**ATTACHMENT NO. 10**

**RRLRT No.1**

National Committee on
Uniform Traffic Control Devices

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**TECHNICAL COMMITTEE:** **Railroad / Light Rail Transit Technical Committee**

**TOPIC:** **Proposed Changes and Additions to Chapter 8B**

**STATUS/DATE OF ACTION:**

| | |
|---|---|
| **TC Drafts:** | 01/08/2014 |
| **RRLRT Approval:** | 06/26/2014 |
| **Transmitted to Sponsors:** | 03/25/2014 |
| **RRLRT editorial revisions & Approval:** | 06/27/2014 |
| **Council Approval:** | 06/28/2014 |

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**ORIGIN OF REQUEST:** Railroad and Light Rail Transit Technical Committee

**DISCUSSION:**

In an effort to clarify existing Manual parts and improve consistency among Manual elements and updated Figures, the RRLRT TC of the NCUTCD is proposing these changes to Parts 8B.03, 8B.04 and Figure 8B.02.

# CHAPTER 8B. SIGNS AND MARKINGS

## Section 8B.01 Purpose

Support:

01 Passive traffic control systems, consisting of signs and pavement markings only, identify and direct attention to the location of a grade crossing and advise road users to slow down or stop at the grade crossing as necessary in order to yield to any rail traffic occupying, or approaching and in proximity to, the grade crossing.

02 Signs and markings regulate, warn, and guide the road users so that they, as well as LRT vehicle operators on mixed-use alignments, can take appropriate action when approaching a grade crossing.

**Standard:**

03 **The design and location of signs shall comply with the provisions of Part 2. The design and location of pavement markings shall comply with the provisions of Part 3.**

## Section 8B.02 Sizes of Grade Crossing Signs

**Standard:**

01 **The sizes of grade crossing signs shall be as shown in Table 8B-1.**

Option:

02 Signs larger than those shown in Table 8B-1 may be used (see Section 2A.11).

## Section 8B.03 Grade Crossing (Crossbuck) Sign (R15-1) and Number of Tracks Plaque (R15-2P) at Active and Passive Grade Crossings

**Standard:**

01 **The Grade Crossing (R15-1) sign (see Figure 8B-1), commonly identified as the Crossbuck sign, shall be retroreflectorized white with the words RAILROAD CROSSING in black lettering, mounted as shown in Figure 8B-2.**

Support:

02 In most States, the Crossbuck sign requires road users to yield the right-of-way to rail traffic at a grade crossing.

**Standard:**

03 **As a minimum, one Crossbuck sign shall be used on each highway approach to every highway-rail grade crossing, alone or in combination with other traffic control devices.**

Option:

04 A Crossbuck sign may be used on a highway approach to a highway-LRT grade crossing on a semi-exclusive or mixed-use alignment, alone or in combination with other traffic control devices.

**Standard:**

05 **If automatic gates are not present and if there are two or more tracks at a grade crossing, the number of tracks shall be indicated on a supplemental Number of Tracks (R15-2P) plaque (see Figure 8B-1) of inverted T shape mounted below the Crossbuck sign in the manner shown in Figure 8B-2.**

06 **On each approach to a highway-rail grade crossing and, if used, on each approach to a highway-LRT grade crossing, the Crossbuck sign shall be installed on the right-hand side of the highway on each approach to the grade crossing. Where restricted sight distance or unfavorable highway geometry exists on an approach to a grade crossing, an additional Crossbuck sign shall be installed on the left-hand side of the highway, possibly placed back-to-back with the Crossbuck sign for the opposite approach, or otherwise located so that two Crossbuck signs are displayed for that approach.**

07 **At all passive grade crossings,a strip of retroreflective white material not less than 2 inches in width shall be used on the back of each blade of each Crossbuck sign for the length of**

**each blade, except those where Crossbuck signs have been installed back-to-back or where double-faced Crossbuck signs have been installed.**

*Guidance:*

08 *Crossbuck signs should be located with respect to the highway pavement or shoulder in accordance with the criteria in Chapter 2A and Figures 2A-2 and 2A-3.*

09 *The minimum lateral offset for the nearest edge of the Crossbuck sign should be 6 feet from the edge of the shoulder or 6 feet from the edge of the traveled way in rural areas, and 2 feet from the face of the curb in urban areas.*

10 *At a highway-rail grade crossing, the Crossbuck sign should be located a minimum of 12 feet from the center of the nearest track.*

