
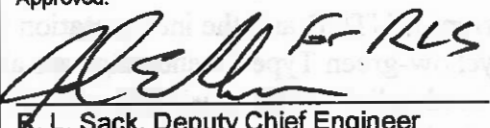


To: SUPERSEDED BY EB 20-038 EFFECTIVE 9/3/20		New York State Department of Transportation ENGINEERING INSTRUCTION	EI 04-034
Title: TYPE IX RETROREFLECTIVE SIGN SHEETING POLICY			
Distribution: <input checked="" type="checkbox"/> Manufacturers (18) <input checked="" type="checkbox"/> Local Govt. (31) <input checked="" type="checkbox"/> Agencies (32) <input type="checkbox"/> Surveyors (33) <input checked="" type="checkbox"/> Consultants (34) <input checked="" type="checkbox"/> Contractors (39) <input type="checkbox"/> _____ ()	Approved:  R. L. Sack, Deputy Chief Engineer Technical Services		8/13/04 Date

ADMINISTRATIVE INFORMATION:

- **Effective Date.** This Engineering Instruction (EI) is effective immediately.
- **Superseded Issuances.** None.
- **Disposition of Information.** The information transmitted by this EI will be incorporated into future revisions of the Highway Design Manual (HDM) and Construction Inspection Manual (CIM).

PURPOSE: To establish a new Department policy on the use of Type IX retroreflective sign sheeting.

TECHNICAL INFORMATION:

- **Policy.** This EI establishes a new Department policy regarding the use of Type IX retroreflective sign sheeting for permanent signs installed under contract, and by Department forces. Type IX retroreflective sheeting shall be used for the signs listed in §645-2.02C of the Standard Specifications, as revised by EI 04-035, *Revisions to Standard Specifications - Section 645 and §730-05*. Type IX retroreflective sheeting may also be used for signs not listed in this section, but its use should be limited to locations where an increase in sheeting capability is necessary due to safety concerns. It is recommended that the Traffic Engineering & Highway Safety Division be consulted before specifying Type IX sheeting for signs not listed in §645-2.02C.
- **Maintenance Operations by NYSDOT Forces.** Department maintenance operations should use Type IX retroreflective sign sheeting in accordance with the policy, subject to the depletion of existing signs in stock.
- **Cost Impact.** For estimating purposes, signs using Type IX sheeting are expected to have costs that will be approximately 25% higher than the costs associated with signs using high-intensity sheeting. This cost increase, however, is offset by the longer expected life and improved performance of the Type IX sheeting.

BACKGROUND:

In 1994, Authorization 94-14 of Appendix A-19 of Chapter V of Title 17 of the *Official Compilation of Codes, Rules and Regulations of the State of New York* (also known as the *NYS Manual of Uniform Traffic Control Devices* (MUTCD) authorized the use of fluorescent yellow-green Type IX reflective sheeting for pedestrian crossing signs (Section 235.1), bicycle crossing signs (Section 235.3), and school child and school crossing signs (Section 236.1). The revised Manual issued in 2001 expanded the use of the fluorescent yellow-green color to include handicapped crossing signs (Section 235.2) and all school signs (Part 236).

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In 1999, the Federal Highway Administration (FHWA) issued an interpretation stating that fluorescent yellow Type IX sheeting conforms to the standard daytime chromaticity limits and reflectance limits required in federal regulations for the standard color yellow.

Based on the current MUTCD and the interpretation issued by the FHWA, the use of fluorescent yellow and fluorescent yellow-green Type IX sheetings are allowed in New York; fluorescent yellow Type IX sheeting may be used in lieu of the usual yellow color, and fluorescent yellow-green Type IX sheeting may be used in the limited situations previously outlined.

Due to its higher retroreflectivity and unique range of observation angles, Type IX sheeting provides higher daytime conspicuity during dawn, dusk, and inclement weather than high-intensity sheeting. The observation angle properties of Type IX sheeting are especially beneficial to older drivers, and drivers of vehicles that sit higher off the ground than ordinary passenger vehicles (e.g., trucks, SUVs). A task force comprising representatives of Traffic & Safety, Construction, Maintenance, and Materials determined in January 2003 that these benefits were significant enough that Type IX sheeting should be utilized for certain high-priority signs.

CONTACT: Direct questions regarding the policy established by this EI to Barbara Abrahamer of the Traffic Engineering and Highway Safety Division at (518) 457-2095 (e-mail: babrahamer@dot.state.ny.us).