

DEPARTMENT OF TRANSPORTATION**Federal Highway Administration****23 CFR Part 655**

[FHWA Docket No. FHWA-2003-15149]

RIN 2125-AE98

National Standards for Traffic Control Devices; the Manual on Uniform Traffic Control Devices for Streets and Highways; Maintaining Traffic Sign Retroreflectivity**AGENCY:** Federal Highway Administration (FHWA), (DOT).**ACTION:** Notice of proposed amendments (NPA) to the Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD); request for comments.

SUMMARY: The MUTCD, approved by the Federal Highway Administration, is incorporated by reference at 23 CFR part 655, subpart F. The FHWA proposes to amend the Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD) to include methods to maintain traffic sign retroreflectivity. The proposed maintenance methods would establish a basis for improving nighttime visibility of traffic signs to promote safety, enhance traffic operations, and facilitate comfort and convenience for all drivers. The proposed changes would be designated as Revision No. 2 to the 2003 Edition of the MUTCD.

DATES: Comments must be received on or before October 28, 2004.**ADDRESSES:** Mail or hand deliver comments to the U.S. Department of Transportation, Dockets Management Facility, Room PL-401, 400 Seventh Street, SW., Washington, DC 20590, or submit electronically at <http://dmses.dot.gov/submit>. All comments should include the docket number that appears in the heading of this document or fax comments to (202) 493-2251.

Alternatively, comments may be submitted via the Federal eRulemaking Portal at <http://www.regulations.gov> (follow the on-line instructions for submitted comments). All comments received will be available for examination and copying at the above address from 9 a.m. to 5 p.m., e.t., Monday through Friday, except Federal holidays. Those desiring notification of receipt of comments must include a self-addressed, stamped postcard or may print the acknowledgment page that appears after submitting comments electronically. Anyone is able to search the electronic form of all comments received into any of our dockets by the

name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). Persons making comments may review DOT's complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (volume 65, number 70, pages 19477-78), or may visit <http://dms.dot.gov>.

FOR FURTHER INFORMATION CONTACT: Mr. Peter J. Hatzl, Office of Safety Design (HSA-10), (202) 366-8036, or Raymond Cuprill, Office of the Chief Counsel (202) 366-0791, Federal Highway Administration, 400 Seventh Street, SW., Washington, DC 20590-0001. Office hours are from 7:45 a.m. to 4:15 p.m., e.t., Monday through Friday, except Federal holidays.

SUPPLEMENTARY INFORMATION:**Electronic Access and Filing**

Interested parties may submit or retrieve comments online through the Document Management System (DMS) at: <http://dmses.dot.gov/submit>. Acceptable formats include: MS Word (versions 95 to 97), MS Word for Mac (versions 6 to 8), Rich Text File (RTF), American Standard Code Information Interchange (ASCII)(TXT), Portable Document Format (PDF), and WordPerfect (versions 7 to 8). The DMS is available 24 hours each day, 365 days each year. Electronic submission, retrieval help and guidelines are available under the help section of the Web site. An electronic copy of this document may be downloaded using a computer, modem and suitable communications software from the Government Printing Office's Electronic Bulletin Board Service at (202) 512-1661. Internet users may reach the Office of the Federal Register's home page at <http://www.archives.gov> and the Government Printing Office's Web page at: <http://www.access.gpo.gov/nara>.

Background

The MUTCD is available for inspection and copying as prescribed in 49 CFR part 7 and on the FHWA's Web site at <http://mutcd.fhwa.dot.gov>. This notice is being issued to provide an opportunity for public comment on the desirability of proposed amendments to Section 1A.11 Relation to Other Documents, Section 2A.09 Minimum Retroreflectivity, and Section 2A.22 Maintenance concerning sign retroreflectivity. Based on the comments received and its own experience, the FHWA may issue a final rule concerning the proposed changes included in this notice and would be incorporated by reference into 23 CFR part 655, subpart

F. The 2003 Edition of the MUTCD with Revision No. 2 changes incorporated as proposed in this amendment is also available on the Web site.

One of the FHWA's primary goals is to improve safety on the nation's roads.¹ Approximately 42,000 people have been killed on U.S. roads each year for the last eight years.² While nearly a quarter of travel occurs at night,³ about one-half of traffic fatalities occur during nighttime hours.⁴ There are many reasons for this disparity. However, the FHWA expects that improvements to the nighttime visibility of traffic signs will help drivers better navigate the roads at night and thus promote safety and mobility.

The purpose of traffic control devices, as well as the principles for their use, is to promote highway safety and efficiency by providing for the orderly movement of all road users. Those devices notify road users of regulations and provide warning and guidance needed for the safe, uniform, and efficient operation of traffic.

The MUTCD requires that traffic signs be illuminated or retroreflective to enhance nighttime visibility.⁵ Most sign faces are made with retroreflective sheeting material to enhance the visibility of signs and their messages at night. Retroreflectivity, one factor associated with night visibility, is the property of a material to redirect light back towards its source. In the case of a traffic sign, light is redirected back from the sign face toward the vehicle's headlamps, making the sign visible to the driver. Available sign sheeting materials offer different degrees of retroreflectivity, making some signs

¹ Fiscal Year 2003 Performance Plan. This document can be viewed at the Internet Web site: <http://www.fhwa.dot.gov/reports/2003plan/index.htm>.

² "Traffic Safety Facts 2001: A Compilation of Motor Vehicle Crash Data from the Fatality Analysis Reporting System and the General Estimates System," Publication NO. DOT HS 809484 December 2002. This document can be viewed at the Internet Web site: <http://www-nrd.nhtsa.dot.gov/pdf/nrd-30/ncsa/tsfann/tsf2001.pdf>.

³ Federal Highway Administration and The Bureau of Transportation Statistics, 2001 National Household Travel Survey, (23.3% of vehicle miles traveled occur between 7 p.m. and 6 a.m.). This document can be viewed at the Internet Web site: <http://nhts.ornl.gov>.

⁴ "Traffic Safety Facts 2001: A Compilation of Motor Vehicle Crash Data from the Fatality Analysis Reporting System and the General Estimates System," Publication NO. DOT HS 809484 December 2002. This document can be viewed at Internet Web site: <http://www-nrd.nhtsa.dot.gov/pdf/nrd-30/ncsa/tsfann/tsf2001.pdf>.

