

# Comments on Docket No. FHWA-2020-0001 National Standards for Traffic Control Devices; the *Manual on Uniform Traffic Control Devices for Streets and Highways*; Revision

Please use this form to provide comments on the Notice of Proposed Amendments for the MUTCD.

## INSTRUCTIONS:

1. Add your name or organization name where indicated in the footer of this form.
2. Use Table 1 to provide your original comments.
3. Use Table 2 to indicate your agreement with a comment that another commenter has submitted to the docket.
4. Do not adjust formatting of the rows and columns; text will automatically wrap and expand the row height as you type.
5. To add rows to this form, use the "Insert Rows" function, or hover just outside the left edge of the row below which you would like to add a row and click the encircled "+" that appears.
6. If you choose to provide a letter to accompany this comment form, please **print the document as a PDF**; **please do not scan a hard copy**. This will assist FHWA with cataloging your comments.

**TABLE 1. ORIGINAL COMMENTS ON PROPOSED CHANGES.** Please indicate the applicable proposed Section numbers in the far-left column. In the next three columns, please indicate your agreement, disagreement, or whether the column is applicable to your response by placing a, "YES," "NO," or "N/A" in the appropriate column of the row. If you agree with a proposed change, then there is no need to fill out the additional columns beyond the first two. However, it can be helpful to explain why you agree with a proposed change based on your objective experience as a roadway operator and/or empirical data. If you disagree in part or in whole, then please provide additional information that FHWA may find helpful.

Proposed Section Number(s)	Agree with concept and text as proposed	Agree with concept; suggested rewording of text in Comments	Disagree with concept	Comments <i>Please include justification for your position based on objective experience and empirical data. If there is a specific statement with which you take exception, please provide the Page and Line numbers from the mark-up version of the proposed MUTCD text.</i>
2B.19	NO	NO	YES	page 73 line 11: We would like to maintain the flexibility to use the STATE LAW legend on R1-5 series signs.
3B.19	NO	YES	N/A	page 357 line 10: should include bikes for "Yield here to Pedestrians and Bikes" sign
3B.19	NO	NO	YES	page 357 line 26: Change "shall" condition to "should". We frequently use yield lines in association with warning signs at uncontrolled crossings at single lane approaches.
3C.01	NO	YES	N/A	Guidance related to when other measures should accompany a marked crosswalk is not consistent with the FHWA Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations. As recommended by the guide, some roadways with 2 and 3 lanes sections (depending on speed) should include supplemental signs and markings such as Advance Yield Here To (Stop Here For) Pedestrians sign, RRFBs, and yield (stop) line, etc.
3C.01	NO	NO	YES	page 368 line 4: The provided sentence is vague and can be interpreted in different ways ("Crosswalk markings shall be provided at non-intersection crosswalk locations.") Recommend changing to make this less broad or change to "Should" condition.
3C.03	NO	YES	N/A	page 370 line 24: Standard is unclear. Add clarification "if used" or "where necessary".
3C.06	NO	YES	NO	page 371 line 39: The new spacing requirement between lateral bars is too restrictive. The standard needs flexibility based on lane width for maintenance purposes. Alternatively recommend changing "shall" condition to guidance.
3H.07	NO	NO	YES	The standard for the red-colored pavement too limited. It is often cost prohibitive to paint the full width and length of a transit lane. Denver has seen more limited application of the red-colored pavement to be effective. Please adjust Section 3H.07 and Figure 3H-5 to allow for alternative applications of red-colored pavement and messaging.

