



# Shelby County Sign Replacement Program

INFORMATIONAL GUIDE

MARCH 2014

## Background Information

### SIGN REPLACEMENT MILESTONES

- December 2009—FHWA releases the Manual on Uniform Traffic Control Devices (MUTCD) with sign retroreflectivity requirements and deadlines
- June 2012—Work begins on Shelby County Sign Replacement Program
- June 2014—FHWA requires all agencies must develop and implements a sign maintenance program that will address minimum sign retroreflectivity standards/requirements

Traffic signs provide important information to the traveling public. In order to be effective, sign visibility must be maintained during both daytime and nighttime conditions. In December 2009, the Federal Highway Administration (FHWA) addressed sign visibility via its publication of the Manual on Uniform Traffic Control Devices, 2009 Edition. (Commonly referred to as the MUTCD).

The MUTCD is the national standard used by all Federal, state, and local agencies for the design and implementation of traffic control devices (i.e. signs, roadway striping, and traffic signals). This publication clearly defines what each traffic sign

should look like, how it should be mounted, and where it should be mounted.

The 2009 edition of the MUTCD began to address the retroreflectivity of roadway signs and placed requirements that agencies who maintain signs must follow regarding the retroreflectivity and general condition of signs. This requires an agency to measure the retroreflectivity of a roadway sign, and remove/replace signs that do not meet current retroreflectivity standards as published in the 2009 MUTCD.

The Shelby County Highway Department currently maintains approximately 12,000 roadway

signs of various shapes, sizes, and types across its 1,100 miles of jurisdiction. The number of signs grows each month due to various requests/roadway requirements etc. Although sign maintenance has always been a priority of the Shelby County Highway Department, the new FHWA requirements have lead the County to create a systematic approach to verify all signs meet retroreflectivity requirements and replace those that don't.

This document provides a brief overview of the sign replacement program, summary of the regulations that require this program, and a list of frequently asked questions regarding the program and its implementation.

## Sign Replacement Program Overview

*Retroreflectivity as defined by FHWA is: A property of a surface that allows a large portion of the light coming from a point source to be returned directly back to a point near its origin.*

The sign replacement program is divided into two phases. The first phase of the program is the compliance phase, and the second phase is the maintenance phase.

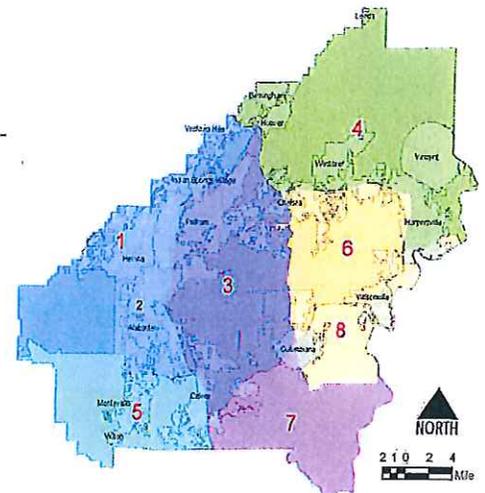
### Phase I - Compliance

The compliance phase of the sign replacement program is the effort to bring all roadway signs maintained by Shelby County Highway Department into compliance with the new Federal regulations. This phase requires

the systematic removal/ replacement of each non-compliant roadway sign maintained by Shelby County. In order to do this, the county was divided into eight "maintenance sectors" i.e. geographic regions.

Sign crews work to replace all non-compliant signs within a sector and then once completed move to the next sector.