⁵ "Manual on Uniform Traffic Control Devices, 2003 Edition," U.S. Department of Transportation, Federal Highway Administration, Washington, DC, November 2003. This document can be viewed at the Internet Web site: <http://mutcd.fhwa.dot.gov>.

appear brighter than others. The brightness of the sign is also a function of the age of the sign face material, as well as the size of vehicle, type of headlamps, the driver's visual capabilities, and the environmental conditions. In general, the higher the retroreflectivity level the brighter the sign will appear to a driver.

The retroreflectivity of signs gradually deteriorates over time making signs progressively less visible (*i.e.*, bright) at night. As signs lose their retroreflective properties, their effectiveness in communicating regulatory, warning, and guidance messages to road users diminishes to the point where they cannot be seen or read. Thus to maintain effectiveness, signs must be replaced before they reach the end of their useful retroreflective life. Until recently, little information was available about the levels of retroreflectivity necessary to meet the needs of drivers and thereby define the useful life of signs. FHWA research has led to the development of minimum maintained levels of traffic sign retroreflectivity for regulatory, warning, and guide signs for currently available materials, vehicle fleet characteristics, and capabilities of the driving population. Further, new methods have evolved for assessing and managing the retroreflectivity of existing signs on the road network. Sign assessment methods involve the evaluation of a sign's retroreflectivity by nighttime visual inspection or measurement of retroreflectivity using an appropriate instrument. Visual and numeric criteria based upon the minimum retroreflectivity needs of drivers are used to judge whether the sign has adequate night visibility. Sign management methods involve tracking or predicting the retroreflective life of individual signs, and scheduling for replacement those approaching the minimum levels.

Darkness significantly hides many of the visual cues used by drivers to interpret roadway alignment (including objects such as signs, pavement markings, and roadside barriers). Retroreflective treatments or illumination increases the visibility of these objects to provide information directly or restore the visual cues needed by the driver to safely navigate the road at night.

Maintaining minimum levels of traffic sign retroreflectivity on the nation's roads is becoming increasingly important as the driving population ages. Older drivers have diminished visual capabilities that are most

apparent under dark conditions.⁶ Currently, 26.2 million drivers are 65 or older and by 2010 an estimated 33.7 million drivers will be 65 or older.⁷ Traffic signs that are easier to see and read can help all drivers (not just the elderly) at night.

The MUTCD, approved by the Federal Highway Administration, is incorporated by reference in 23 CFR part 655, subpart F, and is recognized as the national standard for traffic control devices used on all public roads. The Secretary of Transportation's authority to establish these standards was established in 23 U.S.C. 109, and the Secretary has delegated that authority to the Federal Highway Administration, as stated in 49 CFR 1.48(b)(8). The FHWA is proposing changes to the MUTCD to improve night visibility for drivers by establishing a benchmark for adequacy of traffic signs that are currently in place and those that will be installed in the future. Improved night visibility of traffic signs is expected to promote safety and mobility on the nation's roads.

History of Sign Retroreflectivity

Requirements for nighttime sign visibility have been included in every version of the MUTCD, since the first edition in 1935. The 2003 Edition of the MUTCD continues to address the visibility of signs.⁸ Some of the pertinent MUTCD sections include: Sections 1A.03 through 1A.05, dealing with design, placement, operation, and maintenance of traffic control devices, and Section 2A.22 Maintenance. Sign retroreflectivity is specifically addressed in Section 2A.08 Retroreflectivity and Illumination, which states, "[r]egulatory, warning, and guide signs shall be retroreflective or illuminated to show the same shape and similar color by both day and night, unless specifically stated otherwise in the text discussion in this Manual of a particular sign or group of signs." This language has essentially remained unchanged

since 1971. The FHWA also added Section 2A.09 Minimum Retroreflectivity Levels in the MUTCD Millennium Edition. Section 2A.09 serves as a placeholder for the results of the rulemaking addressed herein.

In 1993, the Congress directed the Secretary of Transportation to revise the MUTCD to include a standard for minimum levels of retroreflectivity that must be maintained for traffic signs and pavement markings, which apply to all roads open to public travel.⁹ The FHWA already had an active research program investigating the nighttime visibility of traffic control devices to meet driver needs. In 1993, the FHWA responded to the congressional mandate by publishing a set of research recommendations for minimum maintained sign retroreflectivity levels.¹⁰ A series of tables was presented in the research report to establish minimum maintained retroreflectivity levels for regulatory, warning, and side-mounted and overhead guide signs. These tables set minimum levels for various factors including sign size, roadway speed limit, type of sign face material, and nature of the sign legend.

In 1995, three national workshops were conducted to educate State and local highway agency personnel and solicit their input regarding the initial set of minimum maintained sign retroreflectivity levels. The findings from these workshops, combined with an increased knowledge of both driver needs and the performance of retroreflective materials and their durability, were used to revise the initial set of minimum maintained retroreflectivity levels. The revised minimum levels were published in 1998 in a report entitled "An Implementation Guide for Minimum Retroreflectivity Requirements for Traffic Signs."¹¹ One of the most evident changes was the removal of minimum levels of retroreflectivity for overhead signs because of unresolved issues with vehicle headlamp performance specifications and the difficulty of measuring overhead sign retroreflectivity.

⁶ Information about this research is summarized on page 206 of the "Highway Design Handbook for Older Drivers and Pedestrians," Report number FHWA-RD-01-103, published by the FHWA Office of Safety Research and Development, 2001. It is available for purchase from the Technical Information Service, Springfield, Virginia 22161, (703) 605-6000. Internet Web site address at <http://www.ntis.gov>.

⁷ Federal Highway Administration and the Bureau of Transportation Statistics, 2001 National Household Travel Survey. This document can be viewed at the Internet Web site: <http://nhts.ornl.gov>.

⁸ "Manual on Uniform Traffic Control Devices, 2003 Edition," U.S. Department of Transportation, Federal Highway Administration, Washington, DC, October 2003. This document can be viewed at the Internet Web site: <http://mutcd.fhwa.dot.gov>.

⁹ United States Department of Transportation and Related Agencies Appropriations Act of 1993, Public Law 102-388, 106 Stat. 1520, Section 406.

¹⁰ Paniati, J.F. and Mace, D.J., "Minimum Retroreflectivity Requirements for Traffic Signs," FHWA-RD-93-077, U.S. Department of Transportation, Federal Highway Administration, Washington, DC, October 1993.