11 *Where unusual conditions make variations in location and lateral offset appropriate, engineering judgment should be used to provide the best practical combination of view and clearances (See Section 2A.16).*

## Section 8B.04 Crossbuck Assemblies with YIELD or STOP Signs at Passive Grade Crossings

**Standard:**

01 **A grade crossing Crossbuck Assembly shall consist of a Crossbuck (R15-1) sign, and a Number of Tracks (R15-2P) plaque if two or more tracks are present, that complies with the provisions of Section 8B.03, and either a YIELD (R1-2) or STOP (R1-1) sign installed on the same support, except as provided in Paragraph 9. If used at a passive grade crossings, a YIELD or STOP sign shall be installed in compliance with the provisions of Part 2, Section 2B.10, and Figures 8B-2 and 8B-3.**

02 **At all public highway-rail grade crossings that are not equipped with the active traffic control systems that are described in Chapter 8C, except crossings where road users are directed by an authorized person on the ground to not enter the crossing at all times that an approaching train is about to occupy the crossing, a Crossbuck Assembly shall be installed on the right-hand side of the highway on each approach to the highway-rail grade crossing.**

03 **If a Crossbuck sign is used on a highway approach to a public highway-LRT grade crossing that is not equipped with the active traffic control systems that are described in Chapter 8C, a Crossbuck Assembly shall be installed on the right-hand side of the highway on each approach to the highway-LRT grade crossing.**

04 **Where restricted sight distance or unfavorable highway geometry exists on an approach to a grade crossing that has a Crossbuck Assembly, or where there is a one-way multi-lane approach, an additional Crossbuck Assembly shall be installed on the left-hand side of the highway.**

05 **A YIELD sign shall be the default traffic control device for Crossbuck Assemblies on all highway approaches to passive grade crossings unless an engineering study performed by the regulatory agency or highway authority having jurisdiction over the roadway approach determines that a STOP sign is appropriate.**

06 **A STOP sign shall not be installed on a Crossbuck Assembly at an intersection that is controlled by a traffic control signal that is not interconnected and not preempted.**

07 **A YIELD sign with a supplemental plaque "TO TRAINS" (RX-XX) shall be installed on a Crossbuck Assembly where the grade crossing is within an intersection controlled by a traffic control signal that is not preemptedby a train.**

*Guidance:*

08 *The use of STOP signs at passive grade crossings should be limited to unusual conditions where requiring all highway vehicles to make a full stop is deemed essential by an engineering study. Among the factors that should be considered in the engineering study are the line of sight to approaching rail traffic (giving due consideration to seasonal crops or vegetation beyond both the highway and railroad or LRT rights-of-ways), the number of tracks, the speeds of trains or LRT equipment and highway vehicles, and the*

*crash history at the grade crossing.*

Support:

09 Sections 8A.02 and 8A.03 contain information regarding the responsibilities of the highway agency and the railroad or LRT agency regarding the selection, design, and operation of traffic control devices placed at grade crossings.

Option:

10 If a YIELD or STOP sign is installed for a Crossbuck Assembly at a grade crossing, it may be installed on the same support as the Crossbuck sign or it may be installed on a separate support at a point where the highway vehicle is to stop, or as near to that point as practical, but in either case, the YIELD or STOP sign is considered to be a part of the Crossbuck Assembly.

**Standard:**

11 **If a YIELD or STOP sign is installed on an existing Crossbuck sign support, the minimum height, measured vertically from the bottom of the YIELD or STOP sign to the top of the curb, or in the absence of curb, measured vertically from the bottom of the YIELD or STOP sign to the elevation of the near edge of the traveled way, shall be 4 feet (see Figure 8B-2).**

12 **If a Crossbuck Assembly is installed on a new sign support (see Figure 8B-2) or if the YIELD or STOP sign is installed on a separate support (see Figure 8B-3), the minimum height, measured vertically from the bottom of the YIELD or STOP sign to the top of the curb, or in the absence of curb, measured vertically from the bottom of the YIELD or STOP sign to the elevation of the near edge of the traveled way, shall be 5 feet, and shall be 7 feet if the Crossbuck Assembly is installed in an area where parking or pedestrian movements are likely to occur.**

*Guidance:*

13 *If a YIELD or STOP sign is installed for a Crossbuck Assembly at a grade crossing on a separate support than the Crossbuck sign (see Figure 8B-3), the YIELD or STOP sign should be placed at a point where the highway vehicle is to stop, or as near to that point as practical, but no closer than 15 feet measured perpendicular from the nearest rail.*

14 *Where a highway-rail grade crossingis located less than the design vehicle length from a stop controlled intersection and a STOP sign is recommended as part of the Crossbuck Assembly, consideration should be given to installing a YIELD sign in lieu of a STOP sign at the intersection.*

Support:

15 The meaning of a Crossbuck Assembly that includes a YIELD sign is that a road user approaching the grade crossing needs to be prepared to decelerate, and when necessary, yield the right-of-way to any rail traffic that might be occupying the crossing or might be approaching and in such close proximity to the crossing that it would be unsafe for the road user to cross.

