

RAVENNA TOWNSHIP
RETROREFLECTIVITY SIGN MAINTENANCE
PLAN

PREPARED BY:

Short Elliott Hendrickson Inc.
3535 Vadnais Center Drive
Saint Paul, MN 55104

INTRODUCTION:

Ravenna Township has authorized the development of a sign retroreflectivity maintenance plan. Implementation of this plan will ensure that the minimum retroreflectivity levels, as determined by the Federal Highway Administration (FHWA), will be maintained to the best of the Township's ability.

Retroreflectivity refers to the property of an object to reflect light back to the source. In this case, retroreflective traffic sign sheeting is used to reflect light from a vehicle's headlamps back to the driver's eyes, thus increasing the sign visibility at night. Retroreflective traffic sign sheeting is created using tiny glass beads or prismatic reflectors, which have been developed to reflect light.

Maintaining traffic sign retroreflectivity is increasingly more important as the older driver population increases. Therefore, the FHWA adopted language that requires all agencies that maintain roadways open to the traveling public to adopt a sign maintenance program which is designed to maintain traffic sign retroreflectivity at or above specific levels. The 2005 Minnesota Manual of Uniform Traffic Control Devices (MN MUTCD) identifies the minimum retroreflectivity levels.

UNIFORM STANDARDS FOR SIGNS:

The MN MUTCD is the standard policy and local authority for traffic control on all public streets, roads and highways within the State of Minnesota. The MN MUTCD regulates the different types of signs, such as regulatory, warning and guide signs. This document also establishes standards for temporary traffic controls, traffic signals, and pavement markings.

In order to ensure the safety and efficiency of Township roads, the Township will install and maintain their signs in accordance with the MN MUTCD.

SIGN INVENTORY:

SEH inventoried all Township roadway signs, which is on record at the Township Hall. The Township has approximately 166 traffic signs and 43 street name signs.

SIGN REPLACEMENT PLAN:

The Township is scheduled do a six-year replacement of all non-street name signs, starting in 2010. The signs will be replaced with DG³ Diamond Grade sign sheeting. Street name signs will be replaced with DG³ Diamond Grade sign sheeting in 2016.

The sign replacement plan is on record at the Township Hall.

ONGOING REPLACEMENT PLAN:

The Township will use the Expected Sign Life method to maintain the minimum retroreflectivity levels of roadway signs. The Expected Life Management Method entails recording the date of sign installation, and replacing those signs just before the expected life of the sign has expired. As the Township replaces roadway signs per the Sign Replacement Plan, they will document the year installed for each sign. The Township will then replace all signs of known age in 15 year intervals. The 15-year cycle for replacement is based on the expected sheeting life for the Diamond Grade sheeting.

If an engineering study is available showing that the expected life may differ or be extended from the above replacement, the Township may consider revising the above schedule as supported by the

engineering study. The Township may only consider engineering studies that have consistent parameters and were performed in a similar geographic area.

CONCLUSIONS:

The information in this report is intended to serve as a framework for ensuring that all traffic signs under the jurisdiction of the Township are maintained at or above the minimum retroreflectivity levels as determined by the FHWA.

The Township will replace all non-street name signs with Diamond Grade prismatic sheeting beginning in 2010, and all street name signs in 2016. The Township will use the Expected Life Method for maintaining minimum retroreflectivity levels by replacing signs of known age on a 15-year replacement cycle.

The attached official Ravenna Township Retroreflectivity Sign Maintenance Plan shall be adopted by the Township to ensure that the Township is in compliance with MN MUTCD standards for maintaining minimum retroreflectivity.

Ravenna Township Retroreflectivity Sign Maintenance Plan:

Ravenna Township will use the Expected Sign Life Management Method to maintain the minimum retroreflectivity levels of traffic signs along Township roads. Section 2A.9.C in the MN MUTCD identifies the Expected Sign Life Management Method as an acceptable management method to maintain sign retroreflectivity. The Township will replace all signs of known age in 15 year intervals, starting in 2010 for all non-street name signs, and in 2016 for all street name signs. The 15-year cycle for replacement is based on the expected sheeting life for the Diamond Grade sheeting that will be installed on Township traffic signs.