¹¹ McGee, H.W. and Paniati, J. F., "An Implementation Guide for Minimum Retroreflectivity Requirements for Traffic Signs," FHWA-RD-97-052, U.S. Department of Transportation, Federal Highway Administration, Washington, DC, 1998.

Also in 1998, a report entitled "Impacts on State and Local Agencies for Maintaining Traffic Signs Within Minimum Retroreflectivity Guidelines" presented the findings of a survey and analyses related to the expected impacts of the proposed minimum maintained retroreflectivity levels.¹² The report estimated that about five percent of the signs under State jurisdiction and eight percent of the signs under local jurisdiction would not meet the proposed minimum levels and would have to be replaced. The report concluded that the one-time replacement costs would be \$32 million for State agencies, and \$144 million for local agencies. It also stated that the cost impacts to agencies would be small if the minimum maintained retroreflectivity levels were phased in over a sufficiently long period of time.

Near completion of the 1998 work on the revised minimum levels, the National Highway Traffic Safety Administration (NHTSA) revised the Federal Motor Vehicle Safety Standard Number 108, Lamps, Reflective Devices, and Associated Equipment (FMVSS 108), so that vehicle owners could easily aim and adjust their headlamps and therefore reduce the variability associated with headlamp aim. FMVSS 108 is the document that sets the minimum and maximum luminous intensities for headlamps, headlamp mounting heights, and standardization of headlamps on new vehicles sold in the U.S. after 1968. Since that time, there have been several changes. Because of these changes, the FHWA conducted additional research to develop minimum maintained retroreflectivity levels for overhead guide signs and street name signs, which were not included in the minimum levels published in 1998. The research for overhead guide signs and street name signs was completed in early 2001.¹³

One of the significant findings of the research was the need to update some of the fundamental inputs on headlights, vehicle type (and hence headlight height), and driver capabilities to reflect the current vehicle fleet and older driver population in the development of minimum maintained retroreflectivity levels for traffic signs.

Consequently, additional research was sponsored by the FHWA to update the inputs and develop an updated set of minimum maintained retroreflectivity levels for traffic signs in the U.S. This work was completed in 2003 and has become the basis for this rulemaking.¹⁴

At least two significant events happened during the development of the proposed minimum maintained retroreflectivity levels. The first was the formation of the Special Task Force on Retroreflectivity by the AASHTO Standing Committee on Highways. The objective of the Task Force was to review the proposed minimum maintained levels for retroreflectivity (both traffic signs and pavement markings) and provide implementation recommendations to the FHWA. In 2000, the AASHTO's Board of Directors approved the Task Force's resolution that included several recommendations.¹⁵ One of the key recommendations was that the minimum maintained retroreflectivity levels for traffic signs not be included in the MUTCD. Another key recommendation was that the proposed minimum maintained retroreflectivity levels for traffic signs should be revised to be clear and unambiguous and consolidated so they can be easily and properly applied. The AASHTO also recommended a six year phase-in compliance period.

The second significant activity occurred during the summer of 2002. The FHWA conducted a second round of national workshops to solicit input from transportation agency personnel concerning the implications of the revised minimum maintained retroreflectivity levels for traffic signs and the proposed changes to the MUTCD to adopt the minimum levels.¹⁶ Feedback from these workshops led to refinement of the consolidated table of minimum maintained retroreflectivity levels, definition of methods for assessing and managing the retroreflectivity of in-place signs, formulation of language for the MUTCD,

and development of implementation recommendations.

Proposed Amendment

The purpose of this notice of proposed amendments (NPA) is to obtain public comment on proposed amendments to the Manual on Uniform Traffic Control Devices (MUTCD) to include methods to maintain traffic sign retroreflectivity. The FHWA seeks comment on the proposed changes to the Introduction, Section 1A.11 Relation to Other Publications, Section 2A.09 Minimum Retroreflectivity, and 2A.22 Maintenance. Minimum maintained retroreflectivity levels associated with the above-mentioned methods are contained in the FHWA document "Maintaining Traffic Sign Retroreflectivity."¹⁷ "Maintaining Traffic Sign Retroreflectivity" is included as an appendix to the preamble.

The American Society of Testing Materials (ASTM) definition of the term "standard" is "a concept established by authority, custom, or agreement to serve as a model or rule in a measurement of quality or the establishment of a practice or procedure."¹⁸ This proposed amendment to the MUTCD is intended to meet that definition. In addition, feedback received during FHWA sponsored workshops reinforced the importance of not only sign retroreflectivity, but also nighttime visibility of signs. This feedback led to the emphasis in this proposal on actual methods to assess and maintain sign retroreflectivity, and not just establishment of minimum thresholds for retroreflectivity.

The proposed changes to the MUTCD by sections are as follows:

Discussion of Proposed Amendments to the Introduction

1. In the Introduction, the FHWA proposes to add to the STANDARD statement a seven-year target compliance date for Section 2A.09 Minimum Retroreflectivity. The FHWA proposes a phase-in target compliance period for implementation of seven years for ground mounted signs and ten years for overhead signs from the effective date of the final rule for Revision No. 2 of the 2003 MUTCD to

¹² McGee, H.W. and Taori, S., "Impacts on State and Local Agencies for Maintaining Traffic Signs Within Retroreflectivity Guidelines," FHWA-RD-97-053, U.S. Department of Transportation, Federal Highway Administration, Washington, DC 1998.

¹³ Carlson, P.J. and Hawkins, H.G., "Minimum Retroreflectivity Levels for Overhead Guide Signs and Street Name Signs," FHWA-RD-03-082, U.S. Department of Transportation, Federal Highway Administration, Washington, DC, 2003. A copy of this report is available on the docket.

¹⁴ Carlson, P.J. and Hawkins, H.G., "Updated Minimum Retroreflectivity Levels for Traffic Signs," FHWA-RD-03-081, U.S. Department of Transportation, Federal Highway Administration, Washington, DC, 2003. A copy of this report is available on the docket.

¹⁵ AASHTO Policy Resolution, "Minimum Retroreflectivity of Signs and Pavement Markings," December 2000. A copy of this AASHTO resolution is available at the following Web site: <http://safety.fhwa.dot.gov/fourthlevel/retrostd.htm>.

