

City of Eagan, MN



Signs, Traffic Signals, Traffic Markings, Pavement Striping & Retro-reflectivity Policy

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I. PURPOSE

The purpose of the City of Eagan *Signs, Traffic Signals, Traffic Markings, Pavement Striping & Retro-reflectivity Policy* is to establish and maintain uniform practices concerning traffic maintenance operations on city roadways.

II. OBJECTIVES

The city will provide traffic operations maintenance in a safe and cost-effective manner balancing the needs of safety for road users and pedestrians with city personnel, budget, and social, economic and environmental concerns. It is in the cities best interest to have traffic operations and maintenance procedures. Because of variables in weather, traffic issues, changing driver demographics, road design, standards and other factors, these procedures must remain flexible. The city may use city employees or other entities under contract to provide this service.

III. PROCEDURES

Under the direction of the Director of Public Works, City Engineer, Assistant City Engineer or City Traffic Engineer, maintenance operations managers (Operations Manager, Superintendents, Supervisors 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/bi-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 and immediate safety hazard.

In every instance, the onsite maintenance employee or sign maintenance technician must assess the conditions of the traffic control device and rely on judgment and experience to determine the correct action to correct problems with or maintain the device. 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

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 City of Eagan guidelines, standard installation plate and practices.
- B. **Maintain Signing, Overall Responsibility:** Eagan sign maintenance practices are established to meet all requirements and ensure appropriate signing for the traveling public.
- C. **Sign Retro-Reflectivity:** The City of Eagan has maintained a field sign inventory database in the form of a sign management system (software) since 1993. The city is currently analyzing the database to determine the best approach to meet Federal Sign Retro-reflectivity Standards.
 1. The City of Eagan will use a combination of EXPECTED SIGN LIFE and CONTROL SIGNS as management methods.
 - a. **CONTROL SIGNS**
 - i. Evaluation of retro-reflectivity of city signs will continue on a 2 year cycle as it has to date (1/2 of city signs each year).
 - ii. As per Federal directives, a group of “calibration signs” will be assembled to represent a sample of each color that is known to have retro-reflectivity levels at or above minimum levels. The signs will be set up so that the sign technician can view the calibrations signs in a manner similar to nighttime field inspection conditions. The technician will use the visual appearance of the calibration signs to establish the evaluation threshold for that night’s inspection activities.
 1. Calibration sign samples are needed for each color of sign in Table 2A-3 (MUTCD Manual)
 2. Calibration signs are viewed at a typical distance using the inspection vehicle. (SUV or standard P/U with low beam head lights).
 3. Calibration signs will be stored appropriately to prevent deterioration.
 4. Calibration signs retro-reflectivity will be verified periodically.
 - iii. A group of small portable samples known to have retro-reflectivity levels at or above minimum levels will be assembled to be used to assess signs that have questionable retro-reflectivity. When the visual inspection identifies questionable signs, a comparison sample may be attached to the sign and viewed as a comparison by the technician.

b. EXPECTED SIGN LIFE

i. Expected sign life processes/practices will be established utilizing a combination of expected sheeting warranty life estimations of manufacturers/suppliers and “on the ground” experience in the field at the city. The city will develop and update as needed general criteria for life cycle replacement of signs in companion with calibration review and nighttime sign examinations.

1. The city began installing 3M High Intensity Prismatic (HIP) sheeting signs in 2002 and migrated to 3M Diamond Grade 3 (DG3) sheeting in 2006. A system wide evaluation will occur identifying all signs that are not scheduled for replacement between now and Jan 2015. Following review and planning, the city will implement a program to replace all signs having insufficient sheeting properties (engineer grade) incrementally between now and Jan. 2015 to meet the new Fed retro-reflectivity standards. Additional planning (and implementation of plan) will occur to assure compliance for the Jan 2018 deadline at the same time.

2. The city will plan for (budget for) replacement of all signs found via the control section/night sign checking process. The eventual goal will be that the majority of retro-reflective related sign replacement will be handled through the expected life cycle/sign life process.

