National Committee on
Uniform Traffic Control Devices

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Item Number: 25B-RR-01

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

COMMITTEE / TASK FORCE:	Railroad and Light Rail Transit Technical Committee
ITEM NUMBER:	25B-RR-01
TOPIC:	Removal of Defined Length and Width of Retroreflective Strip
ORIGIN OF REQUEST:	Railroad and Light Rail TC
AFFECTED SECTIONS OF MUTCD:	8D.03, Figure 8D-1

DEVELOPMENT HISTORY:
Approved by RRLRT TC:.....06/12/2025
Approved by NCUTCD Council: .....

This is a proposed change to the MUTCD that has been developed by a technical committee, joint committee, or joint task force of the NCUTCD. The NCUTCD is distributing this 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, options, or support. 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:
This proposal is for the change in section 8D.03 to provide for the requirement of the width of reflective material to include the entire gate and be determined by the width of the gate section and not an arbitrary length.

DISCUSSION:
The 2009 edition required that the gate arm be fully reflectorized. The 11th edition added a minimum length 32 feet and width 4 inches for the reflective material, which in most cases exceeded the actual width of part of the gate arm itself. A significant number of gates being less than 32 feet in overall length have a reduced section at the tip which the requirement of 4-inch retroreflective tape material is not practical.

The common configuration of railroad gates includes a first section and a gate tip section which is less than 4 inches. Longer gates generally consist of three sections. The first section can accommodate the 4-inch reflective tape. The second section can accommodate 3-inch reflective tape. The gate tip section can accommodate 2-inch reflective tape.

In many locations the gates are designed for high wind locations, and the width of the gate is limited to prevent damage to gate mechanisms and vehicles during wind events. The gates are designed for crashworthiness, and when you increase the size of gate, you place a larger mass in the driving lane.

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, joint committee, or task force after initial distribution to sponsoring organizations are shown in ~~highlighted red strikethrough and sans-serif text~~. Additions made by a technical committee, joint committee, or task force after initial distribution to sponsoring organizations are shown in underline blue and sans-serif text.

PART 8

RAILROAD AND LIGHT RAIL TRANSIT

CHAPTER 8D. FLASHING-LIGHT SIGNALS, AUTOMATIC GATES, AND TRAFFIC CONTROL SIGNALS

Section 8D.03 Automatic Gates

Support:

01 An automatic gate is a traffic control device used in conjunction with flashing-light signals.

Standard:

02 The automatic gate (see Figure 8D-1) shall consist of a drive mechanism and a fully retroreflective red-and-white-striped gate arm with lights. When in the down position, the gate arm shall extend across the approaching lanes of highway traffic.