¹⁶ Hawkins, H.G., Carlson, P.J., Schertz, G.F., and Opiela, K.S., "Workshops on Nighttime Visibility of Traffic Signs: Summary of Workshop Findings," FHWA-SA-03-002, U.S. Department of Transportation, Federal Highway Administration, Washington, DC, 2003.

¹⁷ A copy of the FHWA report "Maintaining Traffic Sign Retroreflectivity," Publication No. FHWA-SA-03-027, October 2003 is available as an appendix to the preamble.

¹⁸ "Compilation of ASTM [American Society of Testing Materials] Standard Definitions", Eighth Edition, ASTM Publication Code Number 03-001094-42, 1994. A copy of this document is available from the ASTM at 1916 Race St., Philadelphia, PA 19103. Internet at the following URL: <http://www.astm.org>.

minimize any impact on State or local governments. The FHWA believes a target compliance period of seven years would allow State and local agencies to replace their engineering grade sign sheeting within a normal replacement period of a commonly-accepted seven year service life. The FHWA proposes a ten year compliance period for overhead signs to allow an extended period of time due to the longer service life typically used for those signs.

Discussion of Proposed Amendments to Part 1—General

2. In Section 1A.11 Relation to Other Publications, the FHWA proposes to add the publication “Maintaining Traffic Sign Retroreflectivity” to the list of other publications that are useful sources. “Maintaining Traffic Sign Retroreflectivity” is included as an appendix to the preamble.

Discussion of Proposed Amendments to Part 2—Signs

3. In Section 2A.09 Minimum Retroreflectivity Levels, the FHWA proposes changing the title of the section by deleting the word “levels” from the title to better describe the content of the section. The FHWA proposes to replace the SUPPORT statement with new SUPPORT, GUIDANCE, and OPTION statements that refer to minimum sign retroreflectivity.

In the SUPPORT statement, the FHWA proposes to provide a reference to Section 2A.22 Maintenance, stating that retroreflectivity is one of several factors associated with maintaining nighttime sign visibility.

In the GUIDANCE statement, the FHWA proposes to indicate that except for those signs specifically identified in the OPTION statement, one or more of the assessment or management methods described in this section should be used to maintain sign retroreflectivity above the minimum levels identified in the FHWA document “Maintaining Traffic Sign Retroreflectivity.”¹⁹ The methods are visual nighttime inspection (including three procedures: calibration signs, consistent parameters, and comparison panels), measured sign retroreflectivity, expected sign life, blanket replacement, and control signs. The GUIDANCE statement includes a brief description of each method and the following SUPPORT statement includes a reference to “Maintaining Traffic Sign Retroreflectivity” that provides more information about these methods and

their association to minimum maintained retroreflectivity levels for traffic signs. As part of the descriptions of the various methods in the GUIDANCE, the FHWA proposes to include a statement that signs that have retroreflectivity below the minimum levels should be replaced.

In the OPTION statement, the FHWA proposes to list several sign series that agencies may exclude from the proposed assessment methods and minimum maintained sign retroreflectivity levels. The FHWA proposes to exclude these sign series, because additional research is needed to support establishment of minimum retroreflectivity levels for these signs. The sign series that the FHWA proposes to exclude are: (1) Parking, Standing, and Stopping signs (R7 and R8 series), (2) Walking, Hitchhiking, and Crossing signs (R9 series, R10–1 through R10–4b), (3) Adopt-A-Highway series, (4) All signs with blue or brown backgrounds, and (5) Bikeway signs that are intended for exclusive use by bicyclists and/or pedestrians. This list will not exclude those signs from existing MUTCD retroreflectivity and maintenance requirements and guidance.

4. In Section 2A.22 Maintenance, the FHWA proposes changing the first paragraph of the GUIDANCE statement by replacing the phrase “adequate retroreflectivity” with “retroreflectivity levels as indicated in Section 2A.09.” The reference to Section 2A.09 Minimum Retroreflectivity, enables readers to access information specific to retroreflectivity more easily. The FHWA proposes a new sentence that reads, “Maintenance activities should consider proper position, cleanliness, legibility, and daytime and nighttime visibility of a sign.”

Appendix to the Preamble— Maintaining Traffic Sign Retroreflectivity

Traffic signs provide an important means of communicating information to road users and they need to be visible to be effective. The 2003 Manual on Uniform Traffic Control Devices (MUTCD) addresses sign visibility in several sections, including 1A.03, 1A.04, 1A.05, 2A.08, and 2A.22. Visibility is addressed in portions of these sections through factors such as design, placement, operation, maintenance, and uniformity.

The concept of visibility encompasses many different considerations and is difficult to quantify as an overall measure. Specific metrics such as conspicuity, legibility, or retroreflectivity are used to represent the various elements that contribute to

visibility. Conspicuity is the ability to identify a target (such as a sign) from its surroundings. It is what helps the user to first see a sign. Legibility is the ability to identify the message (content) of the target. It is what helps the user to read the sign.

The nighttime environment presents many sign visibility challenges. At night, road users cannot see as many visual cues as they can in the day. This places greater reliance on signs and other traffic control devices. To provide nighttime sign visibility, most signs are made from retroreflective sheeting. Retroreflectivity is the property of a material to redirect light back toward the originating source. It is what helps make a sign conspicuous and legible.

Existing procedures and technologies for measuring sign retroreflectivity provide one, but not the only, metric for quantifying nighttime sign visibility. The Federal Highway Administration (FHWA) has focused significant attention on retroreflectivity in recent years, including developing research recommendations for minimum maintained levels of sign retroreflectivity.

Sign location and orientation also impact sign visibility. Signs placed outside of the driver's cone of vision may not be seen by the driver even though they meet other visibility criteria. Likewise, signs behind obstructions (such as a structure or vegetation) may meet some visibility criteria, but can't be seen by drivers. To provide maximum effectiveness, signs should be designed, placed, and maintained in a manner that is consistent with MUTCD guidelines.

This document provides recommendations and general information about minimum maintained retroreflectivity levels and the methods that can be used to maintain sign retroreflectivity. Information contained in this document is intended for policy-makers and managers.