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Shelby County Maintenance Sectors

# Sign Replacement Program (Continued)

## SHELBY COUNTY SIGN REPLACEMENT PROGRAM

- June 2012—Work begins on Shelby County Sign Replacement Program Phase I Compliance Phase
- June 2012—Control Signs Installed at Shelby County Highway Department to help determine the serviceable life of a sign in Shelby County
- December 2016—Phase I Compliance Phase estimated to be complete
- January 2017—Phase 2 Maintenance Phase estimated to begin
- January 2017 & Beyond—Signs replaced/maintained as required to comply with latest sign standards and requirements

As of Winter 2013, Phase I of the Sign Replacement Program is being conducted in the rural maintenance sectors. Primarily, this is because the rural areas typically have higher speed roadways, and have lower light conditions than those in the more populated areas of the county.

### Phase 2—Maintenance

Once all roadway signs are brought into compliance with the new Federal regulations, the County must maintain and

ensure that all signs remain compliant with the FHWA requirements/regulations.

As a sign ages, it fades and its reflective qualities diminish. Therefore, at some point in the future, the sign must be replaced. During Phase 2, a database is kept storing the location of each sign in the county, the age of the sign, and retroreflectivity measurements. During this phase various sign inspections will be done during both daytime and

nighttime conditions to determine the conditions of the signs.

In addition to the sign inspections, a test set of signs have been installed at the Shelby County Highway Department offices in order to further measure sign retroreflectivity and to determine the extent of the serviceable life of a sign. Once a group of signs reach the end of their serviceable life, they will be systematically replaced.

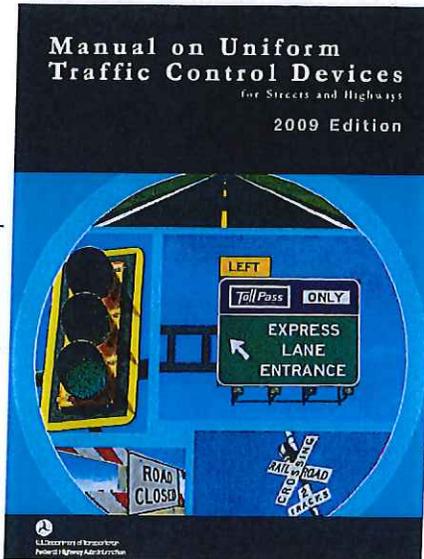
## Federal Regulations for Sign Retroreflectivity

The Federal Regulations that are the basis for the new sign retroreflectivity are included in the 2009 Edition of the MUTCD. As mentioned previously, the MUTCD is nationally recognized as the standard for all traffic control devices. The MUTCD is recognized as the national standard by law through the Federal Register.

The Federal Register of the United States Volume 72, No. 245:

*“The Manual on Uniform Traffic Control Devices (MUTCD) is incorporated by reference in 23 CFR part 655, subpart F, approved by the Federal Highway Administration, and recognized as the national standard for traffic control devices used on all public roads.”*

The retroreflectivity require-



*this Manual for a particular sign or group of signs.”*

The MUTCD also states in Section 2A.08: *“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.”*

The MUTCD states that in order to be compliant with the required standard, a public agency must have a method in place and be using the method to maintain the minimum retroreflectivity levels established in the MUTCD.

The deadline to have a plan in place as required by the MUTCD is June 14, 2014 as required by The Federal Register of the United States Volume 77, No. 93.

ments in the MUTCD are included in the following sections:

The MUTCD, in Section 2A.07, states: *“Regulatory, warning, and guide signs shall be retroreflective or illuminated to show the same shape and similar color by both day and night, unless otherwise provided in the text discussion in*

# Sign Replacement Plan Specifics

The type of signs that are used and the methods used to install them are very important components of the Sign Replacement Program. The Shelby County Highway Department must not only replace the signs that are determined to be non-compliant with the new Federal standards, but also ensure that all signage is correctly installed and appropriate for the roadway conditions. For instance, there may be certain instances where roadway or traffic conditions may have changed and that sign would no longer be required. These tasks will be com-

pleted in an efficient and cost effective manner. While replacing signs, the Highway Department will also be examining the following characteristics of each sign:

- Compliant with Current MUTCD Standards for sign color, message, and design
- Mounted on an approved sign post
- Mounted at the correct height :  
5' from the edge of the pavement to the bottom of the

sign in rural areas, and 7' from the edge of the pavement or top of the curb in urban areas.