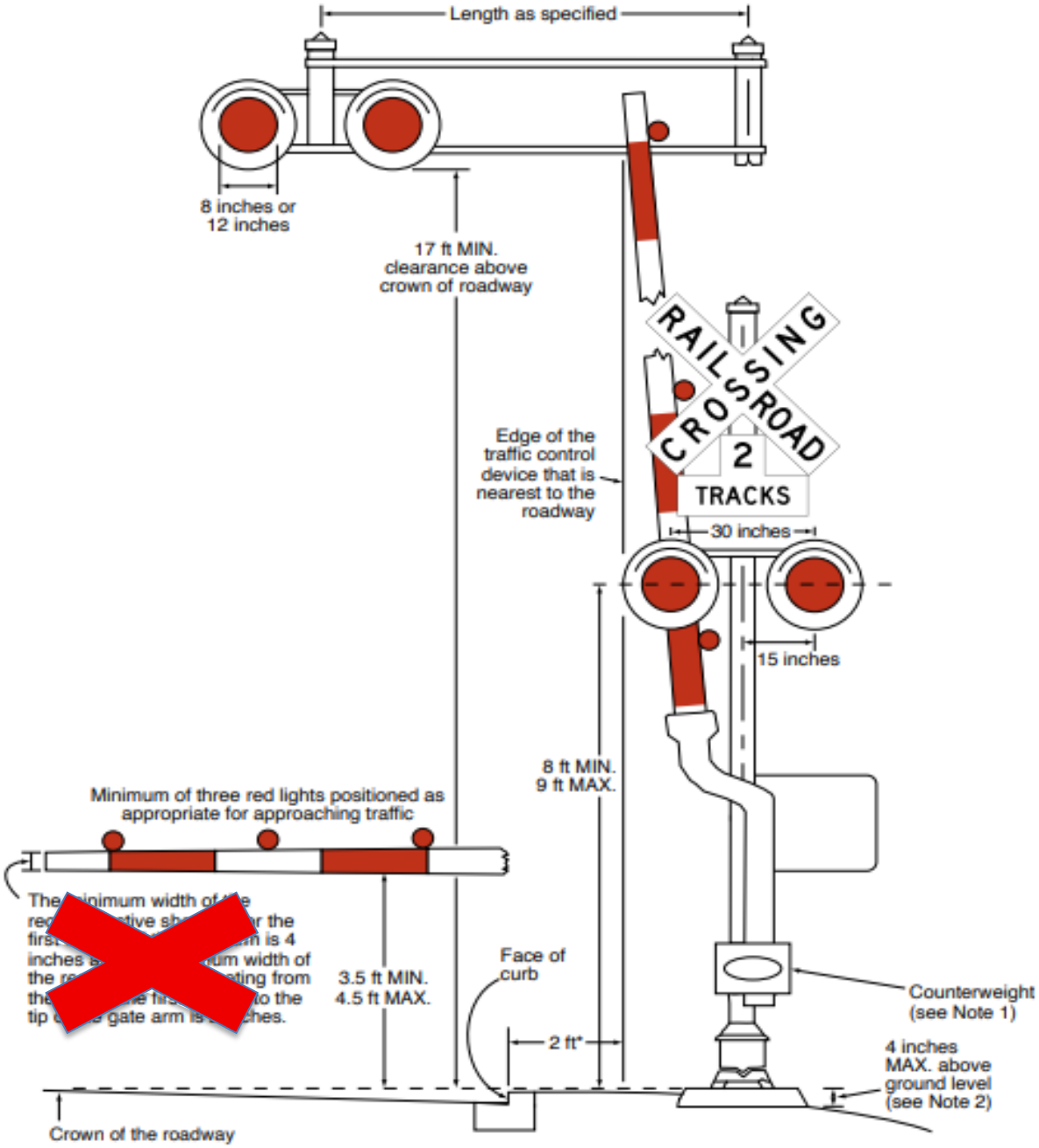
03 In the normal sequence of operation, unless constant warning time detection or other advanced system requires otherwise, the flashing-light signals and the lights on the gate arm (in its normal upright position) shall be activated immediately upon detection of approaching rail traffic. The gate arm shall start its downward motion not less than 3 seconds after the flashing-light signals start to operate, shall reach its horizontal position at least 5 seconds before the arrival of the rail traffic, and shall remain in the down position until the rail traffic completely clears the grade crossing.

04 When the rail traffic clears the grade crossing, and if no other rail traffic is detected, the gate arm shall ascend to its upright position, following which the flashing-light signals and the lights on the gate arm shall cease operation.

05 Gate arms shall be fully retroreflective on both sides and shall have vertical stripes alternately red and white at 16-inch intervals measured horizontally. ~~The width (which becomes the height of the retroreflective sheeting when the automatic gate is in the down position) of the retroreflective sheeting on the front of the gate arm shall be at least 4 inches for the first 32 feet of gate arm length measured from the center of the gate mast. The front of the gate arm beyond 32 feet to the tip of the gate shall have retroreflective sheeting at least 2 inches in width.~~

[Paragraphs 06-19 omitted - no changes]

Figure 8D-1. Composite Drawing of Active Traffic Control Devices for Grade Crossings Showing Clearances



*For locating this reference line on an approach that does not have a curb, see Section 8D.01.

Notes:

1. Where gates are located in the median, additional median width may be required to provide the minimum clearance for the counterweight supports.
2. The top of the signal foundation should be no more than 4 inches above the surface of the ground and should be at the same elevation as the crown of the roadway. Where site conditions would not allow this to be achieved, the shoulder side slope should be re-graded or the height of the signal post should be adjusted to meet the 17-foot vertical clearance requirement.