30 x 36
Bicycle Detector	R10-22	9B.20	12 x 18	12 x 18
Bike Push Button for Green Light	R10-24	9B.20	9 x 15	9 x 15
	R10-25	9B.20	9 x 12	9 x 12
	R10-26	9B.20	9 x 15	9 x 15
	R10-40, R10-40a, R10-41, R10-41a, R10-41b, R10-41c	9B.22	12 x 21	12 x 21
	R15-1	9B.23	24 x 4.5	48 x 9
	R15-2P	9B.23	13.5 x 9	27 x 18
	R15-8	9B.23	18 x 9	36 x 18
	W1-1,2,3,4,5	9C.01	18 x 18	—
Large Arrow	W1-6,7	9C.01	24 x 12	—
Intersection Warning	W2-1,2,3,4,5	9C.02	18 x 18	—

change Legend on R9-23a to Bicycle Left (Right) Turn from Bike Lane

change Legend on R9-23b and R9-23c to Bicycle Left (Right) Turn Must Use Turn Box

[Change legend on R9-23b and R9-23c to "Bicycle Left (Right) Must use Turn Box"]

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72 CHAPTER 9B. REGULATORY SIGNS  
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74 **Section 9B.18 Two-Stage Bicycle Turn Box Regulatory Signing (R9-23 Series)**

75 Support:

76 01 Where two-stage bicycle turn boxes are provided in an intersection, the design of an approach to that  
77 intersection will determine whether the use of a two-stage bicycle turn box is required by bicycles to  
78 facilitate a turn.

79 02 Situations in which a two-stage bicycle turn box might be necessary to facilitate turns include, but  
80 are not limited to, those in which:

- 81 A. A separated bicycle facility is provided where upstream access to a lane used to facilitate turns  
82 by motor vehicle traffic is physically inaccessible to bicycles;
- 83 B. Left turns are prohibited from the left-most lane, or right turns are prohibited from the right-  
84 most lane, at an intersection; or
- 85 C. Locations where physical or operational conditions make it impracticable or unsafe for a  
86 bicyclist to merge and make the appropriate turn as would any other vehicle.

87 **Standard:**

88 03 Where bicycles are required to use a two-stage bicycle turn box (see Figure 9B-5), the Two-  
89 Stage Bicycle Turn Box regulatory sign series (see Figure 9B-5) shall be used.

90 04 Where bicycles are required to use a two-stage bicycle turn box, the Bicycles All Turns from  
91 Bike Lane (R9-23) or Bicycle Left (Right) Turn from Bike Lane (R9-23a) advance regulatory sign  
92 shall be mounted in advance of the intersection, and at least one Bicycle Left (Right) Turn Must  
93 Use Turn Box (R9-23b or R9-23c) sign shall be used at the intersection.

94 05 Where used, the Bicycle Left (Right) Turn Must Use Turn Box (R9-23b) sign shall be mounted  
95 at the near side of the intersection.

96 06 Where used, the Bicycle Left (Right) Turn Must Use Turn Box location (R9-23c) sign shall be  
97 mounted at the far side of the intersection.

98 [Adding 'Bicycle Right Turn' version of R9-23 series sign as per IA-20 in format consistent with current  
99 MUTCD format.]

100 Option:

101 07 Where use of a two-stage bicycle turn box is optional, the Two-Stage Bicycle Turn Box guide sign  
102 series (see Section 9D.13) may be used to provide directional information.

103 08 If used, an appropriately sized Street Name (D3-1) sign (see Section 2D.45) may be installed below  
104 the All Turns from Bike Lane sign or Bicycle Left (Right) Turn from Bike Lane sign to identify the  
105 crossroad where the turn box will be available.

106 Support:

107 09 Section 9E.11 contains information regarding pavement markings and turning restrictions for two-  
108 stage turn boxes.

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110 **CHAPTER 9D. GUIDE AND SERVICE SIGNS**

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112 **Section 9D.13 Two-Stage Bicycle Turn Box Guide Signs (D11-20 Series)**

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114 Support:

115 01 Two-stage bicycle turn boxes provide a way for a bicyclist to make a turn in a manner such that a  
116 merge across the general-purpose lanes is not required.

117 02 Section 9B.18 provides information about situations when the use of a two-stage bicycle turn box is  
118 required and also contains information about the Two-Stage Bicycle Turn Box (R9-23 series) regulatory  
119 signs.

120 03 Section 9E.11 contains information regarding pavement markings for two-stage bicycle turn boxes.  
121 Option:

122 04 Where a two-stage bicycle turn box is provided, the Two-Stage Bicycle Turn Box guide sign series  
123 (see Figure 9D-1) may be used.

124 **Standard:**

125 **05 Where used, the Two-Stage Bicycle Left (Right) Turn Box Advance (D11-20) guide sign shall**  
126 **be mounted in advance of the intersection where the turn box is located.**

127 06 **Where used, the Two-Stage Bicycle Left (Right) Turn Box (D11-20a) guide sign shall be**  
128 **mounted on the far side of the intersection.**

129 [Adding "Bicycle Right Turn" version of D11-20 series signs as per IA-20 and consistent with current  
130 MUTCD format.]

131 Option:

132 07 Where the Two-Stage Bicycle Turn Box Advance (D11-20) guide sign is used, an additional Two-  
133 Stage Bicycle Turn Box Advance guide sign may be mounted on the near side of the intersection where  
134 the turn box is located.

135 08 If used, an appropriately-sized Street Name (D3-1) sign (see Section 2D.45) may be installed below  
136 the Two-Stage Bicycle Turn Box Advance guide sign to identify the crossroad where the turn box will be  
137 available.

138 09 Figure 9D-7 shows an example of Two-Stage Bicycle Turn Box guide signs at a location where the  
139 use of the turn box is optional.