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3J.07	NO	YES	N/A	Figure 3J-6 shows tubular markers on the striped curb extension line. Please provide flexibility for tubular markers to be placed behind the striping to provide for shy distance.
3J.07	NO	NO	YES	page 400 line 11: Provide option for 8" solid white in addition to the 4" double white line for bulbout striping. The new requirement would put all our existing striped bulbouts out of compliance.
4A.05	NO	YES	N/A	Remove the prohibition on using green bicycle signals during times when turning vehicles may proceed after yielding to bikes
4A.05	NO	YES	NO	Section 4A.05 is overly prescriptive. The operation of bicycle signals in use in Denver today is not an issue. These new restrictions would require changes to existing facilities and limit where we could install bicycle facilities.
4C.05	NO	YES	N/A	Provide flexibility for installing pedestrian signals. Remove requirement to have 133 crossing pedestrians/hour to install. Recommend 20/hr. If the pedestrian demand is there, through similar warrants as RRFB, marked crosswalk, etc., the use of a pedestrian signal as the crossing treatment should be based on roadway speed and volumes alone.
4F-16	NA	NA	NA	pg 455 line 32-38: Change "Shall" condition to "Should" condition prohibiting circular indications at t-intersections when t approach is greater than 35 mph
4H.02	NO	NO	YES	Remove the prohibition of the use of bicycle signal faces in the design and operation of pedestrian hybrid beacons. PHBs are commonly used along neighborhood bikeways to facilitate safe bike and pedestrian crossings. This prohibition would not allow for bike movement during the activation of a PHB (since bikes are not treated as pedestrians).
4I.06	YES	YES	NO	pg 475 line 25-27: Change "shall" to "should" condition.
4J	NO	NO	YES	Remove the prohibition of the use of bicycle signal faces in the design and operation of pedestrian hybrid beacons. PHBs are commonly used along neighborhood bikeways to facilitate safe bike and pedestrian crossings. This prohibition would not allow for bike movement during the activation of a PHB (since bikes are not treated as pedestrians).
Section 5	YES	NO	NO	Emphasis on high quality pavement markings and abundant and high-quality signing is a definite positive; accommodating autonomous vehicles will require careful, ongoing understanding of industry practices.
Section 6	NO	NO	N/A	Updated concepts for addressing bikes and pedestrians are not as comprehensive as current Denver practices
8A.05	NO	YES	N/A	Lines 19-26, Section 8A.05: With the latest development in ITS architecture, recommend the inclusion of ITS be part of the factors by the diagnostic team for linking highway, vehicle, TMC with RR operations.
8A.06	NO	YES	N/A	Although this section deals with static regulatory traffic signs, recommend inclusion of variable Blank Out Signs for traffic control devices or reference to a different section if applicable.
8A.07	NO	YES	N/A	Agree with inclusion. But on line 10 of Section 8A.07, recommend adding "Clear Storage Distance" to the title.
8A.12	NO	YES	N/A	Lines 17-20 of Section 8A.12: Recommend keeping "shall" in-lieu of "should" or clarify that the "should" condition resides with the highway authority.
8A.13	NO	NO	YES	Recommend language changes to indicate that a diagnostic team shall decide if active traffic control devices are required at the busway grade crossing. If the grade crossing requires active traffic control, all devices shall be per Part 8 of the MUTCD. There is a difference between a BUS ONLY lane and exclusive BRT transit