Retroreflectivity Maintenance

There are several methods that agencies can use to maintain sign retroreflectivity above the minimum maintained retroreflectivity levels that FHWA has developed through research. These minimum retroreflectivity levels were developed to provide transportation agencies with a general target for maintaining sign retroreflectivity. The existence of minimum retroreflectivity levels is not intended to imply that agencies need to measure the retroreflectivity of every sign in their jurisdictions. Instead, these methods provide agencies with options

¹⁹ A copy of the FHWA report “Maintaining Traffic Sign Retroreflectivity,” Publication No. FHWA-SA-03-027, October 2003 is available as an appendix to the preamble.

that will help to improve nighttime sign visibility.

Sign maintenance methods can be divided into two groups—assessment methods and management methods. Assessment methods involve the actual evaluation of individual signs, while management methods involve tracking and/or predicting the retroreflectivity of signs. The FHWA has identified several assessment and management methods for maintaining sign retroreflectivity in a manner that is consistent with the minimum retroreflectivity levels. Agencies also have the flexibility to develop their own methods for maintaining sign retroreflectivity.

Assessment Methods

The assessment methods require evaluation of individual signs within an agency's jurisdiction. There are two basic assessment methods—visual assessment and retroreflectivity measurement.

Visual Nighttime Inspection Method

In the visual nighttime inspection method, agency personnel assess the nighttime visibility of their signs. The visual inspection method is probably the most consistent with current practices at many agencies. Visual inspections are also recommended in Section 2A.22 of the MUTCD.

In the visual inspection method, the inspector assesses the visibility and retroreflectivity of the traffic signs as he/she approaches the signs. Signs need to be replaced if they do not meet the comparison defined in the appropriate procedure. The following recommendations provide general guidance on how to conduct the inspections:

- Agencies develop guidelines and procedures for inspectors to use in conducting the nighttime inspections. Inspectors are trained on the use of these procedures.
- The inspection is conducted at normal roadway operating speeds. If it is necessary to slow or stop the vehicle to read the sign, the sign typically needs to be replaced. Signs are normally inspected from the travel lane.
- The inspection is conducted using the low beam headlights. It is better not to use the bright beams for inspections as they create higher illuminance levels at the sign and make it appear brighter than it would to a driver using low beams.
- Signs are normally evaluated at a typical viewing distance for each sign, one that provides a driver with adequate time for an appropriate response.

In addition to the above recommendations, one or more of the

following procedures are used in conducting visual nighttime inspections.

Calibration Signs Procedure

Calibration signs are viewed prior to conducting the nighttime inspection. The calibration signs have retroreflectivity levels at or above the minimum levels. These signs are set up where the inspectors can view the calibration signs in a manner similar to how they will conduct the nighttime inspection. The inspector uses the visual appearance of the calibration sign to establish the evaluation threshold for that night's inspection activities. The following factors provide additional information on the use of this procedure:

- Calibration signs are needed for each color of sign for which there are minimum levels.
- The calibration signs are viewed at typical viewing distances and from the same vehicle that will be used for conducting the inspections.
- The calibration signs need to be properly stored between inspections so that the retroreflectivity of the calibration signs does not deteriorate over time. Calibration sign retroreflectivity is checked at periodic intervals to ensure that the calibration panels have the appropriate retroreflectivity levels.
- Field signs need to be replaced if the inspector judges a sign to be less bright than the appropriate calibration sign.

Consistent Parameters Procedure

The same factors that were used to develop the minimum levels are used in conducting the inspections. These factors include:

- Using a full-size sport utility vehicle or pick-up to conduct the inspection.
- Using a model year 2000 or newer vehicle for the inspection.
- Using an inspector age 60 or older.
- Signs are viewed at the typical viewing distance for that sign.
- Signs need to be replaced if they are not legible to the inspector.

Comparison Panels Procedure

Small comparison panels are used to assess the retroreflectivity of questionable signs. The comparison panels are fabricated at retroreflectivity levels that are at or above the minimum levels. When the retroreflectivity of a sign is considered to be questionable, a comparison panel is attached to the sign and the sign/panel combination is viewed by the inspector. If the comparison panel appears brighter than the sign, the sign needs to be replaced.

Measured Retroreflectivity Method

In this method, the retroreflectivity of a sign is measured and directly compared to the minimum level appropriate to that sign. If the sign retroreflectivity is lower than the minimum levels, the sign needs to be replaced. The following factors provide additional information about measuring sign retroreflectivity:

- ASTM E1709, Standard Test Method for Measurement of Retroreflective Signs Using a Portable Retroreflectometer, provides a standard method for measuring sign retroreflectivity using a handheld retroreflectometer.
- A sign needs to be replaced if the average retroreflectivity value is less than the appropriate minimum level.

Management Methods

The management methods provide an agency with the ability to maintain sign retroreflectivity without having to devote significant effort into assessing individual signs. There are three basic types of management methods—replacing signs based on age, blanket replacement of large numbers of signs at appropriate intervals, and using a sample of control signs to determine when to replace equivalent signs.

Expected Sign Life Method

In this method, individual signs are replaced before they reach the end of their expected service life. The expected service life is based on the time required for the retroreflective material to degrade to the minimum retroreflectivity levels. The following factors provide additional information about using this method:

- The expected service life of a sign can be based on several different sources of information, such as:
 - Sign sheeting warranties.
 - Sign test deck measurements.
 - Measurements of actual signs.
- An agency will need a method of identifying the age of individual signs. Potential methods include:
 - A sticker or other label attached to the sign that identifies the year of fabrication, installation, or replacement.
 - A sign management system that can identify the age of individual signs.

Blanket Replacement Method

In this method, an agency replaces all the signs in an area/corridor, or of a given type, at specified intervals. An agency that uses this method does not need to track the age or assess the retroreflectivity of individual signs. The following factors provide additional

information about the use of this procedure:

- Replacement zones can be based on an area, corridor, or sign type.
- The replacement interval for the area/corridor, or sign type, is based on the expected sign life for the affected signs.
- All signs within a replacement area/corridor/type are typically replaced, even if the sign was recently installed.

Control Sign Method

In this method, a control sample of signs is used to represent the total population of an agency's signs. The retroreflectivity of the control signs is monitored at appropriate intervals and sign replacement is based on the performance of the control signs. The following factors provide additional information about using this method:

- An agency develops a sampling plan to determine the appropriate number of control signs needed to represent the agency's sign population.
- Control signs may be actual signs in the field or signs installed in a maintenance yard to serve specifically as control signs.
- The retroreflectivity of the control signs should be monitored following the procedures outlined for one of the assessment methods.
- All field signs represented by the control sample need to be replaced before the retroreflectivity levels of the control sample reach the minimum levels.