- The sign will be examined to verify that it is warranted based upon the current roadway conditions.

Any signs that are on public right-of-way that are found to be non-compliant with current Federal standards or not applicable will be removed and/or replaced as required.

*The MUTCD in Section 2A.07 states: "Regulatory, warning, and guide signs shall be retroreflective or illuminated to show the same shape and similar color by both day and night..."*

## Signs in Residential Areas

A common experience while replacing signs as a part of the Sign Replacement Program is the requirement to replace signs located inside residential areas.

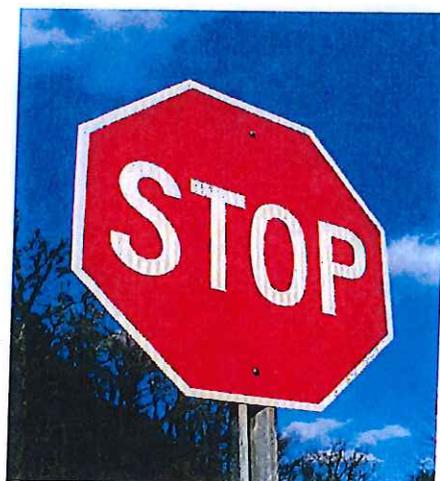
Throughout the years, there have been various residential developments occur that have roadways maintained by the Shelby County Highway Department. In previous years it was customary that when a development was constructed, the signage was installed by the developer during the period prior to the County accepting the roadways for maintenance. However, issues arose due to inconsistencies in the quality of materials used and the manner of installation, such as:

- The materials used in the signs/post were low quality and have deteriorated due to weather
- The signs were installed in poor locations or mounted at incorrect heights
- Regulatory and street name signs must be MUTCD compliant (Latest Edition)

Homeowners associations have typically not maintained signs in a manner consistent with the MUTCD. As a result the Shelby County Subdivision Regulations were revised such that all signs in new developments are provided and installed by the Shelby County Highway Department.

In order to comply with the MUTCD and to be as consistent, cost effective, and efficient as possible, all signs installed on Shelby County Routes within residential areas must comply with the following:

- Must be installed on an approved sign post as required by the Shelby County Highway Department



**Compliant retroreflective signs appear to have reflective lines across them when viewed from different angles**

# Frequently Asked Questions

**Question: Why must the signs be retroreflective?**

**Answer:** As detailed by FHWA: "Adequately maintained retroreflective signs and pavement markings improve highway safety and prevent roadway departure crashes by bouncing light from vehicle headlights back toward the vehicle and the driver's eyes, making the signs and markings appear brighter and easier to see and read."

**Question: Why is the Shelby County Highway Department replacing the signs?**

**Answer:** As detailed by the FHWA: "Because the retroreflective properties of traffic control devices deteriorate over time, highway agencies need to actively manage the maintenance of signs and pavement markings in order to ensure that they are clearly visible at night."

**Question: What happens if the Shelby County Highway Department does not replace the signs?**

**Answer:** By not replacing the signs and posts determined to be non-compliant by current Federal Standards, Shelby County risks liability associated with non-compliance with Federal law. This would mean a loss of millions of dollars of Federal highway funds. County routes are also audited each year for condition and maintenance which is also directly related to funding the County receives from the Federal government for roadway maintenance and construction.

**Question: What does a compliant sign and post look like once it has been replaced?**



**Answer:** The sign is retroreflective, mounted at the correct height, mounted in the correct location and installed on an approved sign post.

