

## FEDERAL SIGN RETROREFLECTIVITY REQUIREMENTS

The Federal Highway Administration (FHWA) requires states and local governments to maintain minimum levels of sign retroreflectivity for regulatory and warning signs. To ensure this is occurring, the FHWA required that states and local governments have a maintenance plan in place by June 14, 2014.

Maintaining good sign retroreflectivity is consistent with the FHWA's primary goal to improve safety on the nation's streets and highways. To support this goal, the FHWA is requiring municipalities to have a sign maintenance plan and to implement that plan to preserve the retroreflectivity of regulatory and warning signs.

Improving sign retroreflectivity will benefit all drivers, especially older drivers. All drivers need visible, legible signs so they can make important decisions at key locations while driving, especially during the nighttime.

### What are the Compliance Requirements?

The deadline to comply with the mandatory standard in the MUTCD, Section 2A-08, Maintaining Minimum Retroreflectivity, was June 14, 2014. The MUTCD standard states:

*Public agencies or officials having jurisdiction shall use an assessment or management method that is designed to maintain sign retroreflectivity at or above the minimum levels in Table 2A-3 MUTCD.*

To allow flexibility in designating an assessment or management method, the MUTCD outlines six methods to choose from. The municipality should prepare a documented traffic sign maintenance plan that identifies which of the methods they are using and how they will implement the plan over time.

The standard does not imply that all signs need to be replaced; rather the intent is to identify and replace signs that no longer meet the needs of nighttime drivers. As long as an agency is using one of the methods to maintain their signs, they are considered to be in compliance with the standard.

### What are the Six Assessment or Management Methods?

An assessment or management program is required for all regulatory or warning signs except for signs specifically exempted in the MUTCD. To satisfy the MUTCD standard for sign reflectivity, one or more of the following methods should be used to maintain sign retroreflectivity:

1. **Visual Nighttime Inspection** - This inspection method is an on-the-fly assessment conducted by a trained inspector during nighttime conditions. To accomplish this successfully, some keys to success include:
  - Develop guidelines for inspectors and train them on the use of these procedures.
  - Conduct inspections at normal driving speed from the travel lane.
  - Conduct inspections using low-beam headlights with minimal interior lighting disturbance.
  - Evaluate signs at typical viewing distances to allow adequate time for driver response.

One of three procedures may be followed to perform the nighttime inspection: Calibration Signs Procedure; Comparison Panels Procedure; or Consistent Parameters Procedure. The first two involve having calibrated signs or panels of known retroreflectivity for the inspector to compare the visual appearance during a drive-through. If the inspector believes a roadside sign is less bright than the calibrated ones, the sign should be replaced.

The Consistent Parameters Procedure employs a trained inspector who is at least 60 years old, using a pick-up truck or sport utility vehicle with a model year 2000 or newer. The trained inspector makes a judgment call whether an in-service sign meets his or her nighttime driving needs.



The intent of the standard is to identify and replace signs that no longer meet the needs of nighttime drivers.

2. **Measured Sign Retroreflectivity Method** – This method involves measuring the retroreflectivity of a sign using a handheld or mobile retroreflectometer. If the sign does not meet the minimum retroreflectivity levels in Table 2A-3 of the 2009 MUTCD, the sign should be replaced.
3. **Expected Sign Life Method** – For this method, the agency monitors the age of the signs and replaces them before they are expected to degrade below the minimum levels in Table 2A-3 of the 2009 MUTCD. Signs should be dated on the back when installed or tracked in a sign management system. Sign sheeting warranties may be used as a guide to determine service life.
4. **Blanket Replacement Method** – With this method, an agency may choose to group signs by a geographic area, corridor, type of sign sheeting, or sign category (for example, regulatory signs). With this method, the agency is obligated to replace all designated signs in the group based upon expected sign life of the shortest expected sign life. Newer signs that were replaced due to vandalism or other forms of damage must be replaced at the same time as the rest of the group.
5. **Control Signs Method** – In this method, the agency will select a control sample of signs within a group and monitor the retroreflectivity of the control signs using an assessment method. The control samples should represent the entire group with certain factors such as sign sheeting and color. The control signs may be actual signs in the field or signs in a maintenance yard. All signs within the group must be replaced before the retroreflectivity levels of the control signs reach minimum levels in Table 2A-3 of the 2009 MUTCD.
6. **Other Methods** – Other methods that can be supported by an engineering study can be used.



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### What are the Consequences of Noncompliance?

The intent of the standard is to promote safer highways. The consequence of not having and implementing a traffic sign maintenance plan is a higher risk of crashes on your roads due to drivers missing important signs. If crashes are occurring on your roads, you may have a higher risk tort liability if you are not in compliance with the standard and inadequate or unmaintained signing is proven as one of the causes of a crash.

The positive result of implementing a plan and working toward replacing signs to the MUTCD standard is safer roadways with less potential for crashes and fatalities.

### Does the Plan Have to be Adopted by a Resolution?

The FHWA does not require the traffic sign maintenance plan to be adopted by a resolution. However, municipalities may adopt a resolution for the plan and plan implementation, if they so choose. In fact, a resolution will help to provide support in implementing the plan and being compliant with the standard.



One method for tracking sign inventory is to use a bar code.

## References/Resources

- The **Manual on Uniform Traffic Control Devices (MUTCD)**, 2009 Edition, Chapter 2A, General, contains standards, guidance, and options for signing of all types of highways that are open to the traveling public. Specific guidance relating to retroreflectivity and maintaining minimum retroreflectivity can be found in Sections 2A.07 and 2A.08. [http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/pdf\\_index.htm](http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/pdf_index.htm)
- The FHWA guidance document, **Maintaining Traffic Sign Retroreflectivity**, features more detailed information on the current requirements of the MUTCD compliance dates. [http://safety.fhwa.dot.gov/roadway\\_dept/night\\_visib/sign\\_retro\\_4page.pdf](http://safety.fhwa.dot.gov/roadway_dept/night_visib/sign_retro_4page.pdf)
- The LTAP course, **Sign Inventory and Management System (SIMS)**, provides free training on how to develop and implement a SIMS in a municipality. [www.ltap.state.pa.us](http://www.ltap.state.pa.us).