Sign Replacement

All of the sign retroreflectivity maintenance methods indicate that signs need to be replaced when they do

not meet the threshold criteria for the individual method. In maintaining sign retroreflectivity, an agency may want to consider the interval before the next assessment or management event as part of the sign evaluation and replacement process. In some cases, it may be appropriate to replace a sign even though it is above the threshold criteria because it could be expected to drop below the threshold criteria before the next assessment/management event.

Sign Exclusions

The following signs may be excluded from the various methods of maintaining sign retroreflectivity:

- Parking, Standing, and Stopping signs (R7 and R8 series).
- Walking/Hitchhiking/Crossing signs (R9 series, R10–1 through R10–4b).
- Adopt-A-Highway signs.
- All signs with blue or brown backgrounds.
- Bikeways which are not immediately adjacent to a roadway and that are intended for exclusive use by bicyclists and/or pedestrians.

Minimum Retroreflectivity Levels

Since the early 1990s, the FHWA has sponsored several different efforts to develop research recommendations for minimum retroreflectivity levels for traffic signs. These efforts represent various attempts to define and refine the concept of minimum maintained sign retroreflectivity. Initial minimum retroreflectivity levels were developed through research in 1993 (1). These levels were revised in 1998 through further research (2). Updated minimum levels were developed in 2003 (3) and

are the ones that FHWA proposes for use. A paper describes the evolution of the research to develop minimum levels of sign retroreflectivity (4).

The updated minimum levels of sign retroreflectivity are generally similar in magnitude to levels published previously, but represent several refinements and updates. The following improvements were incorporated into the 2003 updated levels:

- An improved computer model was used to develop the minimum levels.
- Additional sheeting types were incorporated into the minimum levels.
- Headlamp (headlight) performance was updated to represent the model year 2000 vehicle fleet.
- Vehicle size was increased to represent the greater prevalence of sport utility vehicles and pick-up trucks.
- The luminance level needed for legibility was increased to better accommodate older drivers.
- Minimum retroreflectivity levels were consolidated across more sheeting types to reduce the number of minimum levels.

The updated minimum maintained retroreflectivity levels are shown in the following table. They represent the most current research recommendations, and are recommended by FHWA, but are limited to the current knowledge of the nighttime luminance requirements of traffic signs. The assumptions and limitations associated with the development of these levels are described in the research report (3). It should be noted that there may be situations where, based on engineering judgment, an agency may want to provide greater retroreflectivity.

MINIMUM MAINTAINED RETROREFLECTIVITY LEVELS

Sign color	Criteria	Sheeting type (ASTM D4956–01a)					
		I	II	III	VII	VIII	IX
White on Red	See Note 1	35//7					
Black on Orange or Yellow	See Note 2	*	50				
	See Note 3	*	75				
Black on White		50					
White on Green	Overhead	*//7	*//15	*//25	250//25		
	Shoulder	*//7	120//15				

Notes:

Levels in cells represent legend retroreflectivity // background retroreflectivity (for positive contrast signs). Units are cd/lx/m² measured at an observation angle of 0.2° and an entrance angle of –4.0°.

1 Minimum Contrast Ratio ≥ 3:1 (white retroreflectivity ÷ red retroreflectivity).

2 For text signs measuring 48 inches or more and all bold symbol signs.

3 For text signs measuring less than 48 inches and all fine symbol signs.

* Sheeting type should not be used.

MINIMUM MAINTAINED RETROREFLECTIVITY LEVELS—Continued

Bold Symbol Signs	• W1-1—Turn. • W1-2—Curve. • W1-3—Reverse Turn. • W1-4—Reverse Curve. • W1-5—Winding Road. • W1-6—Large Single Arrow. • W1-7—Large Double Arrow. • W1-8—Chevron. • W1-9—Turn & Advisory Speed. • W1-10—Horizontal Alignment & Intersection. • W2-1—Cross Road. • W2-2, W2-3—Side Road. • W2-4—T Intersection. • W2-5—Y Intersection. • W2-6—Circular Intersection. • W3-1a—Stop Ahead. • W3-2a—Yield Ahead. • W3-3—Signal Ahead. • W4-3—Added Lane. • W6-1—Divided Highway Begins. • W6-2—Divided Highway Ends. • W6-3—Two-Way Traffic. • W10-1, -2, -3, -4—Highway-Railroad Intersection Advance Warning. • W11-2—Pedestrian Crossing. • W11-3—Deer Crossing. • W11-4—Cattle Crossing. • W11-5—Farm Equipment. • W11-5p, -6p, -7p—Pointing Arrow Plaques. • W11-8—Fire Station. • W11-10—Truck Crossing. • W12-1—Double Arrow.
Fine Symbol Signs	All symbol signs not listed in the bold category are considered fine symbol signs.
Special Case Signs (for requirements in addition to yellow color addressed in above table).	• W3-1a—Stop Ahead. • Red retroreflectivity ≥ 7. • W3-2a—Yield Ahead • Red retroreflectivity ≥ 7, White retroreflectivity ≥ 35. • W3-3—Signal Ahead. • Red retroreflectivity ≥ 7, Green retroreflectivity ≥ 7. • W14-3—No Passing Zone, W4-4p—Cross Traffic Does Not Stop, or W13-2, -3, -1, -5—Ramp & Curve Speed Advisory Plaques. • Use largest sign dimension to find proper category in above table.

References

1. Paniati, J.F. and Mace, D.J., Minimum Retroreflectivity Requirements for Traffic Signs, Technical Report. FHWA-RD-93-077, Federal Highway Administration, Washington, DC, October 1993.
2. McGee, H.W. and Paniati, J.F., An Implementation Guide for Minimum Retroreflectivity Requirements for Traffic Signs. FHWA-RD-97-052, Federal Highway Administration, Washington, DC, 1998.
3. Carlson, P.J. and Hawkins, H.G., Updated Minimum Retroreflectivity Levels for Traffic Signs. FHWA-RD-03-081, Federal Highway Administration, Washington, DC, 2003.
4. Carlson, P.J., Hawkins, H.G., Schertz, G.F., Opiela, K.S., and Mace, D.J., Developing Updated Minimum In-Service Retroreflectivity Levels for Traffic Signs, accepted for publication in the Transportation Research Record, Transportation Research Board, Washington, DC, 2003.