16 Certain commercial motor vehicles and school buses are required to stop at all grade crossings in accordance with 49 CFR 392.10 even if a YIELD sign (or just a Crossbuck sign) is posted.

17 The meaning of a Crossbuck Assembly that includes a STOP sign is that a road user approaching the grade crossing must come to a full and complete stop not less than 15 feet short of the nearest rail, and remain stopped while the road user determines if there is rail traffic either occupying the crossing or approaching and in such close proximity to the crossing that the road user must yield the right-of-way to rail traffic. The road user is permitted to proceed when it is safe to cross.

**Standard:**

18 **A vertical strip of retroreflective white material, not less than 2 inches in width, shall be used on each Crossbuck support at passive grade crossings for the full length of the back of the support from the Crossbuck sign or Number of Tracks plaque to within 2 feet above the ground or elevation of the near edge of the traveled way (whichever is higher), except as provided in Paragraph 19.**

Option:

19 The vertical strip of retroreflective material may be omitted from the back sides of Crossbuck sign supports installed on one-way streets.

20 If a YIELD or STOP sign is installed on the same support as the Crossbuck sign, a vertical strip of

red (see Section 2A.21) or white retroreflective material that is at least 2 inches wide may be used on the front of the support from the YIELD or STOP sign to within 2 feet above the ground or elevation of the near edge of the traveled way (whichever is higher).

**Standard:**

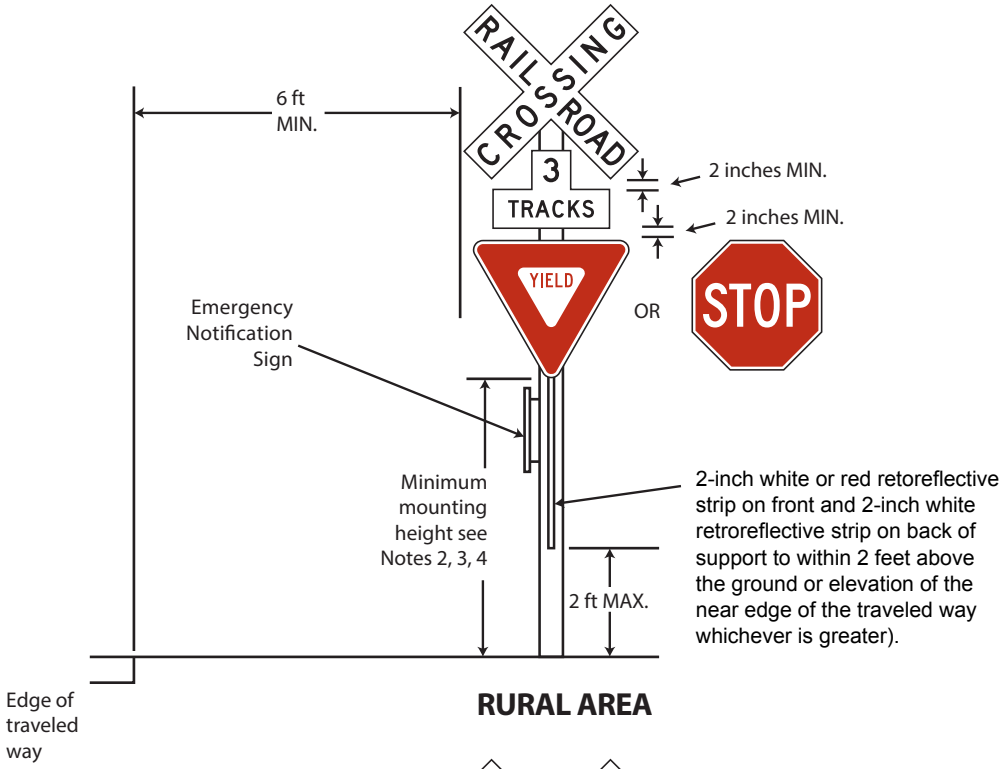
21 **If a Crossbuck sign support at a passive grade crossing does not include a YIELD or STOP sign (either because the YIELD or STOP sign is placed on a separate support or because a YIELD or STOP sign is not present on the approach), a vertical strip of retroreflective white material, not less than 2 inches in width, shall be used for the full length of the front of the support from the Crossbuck sign or Number of Tracks plaque to within 2 feet above the ground or elevation of the near edge of the traveled way (whichever is higher).**

