

Proposed Pavement Marking Retroreflectivity MUTCD Text

Add to Table I-2 Target Compliance Dates Established by the FHWA:

Section 3A.03 Maintaining Minimum Retroreflectivity of Longitudinal Pavement Markings—new section—from the effective date of the Final Rule for Revision 1 of the 2009 MUTCD:

- 4 years from date of Final Rule for implementation and continued use of a maintenance method that is designed to maintain pavement marking retroreflectivity at or above the established minimum levels; and
- 6 years from date of Final Rule for replacement of pavement markings that are identified using the maintenance method as failing to meet the established minimum levels.

Add new reference document to Section 1A.11 Relation to Other Publications:

Section 1A.11

“Summary of the MUTCD Pavement Marking Retroreflectivity Standard,” Report No. FHWA-SA-10-015.

Revise Section 3A.03 as follows:

Section 3A.03 ~~Maintaining Minimum Pavement Marking Retroreflectivity [reserved section]~~ **Maintaining Minimum Retroreflectivity of Longitudinal Pavement Markings**

~~(This Section is reserved for future text based on FHWA rulemaking.)~~

Standard:

01 Public agencies or officials having jurisdiction shall use a method designed to maintain retroreflectivity of the following white and yellow longitudinal pavement markings, at or above the minimum levels in Table 3A-1:

1. Center line markings on roads where they are required or recommended by Section 3B.01. This shall include any no-passing zone markings, longitudinal two-way left-turn lane markings, and yellow markings used to form flush medians on such roads.
2. Lane line markings on roads where they are required or recommended by Section 3B.04. This shall include any dotted lane lines, lane drop markings, and longitudinal preferential lane markings on such roads.
3. Edge line markings on roads where they are required or recommended by Section 3B.07. This shall include any channelizing lines delineating gores, divergences, or obstructions on such roads.
4. Any optional edge line markings that are used to qualify for the lower minimum retroreflectivity values in the “All other roads” row of Table 3A-1.

Table 3A-1 Minimum Maintained Retroreflectivity Levels^① for Longitudinal Pavement Markings

	Posted Speed (mph)		
	< / = 30	35 – 50	> / = 55
Two-lane roads with centerline markings only ^②	n/a	100	250

All other roads ^②	n/a	50	100
<p>① Measured at standard 30-m geometry in units of mcd/m²/lux</p> <p>② Exceptions:</p> <p>A. When RRPMS supplement or substitute for a longitudinal line (see Section 3B.13 and 3B.14), minimum pavement marking retroreflectivity levels are not applicable as long as the RRPMS are maintained so that at least 3 are visible from any position along that line during nighttime conditions.</p> <p>B. When continuous roadway lighting assures that the markings are visible, minimum pavement marking retroreflectivity levels are not applicable.</p>			

Support:

02 Compliance with the above Standard is achieved by having a method in place and using the method to maintain the minimum levels established in Table 3A-1. Provided that a method is being used, an agency or official having jurisdiction would be in compliance with the above Standard even if there are pavement markings that do not meet the minimum retroreflectivity levels at a particular location or at a particular point in time.

03 There are many factors for agencies to consider in developing a method of maintaining minimum pavement marking retroreflectivity including, but not limited to, winter weather, environmental conditions and pavement resurfacing.

Guidance:

04 *Except for those pavement markings specifically identified in the Option below, one or more of the following methods, as described in the 2010 Edition of FHWA's "Summary of the MUTCD Pavement Marking Retroreflectivity Standard (see Section 1A.11)," should be used to maintain retroreflectivity of longitudinal pavement markings at or above the levels identified in Table 3A-1:*

- A. *Calibrated Visual Nighttime Inspection – Prior to conducting a nighttime inspection from a moving vehicle and in conditions similar to nighttime field conditions, a trained inspector calibrates his eyes to pavement markings with known retroreflectivity levels at or above those in Table 3A-1. Pavement markings identified by the inspector to have retroreflectivity below the minimum levels are replaced.*
- B. *Consistent Parameters Visual Nighttime Inspection –A trained inspector at least 60 years old conducts a nighttime inspection from a moving vehicle under parameters consistent with the supporting research. Pavement markings identified by the inspector to have retroreflectivity below the minimum levels are replaced.*
- C. *Measured Retroreflectivity – Pavement marking retroreflectivity is measured using a retroreflectometer. Pavement markings with retroreflectivity levels below the minimums are replaced.*
- D. *Service Life Based on Monitored Markings – Markings are replaced based on the monitored performance of similar in-service markings with similar placement characteristics. All pavement markings in a group/area/corridor are replaced when those in the representative monitored control set are near or at minimum retroreflectivity levels. The control set markings are monitored on a regular basis by the visual nighttime inspection method, the measured retroreflectivity method, or both.*
- E. *Blanket Replacement – All pavement markings in a group/area/corridor or of a given type are replaced at specific intervals. The replacement interval is based on when the shortest-life material in that group/area/corridor approaches the minimum retroreflectivity level. The interval is also based on historical retroreflectivity data for that group/area/corridor.*
- F. *Other Methods – Other methods developed based on engineering studies that determine when markings are to be replaced based on the minimum levels in Table 3A-1.*

Option:

05 Public agencies or officials having jurisdiction may exclude the following markings from their minimum pavement marking retroreflectivity maintenance method(s) and the minimum maintained pavement marking retroreflectivity levels, but not from any requirements in Section 3A.02 to be retroreflective.

- A. Words, symbols, and arrows,
- B. Crosswalks and other transverse markings,
- C. Black markings used to enhance the contrast of pavement markings on a light colored pavement,
- D. Diagonal or chevron markings within a neutral area of a flush median, shoulder, gore, divergence, or approach to an obstruction,
- E. Dotted extension lines that extend a longitudinal line through an intersection or interchange area,
- F. Curb markings,
- G. Parking space markings, and
- H. Shared use path markings