Rulemaking Analyses and Notices

All comments received before the close of business on the comment closing date indicated above will be considered and will be available for examination using the docket number appearing at the top of this document in the docket room at the above address. The FHWA will file comments received after the comment closing date and will consider late comments to the extent practicable. In addition to late comments, the FHWA will also continue to file in the docket relevant information becoming available after the comment closing date, and interested persons should continue to examine the docket for new material. A final rule may be published at any time after the close of the comment period.

Executive Order 12866 (Regulatory Planning and Review) and U.S. DOT Regulatory Policies and Procedures

The FHWA has determined that this action is a significant regulatory action

within the meaning of Executive Order 12866 and under the regulatory policies and procedures of the U.S. Department of Transportation, because of the substantial public interest in the retroreflectivity of traffic signs. This rulemaking addresses comments received in response to the Office of Management and Budget's (OMB) request for regulatory reform nominations from the public. The OMB is required to submit an annual report to Congress on the costs and benefits of Federal regulations. The 2002 report included recommendations for regulatory reform that OMB requested from the public.²⁰ One recommendation was that the FHWA should establish standards for minimum levels of

²⁰ A copy of the OMB report "Stimulating Smarter Regulation: 2002 Report to Congress on the Costs and Benefits of Regulation and Unfunded Mandates on State, Local, and Tribal Entities" is available at the following Web address: http://www.whitehouse.gov/omb/inforeg/summaries_nominations_final.pdf.

brightness of traffic signs.²¹ The FHWA has identified this rulemaking as responsive to that recommendation.

It is anticipated that the economic impact of this rulemaking would cause minimal additional expense to public agencies. In 2003, the FHWA updated its analysis of the cost impacts to State and local agencies to reflect higher material costs due to inflation, an increase in the proportion of signs that would be replaced with higher-level sign sheeting material, and changes in the overall mileage of State and local roads. The findings of the 2003 analysis show that the costs of the proposed action to State and local agencies would be less than \$100 million per year. The proposed seven-year regulation implementation period for ground mounted signs would allow State and local agencies to delay replacement of recently-placed Type I signs until they have reached their commonly-accepted seven-year service life. The proposed ten-year compliance period for overhead signs would allow an extended period of time due to the longer service life typically used for those signs.

The FHWA has considered the costs and benefits associated with this rulemaking and believes that the benefits outweigh the costs. Currently, the MUTCD requires that traffic signs be illuminated or retroreflective to enhance nighttime visibility. The changes proposed in this notice provide additional guidance, clarification, and flexibility in maintaining traffic sign retroreflectivity that is already required by the MUTCD. The proposed maintenance methods consider changes in the composition of the vehicle population, vehicle headlamp design, and the demographics of drivers. The FHWA expects that the proposed maintenance methods will help to promote safety and mobility on the nation's roads and will result in minimum additional expense to public agencies or the motoring public.

Regulatory Flexibility Act

In compliance with the Regulatory Flexibility Act (Pub. L. 96–354, 5 U.S.C. 601–612), the FHWA has evaluated the effects of this proposed action on small entities, including small governments. The FHWA certifies that this proposed action would not have a significant economic impact on a substantial number of small entities.

²¹ A complete compilation of comments received by OMB is available at the following Web address: http://www.whitehouse.gov/omb/inforeg/key_comments.html. Comment number 93 includes the recommendation concerning the retroreflectivity of traffic signs.

Executive Order 13132 (Federalism)

The FHWA analyzed this proposed amendment in accordance with the principles and criteria contained in Executive Order 13132, dated August 4, 1999, and the FHWA has determined that this proposed action would not have a substantial direct effect or sufficient federalism implications on States and local governments that would limit the policy making discretion of the States and local governments. Nothing in the MUTCD directly preempts any State law or regulation.

The MUTCD is incorporated by reference in 23 CFR part 655, subpart F. These proposed amendments are in keeping with the Secretary of Transportation's authority under 23 U.S.C. 109(d), 315, and 402(a) to promulgate uniform guidelines to promote the safe and efficient use of the highway.

Executive Order 12372 (Intergovernmental Review)

Catalog of Federal Domestic Assistance Program Number 20.205, Highway Planning and Construction. The regulations implementing Executive Order 12372 regarding intergovernmental consultation on Federal programs and activities apply to this program.

Unfunded Mandates Reform Act

This notice of proposed amendments would not impose unfounded mandates as defined by the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4, 109 Stat. 48, March 22, 1995). The findings of the impacts analysis indicate that this proposed action will not result in the expenditure by State, local, and tribal governments, in the aggregate, or by the private sector, of \$120.7 million or more in any one year. In addition, sign replacement is eligible for up to 100 percent Federal-aid funding—this applies to local jurisdictions and tribal governments, pursuant to 23 U.S.C. 120(c).

Paperwork Reduction Act

Under the Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3501, *et seq.*), Federal agencies must obtain approval from the Office of Management and Budget (OMB) for each collection of information they conduct, sponsor, or require through regulations. The FHWA has determined that this proposed action does not contain a collection of information requirement for the purposes of the PRA.

Executive Order 12988 (Civil Justice Reform)

This proposed action meets applicable standards in Sections 3(a) and 3(b)(2) of Executive Order 12988, Civil Justice Reform, to minimize litigation, to eliminate ambiguity, and to reduce burden.

Executive Order 13045 (Protection of Children)

The FHWA has analyzed this proposed action under Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks. This is not an economically significant proposed action and does not concern an environmental risk to health or safety that may disproportionately affect children.

Executive Order 12630 (Taking of Private Property)

This proposed action would not affect a taking of private property or otherwise have taking implications under Executive Order 12630, Governmental Actions and Interference with Constitutionally Protected Property Rights.

Executive Order 13211 (Energy Effects)

The FHWA has analyzed this proposed action under Executive Order 13211, Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use. We have determined that this is not a significant energy action under that order because it is not a significant regulatory action under Executive Order 12866 and is not likely to have a significant adverse effect on the supply, distribution, or use of energy. Therefore, a Statement of Energy Effects under Executive Order 13211 is not required.