# Frequently Asked Questions

**Question: What color street name signs can be used?**

**Answer:** According to the MUTCD Section 2D.03 “Except where otherwise provided in this Manual for individual signs or groups of signs, guide signs on streets and highways shall have a white message and border on a green background. All messages, borders, and legends shall be retroreflective and all backgrounds shall be retroreflective or illuminated.” The MUTCD does allow for alternate background colors of blue, brown, or white. The Shelby County Highway Department has adopted a green background sign in order to provide consistency, uniformity, and cost effectiveness for all street name signs on roads maintained by the County.



**Question: Why haven't you replaced the signs in \_\_\_\_\_?**

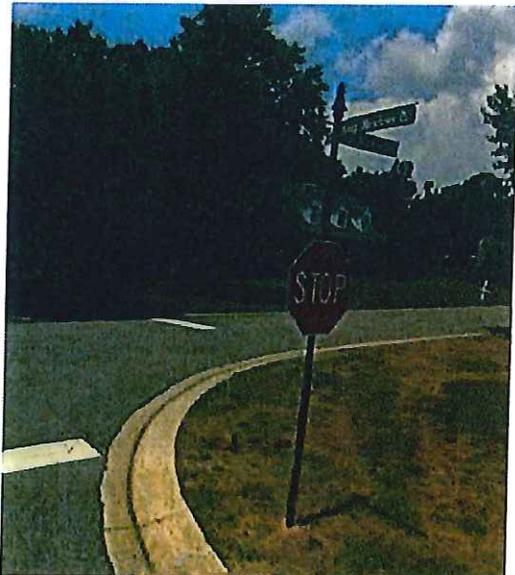
**Answer:** The Shelby County Sign Replacement Program is being applied in a systematic method consistently to all roadways maintained by the County. The Alabama Department of Transportation and all counties and cities in the State of Alabama are subject to the provisions of the MUTCD.

**Question: Can my Homeowner's Association supply the materials and maintain our signs ourselves so that the County doesn't have to maintain them?**

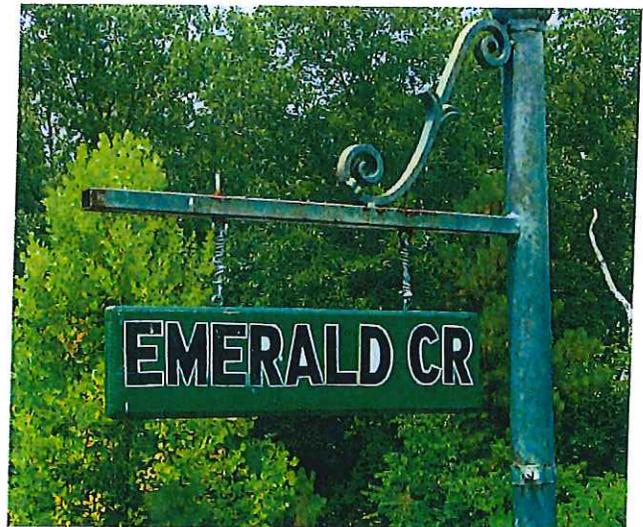
**Answer:** Shelby County cannot assign responsibility or liability to other entities. In order to ensure compliance with the MUTCD, the Shelby County Highway Department must install and maintain all traffic signs.

**Question: What does a non-compliant sign look like?**

**Answer:** The following are photographic examples of non-compliant signs that would be required to be replaced as a part of the Shelby County Sign Replacement Program.



The Stop Sign is mounted too low, the sign post is leaning, and the Street Name signs are not retroreflective or standard color



The Street Name Sign is not retroreflective, the sign lettering is not the appropriate size, font, color, or case.