22 **At all grade crossings where YIELD or STOP signs are installed, Yield Ahead (W3-2) or Stop Ahead (W3-1) signs shall also be installed if the criteria for their installation in Section 2C.36 is met.**

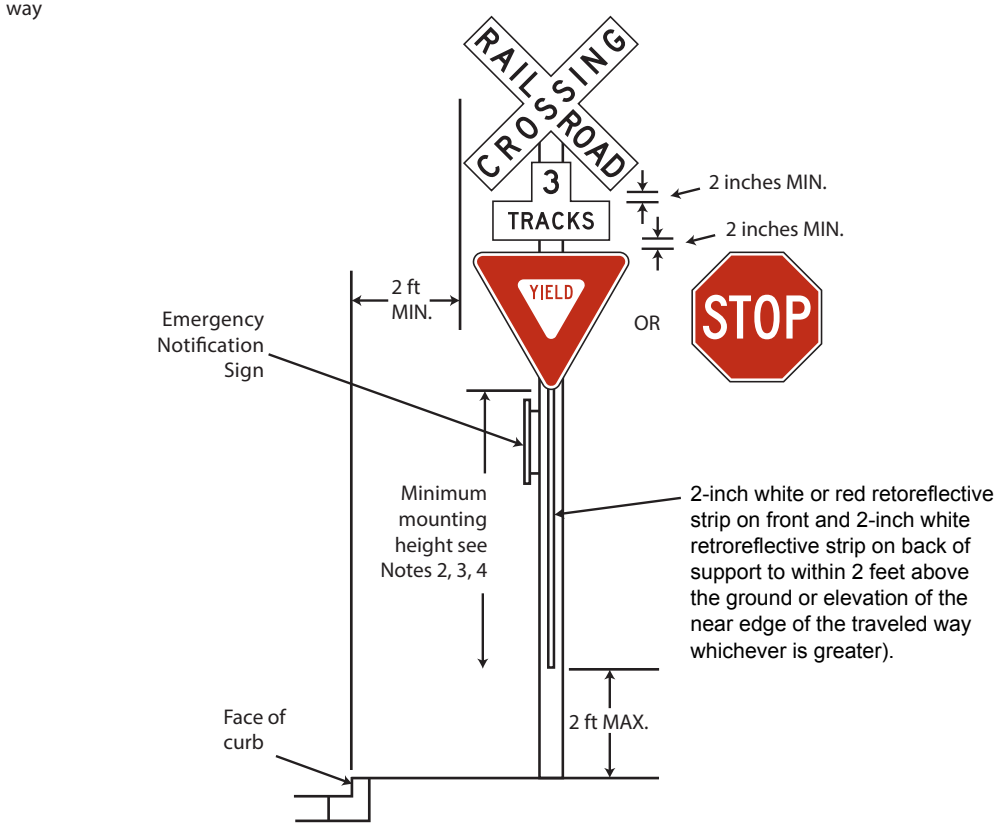
Support:

23 Section 8B.28 contains provisions regarding the use of stop lines or yield lines at grade crossings.

## Figure 8B-2. Crossbuck Assembly with a YIELD or STOP Sign on the Crossbuck Sign Support




**RURAL AREA**




**AREA WITH PEDESTRIAN MOVEMENTS OR PARKING**

Notes:
1. YIELD or STOP signs are used at passive crossings. A STOP sign is used only if an engineering study determines that it is appropriate for that particular approach.
2. Mounting height shall be at least 4 feet for installations of YIELD or STOP signs on existing Crossbuck sign supports.
3. Mounting height shall be at least 5 feet on new crossbuck assembly installations in areas without pedestrian movements or parking.
4. Mounting height shall be at least 7 feet on new crossbuck assembly installations in areas with pedestrian movements or parking, and on expressways.
5. Where unusual conditions make variations in location and lateral offset appropriate, engineering judgment should be used to provide the best practical combination of view and safety clearances.
6. Retroreflective strips should not interfere with the crash worthiness of the sign support.