Executive Order 13175 (Tribal Consultation)

The FHWA has analyzed this proposed action under Executive Order 13175, dated November 6, 2000, and believes that it will not have substantial direct effects on one or more Indian tribes; will not impose substantial direct compliance costs on Indian tribal governments; and will not preempt tribal law. Therefore, a tribal summary impact statement is not required.

National Environmental Policy Act

The agency has analyzed this proposed action for the purpose of the National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq.*) and has determined that it would not have any effect on the quality of the environment.

Regulation Identification Number

A regulation identification number (RIN) is assigned to each regulatory action listed in the Unified Agenda of Federal Regulations. The Regulatory Information Service Center publishes the Unified Agenda in April and October of each year. The RIN contained in the heading of this document can be used to cross-reference this action with the Unified Agenda.

List of Subjects in 23 CFR 655

Design standards, Grant programs—Transportation, Highways and roads, Incorporation by reference, Signs, Traffic regulations.

Authority: (23 U.S.C. 101(a), 104, 105, 109(d), 114(a), 135, 217, 307, 315, and 402(a); sec. 406(a), Pub. L. 102–388, 106 Stat. 1520, 1564; 23 CFR 1.32; and 49 CFR 1.48(b).)

Issued on: July 26, 2004.

Mary E. Peters,

Federal Highway Administrator.

[FR Doc. 04–17409 Filed 7–29–04; 8:45 am]

BILLING CODE 4910–22–P

DEPARTMENT OF THE TREASURY**Internal Revenue Service****26 CFR Part 48**

[REG–120616–03]

RIN 1545–BC08

Entry of Taxable Fuel

AGENCY: Internal Revenue Service (IRS), Treasury.

ACTION: Notice of proposed rulemaking by cross-reference to temporary regulations.

SUMMARY: In the Rules and Regulations section of this issue of the **Federal Register**, the IRS is issuing temporary regulations relating to the tax on the entry of taxable fuel into the United States. The text of those regulations also serves as the text of these proposed regulations. The regulations affect enterers of taxable fuel, certain other importers, and certain sureties.

DATES: Written and electronic comments and requests for a public hearing must be received by October 28, 2004.

ADDRESSES: Send submissions to: CC:PA:LPD:PR (REG–120616–03), room 5203, Internal Revenue Service, POB 7604, Ben Franklin Station, Washington, DC 20044. Alternatively, submissions may be hand delivered Monday through Friday between the hours of 8 a.m. and 4 p.m. to: CC:PA:LPD:PR (REG–120616–03), Courier's Desk, Internal Revenue Service, 1111 Constitution Avenue,

NW., Washington, DC, or sent electronically, via the IRS Internet site at <http://www.irs.gov/regs> or via the Federal eRulemaking portal at <http://www.regulations.gov> (IRS and REG–120616–03).

FOR FURTHER INFORMATION CONTACT:

Concerning submissions, LaNita VanDyke (202) 622–7180; concerning the regulations, Celia Gabrysh (202) 622–3130 (not toll-free numbers).

SUPPLEMENTARY INFORMATION:**Paperwork Reduction Act**

The collection of information contained in this notice of proposed rulemaking has been submitted to the Office of Management and Budget for review in accordance with the Paperwork Reduction Act of 1995 (44 U.S.C. 3507(d)). Comments on the collection of information should be sent to the Office of Management and Budget, Attn: Desk Officer for the Department of the Treasury, Office of Information and Regulatory Affairs, Washington, DC 20503, with copies to the Internal Revenue Service, Attn: IRS Reports Clearance Officer, SE:W:CAR:MP:T:T:SP, Washington, DC 20224. Comments on the collection of information should be received by September 28, 2004. Comments are specifically requested concerning:

Whether the proposed collection of information is necessary for the proper performance of the functions of the IRS, including whether the information will have practical utility;

The accuracy of the estimated burden associated with the proposed collection of information (see below);

How the quality, utility, and clarity of the information to be collected may be enhanced;

How the burden of complying with the proposed collection of information may be minimized, including through the application of automated collection techniques or other forms of information technology; and

Estimates of capital or start-up costs and costs of operation, maintenance, and purchase of services to provide information.

The collections of information in this proposed regulation are in § 48.4081–3T(c)(2)(iii) and (iv). Section 48.4081–3T(c)(2)(iii) generally provides that an importer of record may avoid tax liability if the importer of record obtains from the enterer a notification certificate, described in 48.4081–5, which contains the enterer's registration number. Section 48.4081–3T(c)(2)(iv) generally provides that a surety bond will not be charged for the tax imposed on the entry of the fuel covered by the

bond, if at the time of entry, the surety has a notification certificate, described in 48.4081–5, which contains the enterer's registration number. These collections of information are required to obtain a tax benefit. The likely respondents are businesses.

Estimated total annual reporting and/or recordkeeping burden: 281 hours.

Estimated average annual burden hours per respondent and/or recordkeeper varies from .25 hour to 2.25 hours, depending on individual circumstances, with an estimated average of 1.25 hours.

Estimated number respondents and/or recordkeepers: 225.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid control number assigned by the Office of Management and Budget.

Books or records relating to a collection of information must be retained as long as their contents may become material in the administration of any internal revenue law. Generally, tax returns and tax return information are confidential, as required by 26 U.S.C. 6103.

Background

Temporary regulations in the Rules and Regulations section of this issue of the **Federal Register** amend the Manufacturers and Retailers Excise Taxes Regulations (26 CFR part 48) relating to the tax on the entry of taxable fuel imposed by section 4081. The text of those regulations also serves as the text of these proposed regulations. The preamble to the temporary regulations explains the amendments.

Special Analyses

It has been determined that this notice of proposed rulemaking is not a significant regulatory action as defined in Executive Order 12866. Therefore, a regulatory flexibility assessment is not required. It also has been determined that section 553(b) of the Administrative Procedure Act (5 U.S.C. chapter 5) does not apply to these regulations. It is hereby certified that the collection of information in these regulations will not have a significant economic impact on a substantial number of small entities. This certification is based on the fact that the time required to request and to furnish a notification certificate is minimal and will not have a significant impact on those small entities. Therefore, a Regulatory Flexibility Analysis under the Regulatory Flexibility Act (5 U.S.C. chapter 6) is not required. Pursuant to section 7805(f) of the Internal Revenue Code, this