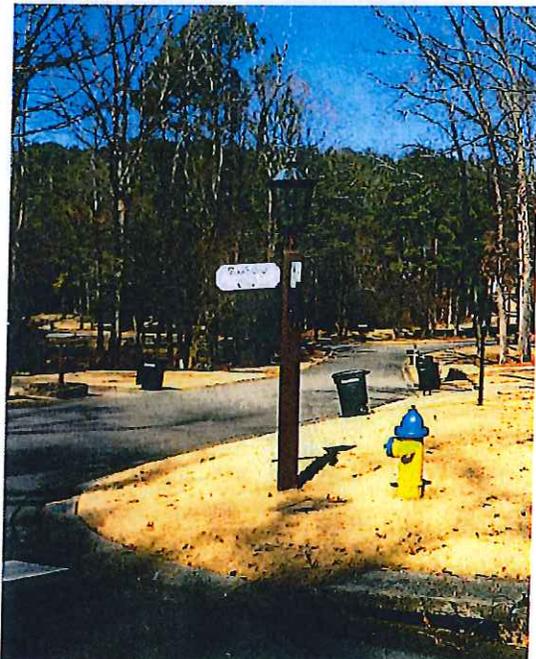
# Frequently Asked Questions



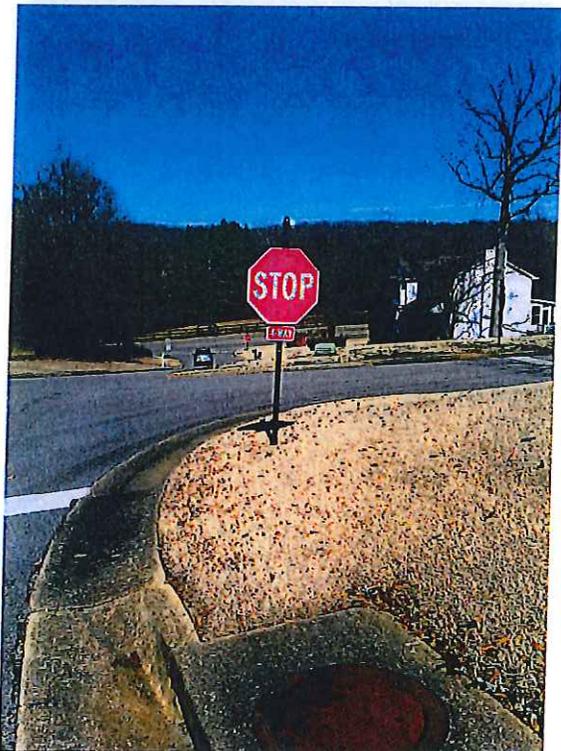
The Stop Sign post is non-breakaway, the sign is non-retroreflective, non-maintained, and is not constructed of an acceptable material.



The Street Name Sign post is non-breakaway, the Street name signs are non-retroreflective, non-compliant colors, non-compliant lettering, and the signs are mounted using non-maintainable brackets.

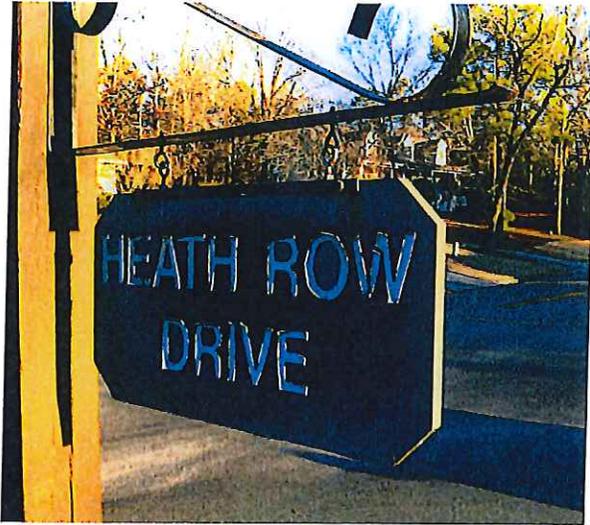


The Street Name Sign is mounted on a non-breakaway post, is non-retroreflective, is not constructed of an acceptable material, has non-compliant lettering, and is a non-compliant color.