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				ways. The proposed definition of "busway" in Section 1C.01 does not differentiate.
8B.17	NO	YES	N/A	Recommend inclusion LRT approaching activated "Second Train" Blankout Warning sign or W10-16 for pathway and sidewalk on RR grade crossings.
8D.04	NO	YES	N/A	Agree with modification in general, but the revision of lines 29 to 38 created a confusion between the LRT speed and "OPERATING" speed. Recommend providing additional clarification of what is the definition of LRT "OPERATING" speed in both scenarios.
8D.10	NO	YES	N/A	Agree to the inclusion of Section 8D.10 but recommend removing "Busway" from line 2 of page 717 of Section 8D.10 or provide clearer definition for type of busway. Recommend inclusion of a different section for Busway grade crossing in-lieu of combining it with the traffic signal controller preemption and RR/LRT grade crossings.
8D.12	NO	YES	N/A	Agree to inclusion and revision of Section 8D.12 but recommend allowing the circular green ball indications as an alternative on lines 5 to 18 of page 721 of Section 8D.12.
8D.12	NO	YES	N/A	Recommend revision to the criteria on lines 33 to 37 of page 721. Add clarity that downstream intersection turn movement is across a track.
8D.13	NO	YES	N/A	Agree to the inclusion but recommend allowing the use of the circular green ball indications as an alternative for queue cutter signals.
8D.16	NO	YES	N/A	Agree with revision, but figure 8D-4 mentioned in lines 29-31 of page 727 from Section 8D.16 is not available.
8E.01	NO	YES	N/A	Agree with revision for reorganization, but I believe the word "pathway" in line 23 of page 729 needs to be "sidewalk".
8E.03	NO	YES	N/A	Agree with revision for clarity and consistency, but tables 9B-1 and 9C-1 are not available.
8E.04	NO	YES	N/A	Agree with revision for clarity and consistency, but the reference to figure 8E-5 as noted in lines 12 and 13 of page 32 from Section 8E.4 is incorrect. The correct figure is 8E-6.
8E.05	NO	YES	N/A	Agree with revision for clarity, but the reference to figure 8E-6 for crossbuck assembly is incorrect. The correct figure is 8E-7. Also figure 8E-2 is reference for crossbuck location which is also incorrect. It should be 8E-4.
8E.06	NO	YES	N/A	Agree with revision for clarity and support, but again the references to figures are incorrect. For swing gates, figure 8E-7 is incorrect. For fences, figure 8E-7 is correct. For ped/Emergency gate exist, figure 8E-7 is incorrect.
8E.09	NO	YES	N/A	Agree with revision, but again the references to figures are incorrect. For both automatic ped and swing gates, the reference to figure 8E-7 is incorrect.
Section 9	NO	N/A	N/A	In general, add more flexibility for bike facility design. It is an evolving field. A lot of the language in this section is unduly restrictive.
9A.01	NO	YES	NO	Focus the use of bicycle facilities and traffic control devices specifically on safety, not "public acceptance" and "counterproductive results". Add safety benefits.
9B.11	NO	YES	N/A	Include provision for the use of "Turning Vehicles Yield to Bikes/Peds" signage for RTs across bike lane (in addition to Turning Vehicles Yield to Peds or LT Yield to Bicycles signage) in order to remind drivers of the yield condition.
9D.13	NO	YES	N/A	In Standard, please change TSBTB language from "shalls" to "shoulds." Installing all of these signs at all intersections with a TSBTB will significantly increase signage clutter at intersections and decrease safety. At minimum, only require one of the three in the

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				series. Figure 9D-7 shows them as optional. Please clarify/provide consistency in text by changing to "shoulds".
Figure 9E.1	NO	YES	NO	Add back in "Helmeted Bicyclist Symbol" as option for bike lane symbol. It would be a financial burden to replace all our bicycle facility symbols in Denver.
9E.02	NO	NO	YES	Please remove the prohibition of dotted bike lanes within a turn lane. In many cases this is appropriate and helps to maintain the safety of the bike lane.
9E.02	NO	NO	YES	Remove guidance that says you need a space for vehicles to be stored between general purpose and bike lane if you bend away from general purpose lanes. Recent experience on separated bikeways has suggested that, even if you cannot achieve a full car length offset between bike lane and general purpose lane, the bend out design still shows efficacy in slowing down turning movements, and minimizing conflicts to a more specific location (as opposed to a mixing zone of bike keyhole, in many instances).
9E.03	NO	NO	YES	Remove prohibition of chevron markings in bike lane extensions. Dotted lines with chevrons have been used to mark bike lanes through intersections where no conflict exists (in many cities) without serious consequence. If this were prohibited, many of these intersections would be out of compliance, and for no reason.
9E.07	NO	YES	N/A	Remove requirement to place directional arrows on all separated bike lanes (Line 23). Recent Denver experience has suggested that arrows are only beneficial when you have a contraflow bikeway or two-way bikeway or unexpected conditions. Remove requirement to install chevrons or diagonal markings in buffers that already have vertical elements (Line 32). This significantly increases cost and has been found to be redundant when vertical elements are present in the buffer.
9E.16	NO	YES	N/A	Remove guidance stating that channelizing devices for bike facilities should be tubular markers. This is too prescriptive and does not allow for safer, innovative devices (i.e. concrete curb, rubber curb, etc.) to be used.

**TABLE 2. AGREE WITH ANOTHER COMMENTER.** If you agree with another commenter, please indicate the commenter with whom you agree with and note any additional information FHWA may find helpful or any exceptions.

Docket Comment Number and/or Commenter Name	Agree with commenter's comments as written	Agree with commenter; with exception(s)	Additional information helpful to FHWA, or exceptions to commenter's comments