

## **HOUSTON COUNTY DEPARTMENT OF TRANSPORTATION**

### **Road Sign Inventory, Retro-Reflectivity Compliance Evaluation, and Replacement Policy**

#### **I. PURPOSE**

The purpose of the Houston County Road Sign Inventory, Retro-Reflectivity Compliance Evaluation, and Replacement Policy is to establish and maintain uniform practices as required in the current Minnesota Manual on Uniform Traffic Control Devices, MnMUTCD, for the implementation a sign assessment or management method to maintain minimum levels of sign retro-reflectivity on Houston County roadways.

#### **II. OBJECTIVES**

It is the stated objective of Houston County, MN to maintain its county roads in a safe but cost effective manner. As part of its maintenance efforts, Houston County recognizes that regulatory , warning, and directional road signs (commonly referred to collectively as safety signs), including but not limited to stop signs, yield signs and other similar traffic control devices, need to be properly inventoried, assessed for compliance with applicable retro-reflectivity standards, maintained, and replaced from time to time. Houston County further recognizes that when signs are installed within county road rights-of-way they must comply with state and federal regulations as primarily outlined in the Manual on Uniform Traffic Control Devices. As part of its efforts to comply with applicable regulations, the County Board of Houston County shall be guided by the following plan adopted in accordance with Section 2A.9 of the Minnesota Manual on Uniform Traffic Control Devices.

### **III. PROCEDURES**

Under the direction of the Houston County Highway Engineer, Engineering Supervisor, Maintenance Supervisor or designated lead, workers will make decisions concerning scheduling and the procedures to be followed for daily traffic operation, maintenance needs and associated periodic and yearly detailed condition inspections. Scheduling and the procedures to be followed will be based upon consideration of the following factors: significance of the traffic device to driver safety, condition and effectiveness of the device, standards compliance and whether damage or condition creates an immediate safety hazard.

In every instance, the onsite maintenance employee or sign technician must assess the conditions of the traffic control device and rely on judgment and experience to determine the correct action to correct the situation. Factors that may delay completion of traffic operation maintenance include other repair needs, utility locates, fabrication or procurement of necessary materials, weather conditions including severe cold, limited access, significant winds, limited visibility and other staff and field condition issues.

### **IV. SIGN MAINTENANCE**

- A. Sign Installation: Signs will be installed and maintained to meet federal standards set forth in the most recent Minnesota Manual on Uniform Traffic Control Devices (MnMUTCD) in accordance to Houston County guidelines, standard installation plate and practices.

The use of Engineering Judgment, in accordance with the requirements of the MnMUTCD has determined the following practices to be used routinely within the County:

- Use of a U-channel post of re-rolled rail steel weighing 4 pounds-per-foot to resist swaying in the wind or displacement by vandalism. When the 4 pounds-per-foot posts are used, they are mounted using an approved breakaway device or splice to improve safety when the post is hit.
- Placement of curve warning signs for Advance Placement Condition B are typically increased to approximately 500 feet to account for roadway features, other signing, improve visibility, and allow for an increased Perception-Response Time (PRT). This placement location exceeds the Advance Placement Distance for Condition B, but is lower than Advance Placement Condition A,

heavy traffic areas, and has not been shown to negatively impact traffic safety in the county.

- Placement of stop ahead signs for Advance Placement Condition B are typically increased to approximately 750 feet to account for roadway features, other signing, improved visibility, and allow for an increased Perception-Response Time (PRT). This placement location exceeds the Advance Placement Distance for Condition B, but is lower than Advance Placement Condition A, heavy traffic areas, and has not been shown to negatively impact traffic safety in the county.