D. Sign Maintenance Responsibility: Maintain signs and street identification signs on all City of Eagan roadways (specific agency name) highways, with the exception of:

- a. Signage on approaches to county highways are not installed or maintained by the city. Street name signs and stop signs intersecting with Dakota County Highways are maintained by Dakota county.
- b. Stop signs at Minnesota Department of Transportation (MnDOT) controlled intersections and highway ramps with state/county highways.
- c. Specific signs installed by others (Mn/DOT, transit agencies, and private signs as agreed upon by the City of Eagan.
- d. Signs along county highways, within Mn/DOT right of way, unless specific agreement with Mn/DOT/Dakota County stipulates a city maintenance responsibility for signing.
- e. Bike path and other pedestrian-control signs not pertaining to vehicle traffic installed by government entities other than the city.
- f. Signs on approaches to city streets installed by private business and/or property owners.

- E. 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, no later than one business day, a temporary stop sign will be placed if required.
 - b. Other regulatory signs: no later than three business days.
 - c. Warning signs: within one scheduled workday.
 - d. Informational/guidance signs: as soon as scheduling/delivery permits

- F. Sign replacement resulting from field inspections:
 - a. 3 year cycle review (1/3 each year)
 - b. Night retro-reflectability 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.

- G. 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 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 city training budget), appropriate available training videos or website trainings, and training as appropriate and available for supervisors.
 - c. Unauthorized signs will be removed from city rights of way.
 - d. Support staff will be informed and updated regarding sign maintenance operations (e.g., schedules and other priority needs or equipment failures) to ensure accurate information is available to respond to telephone inquiries.
 - e. Sign staff may park a sign maintenance vehicle against traffic flow in order to perform necessary emergency and routine maintenance duties.
 - f. Sign staff may drive or park maintenance vehicles on the center medians or boulevards in order to perform necessary emergency and routine maintenance duties.

V. TRAFFIC SIGNALS

Traffic Signals

- A. Miscellaneous Signal Practices:
 - a. City maintenance staff (Streets Engineering Technician) will respond to reports of signal damage or malfunctions as soon as possible after

notification. (The Streets Engineering Technician is not directly on-call after normal working hours. After hours phone numbers for maintenance managers are available to Public Safety dispatchers so staff can be contacted in case of an emergency).

- b. The city utilizes contractual technicians for signal adjustment/repair.
- c. The city will not supply temporary stop signs for dark signals as a typical service request response. (County and State requests included)

B. Routine Maintenance:

- a. City maintenance staff (Streets Engineering Technician) will periodically perform signal maintenance inspections. (annually)
 - i. Test pedestrian push buttons and indicators for proper operation.
 - ii. Observe vehicle indicators and check operation of signal control equipment including vehicle detectors, intersection monitors, and/or controllers
 - iii. Document general signal condition (pole, base, devices) and make recommendations to Supervisors/City Engineer for maintenance needed.

VI. PAVEMENT MARKINGS

Pavement Markings

C. Miscellaneous Pavement Marking Practices:

- a. Pavement Marking Survey;
 - i. At the beginning of each construction season, the Streets Engineering Technician/Street Superintendent shall review the conditions of city pavement markings.
 - ii. All pavement markings needing refreshing will be identified and contract pavement painters will be secured and directed to refresh as needed.
 - iii. In the event of limited funding, the city will assure that pavement markings meet standard requirements for retro-reflectivity (and clarity) at a minimum.

VII. PAVEMENT STRIPING

Pavement Striping

A. Miscellaneous Pavement Striping Practices:

- a. Pavement Striping Survey;
 - i. At the beginning of each construction season, the Streets Engineering Technician/Street Superintendent shall review the conditions of city pavement striping.
 - ii. All pavement striping needing refreshing will be identified and contract pavement painters will be secured and directed to refresh as needed.

- iii. City roadways scheduled to be seal coated may be omitted from pavement striping as agreed upon. (Meeting safety standards/requirements)
 - iv. In the event of limited funding, the city will assure that all pavement striping meets standard requirements for retro-reflectivity (and clarity) at a minimum.
- b. Pavement Striping Paint
- i. Epoxy paint shall be installed following overlays/new construction. Epoxy typically will not be refreshed prior to first sealcoat most commonly at 5 years.
 - ii. Latex paint will commonly be used following sealcoats.

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