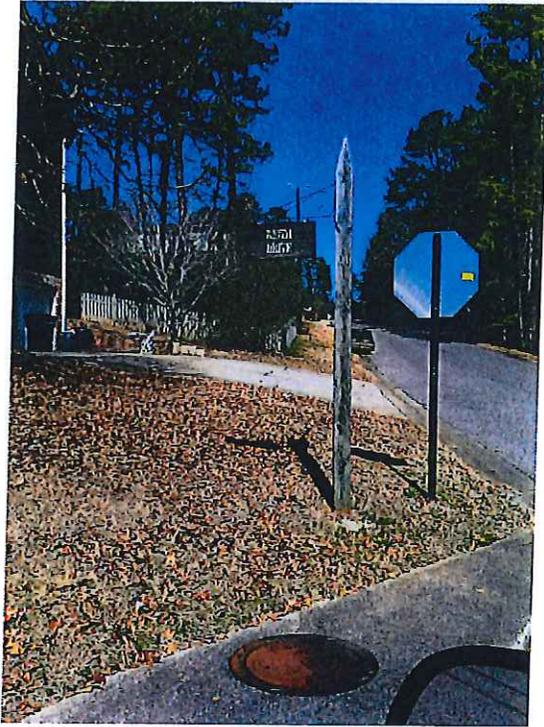


The Stop Sign post is leaning, is mounted too low, and is not retroreflective.

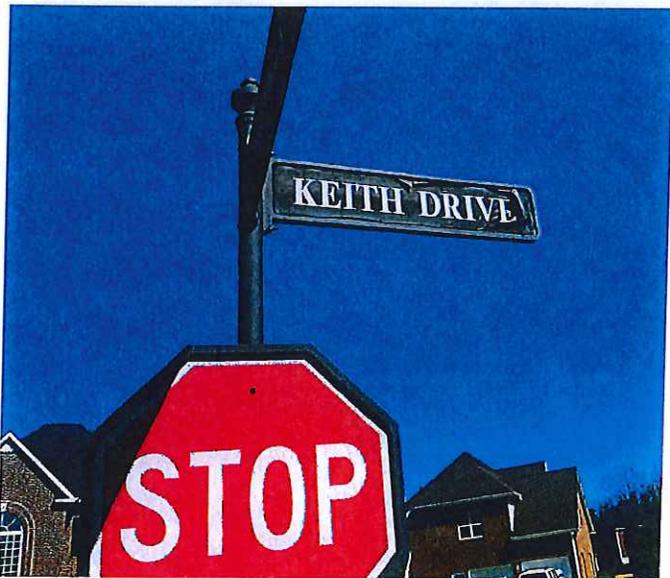
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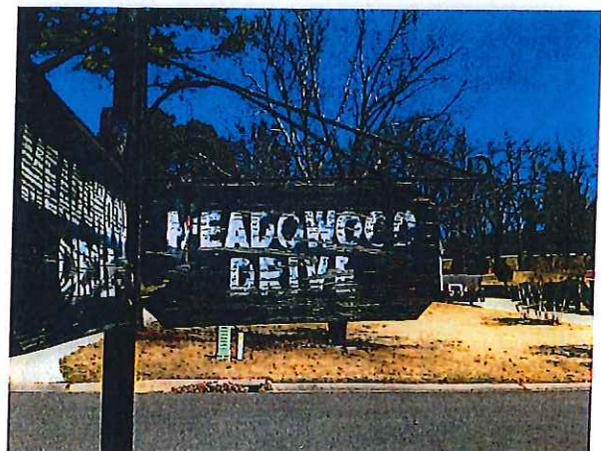
The Street Name Sign is a non-compliant color, the sign blank is faded, the lettering is peeling and not in upper/lower case format, and the sign is not retroreflective



The Street Name Sign is non-maintained, mounted on a non-compliant post, is constructed of a non—acceptable material, is not retroreflective, has non-compliant lettering, and non-compliant colors.



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