- B. Removal of Excess Signs: In recognition of the fact that excess road signs have been shown to reduce the effectiveness of signage, as well as impose an unnecessary financial burden on the road authority, it shall be the policy of Houston County to remove signs determined to be unnecessary for safety purposes and which are not otherwise required to comply with an applicable state or federal statute or regulation. The removal of signs shall be based on engineering judgment or an engineering study and the Manual on Uniform Traffic Control Devices. Particular attention shall be paid to recommendations on signage for roads considered to be “low-volume” under the Manual on Uniform Traffic Control Devices as adopted by the State.
- C. Sign Retro-Reflectivity Evaluation: Houston County has maintained a field sign inventory database in the form of a sign management system (software) since 1999 and conducts annual inspections. The county began installing 3M High Intensity Prismatic (HIP) sheeting signs in 2000 and migrated to 3M Diamond Grade 3 (DG3) sheeting in 2009.
- D. Sign Management Methods: The county shall, for the purpose of complying with the requirements of the Manual on Uniform Traffic Control Devices to maintain minimum retro-reflectivity standards, replace signs as they reach the end of the latter of their (a) warranty period; (b) expected life expectancy for the facing material used on the sign; or (c) no longer meet minimum retro-reflectivity as determined by the visual nighttime inspection. Damaged, stolen, or missing signs may be replaced as needed.
- a. Warranty Period: As provided by sheeting manufacturer.
  - b. Expected Sign Life

- i. Expected sign life processes/practices will be established utilizing a combination of sheeting warranty life estimations from manufacturers and suppliers, modified based on field experience of sign retro-reflectivity degradation of similar signs in the geographic area.
  - c. Visual Nighttime Inspection
    - i. Acceptable retro-reflectivity will be determined by the staff conducting the night time inspection, per MnMUTCD requirements. Signs exceeding both the manufacturer's warranty period and expected sign life will be inspected using the visual nighttime inspection method.
- E. Sign Maintenance Responsibility: Maintain signs and street identification signs on all Houston County roadways and pathways, with the exception of:
  - a. Stop signs at Minnesota Department of Transportation (MnDOT) controlled intersections and highway ramps with state/county highways.
  - b. Specific signs installed by others (Mn/DOT, transit agencies, and private signs as agreed upon by Houston County.
  - c. Bike path and other pedestrian-control signs not pertaining to vehicle traffic installed by government entities other than the county.
  - d. Signs on approaches to various streets installed by private business, municipalities, and/or property owners.
  - e. Standing, and Stopping signs (R7 and R8 series)
  - f. Walking/Hitchhiking/Crossing signs (R9 series, R10-1 through R10-4b)
  - g. Adopt-A-Highway signs
- F. Response to Incident Report for Sign Repair Needs: Sign maintenance staff will respond after receiving notice of a repair need to determine appropriate action with the following priorities:
  - a. Stop sign: as soon as practical once staff are notified and is the sign specialist's top priority, generally no later than one business day, a temporary stop sign will be placed if required.
  - b. Warning signs: as soon as schedule permits, generally within one to two scheduled workdays.
  - c. Informational/guidance signs: as soon as scheduling/delivery permits while maximizing the efficiency of the sign replacement crew.
- G. Sign replacement resulting from field inspections:

- a. Expected sign life method.

Night retro-reflectivity sign check:

- i. Written documentation of the location, sign type, size and reason for sign replacement will be recorded (into database) for each sign that is not in an acceptable condition and needs replacement.
- ii. Sign replacement will occur as follows:
  - 1. Stop signs – as soon as scheduling permits
  - 2. All other signs – concurrent with neighborhood refurbishing replacement schedules or as determined by sign technician.

#### H. Miscellaneous Sign Practices:

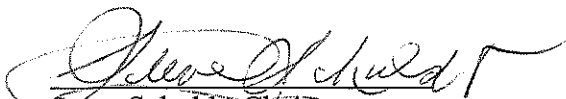
- a. Sign staff is not directly on-call after normal working hours. After hours phone numbers for maintenance managers are available to Public Safety (911 response) dispatchers so staff can be contacted in case of an emergency.
- b. Training is provided to ensure traffic staff can perform sign maintenance duties in an efficient, effective and responsive manner. Such training shall consist of, at a minimum, appropriate signing and traffic control seminars (when available and funds are available in the county training budget), appropriate available training videos or website trainings, and training as appropriate and available by supervisors.

## V. EFFECTIVE DATE

This policy shall take effect on January 14, 2015.

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#### AUTHENTICATED BY:



Steve Schuldt, Chair  
Houston County Board of Commissioners

January 13, 2015

#### Authoritative References:

- Minnesota Manual on Uniform Traffic Control Devices

- FHWA – Maintenance of Signs and Signs Supports: A Guide for Local Highway and Street Maintenance Personnel
- | ➤ NCHRP

Initial Date of Adoption: January 10, 2012

Date(s) of Revision: January 13, 2015