

State of Nevada  
Department of Transportation  
Materials Division

**METHOD OF TEST FOR DETERMINING RETROREFLECTIVE PROPERTIES  
FOR PAVEMENT STRIPING**

**SCOPE**

This method describes the procedure used for determining the minimum retroreflective properties for temporary and permanent applied waterborne, epoxy, and polyurea painted pavement striping.

**EQUIPMENT**

Use an approved retroreflectometer from NDOT's Qualified Products List (QPL). Retroreflectometers need to be calibrated and serviced by the manufacturer every two years and calibrated prior to each use as required by manufacturers recommendations.

**METHOD OF MEASUREMENT**

1. Prior to taking retroreflectivity readings, the roadway shall be dry and free from any debris.
2. Take retroreflective measurements one to two weeks after installation of pavement striping.
3. Measurement locations will be randomly determined by the Engineer.
4. Test frequencies will be in accordance with the "Testing Frequency Schedule - **Minimum** Required Samples and Tests - Project".
5. All measurements will be taken in the direction of traffic flow, except on the centerline of two-lane roads where the required number of measurements will be made in each direction. Both single and double lines are to be measured and the acceptance criteria shall be followed for each line in both directions.
6. One test location is defined as taking the average of five readings, approximately 3 m (10 ft.) apart. If the average of five readings meet specifications, then record the average on Form No. 040-041 (Retroreflectivity Measurements). If the average of the five readings is below the required retroreflectivity requirement, take the average of three additional readings, which are outside of the original five readings, to verify retroreflectivity failure. If the average of the additional three readings still do not meet specification requirements, then record the average of the five original readings and the average of the three additional readings on Form No. 040-041 (Retroreflectivity Measurements). This procedure will complete one test location.

For example, if you have a two-lane roadway, there would be three stripes total - two edge stripes, and a centerline stripe. (See Standard Specifications and Special Provisions for project retroreflectivity requirements).

**REPORTING:**

1. Form No. 040-041
2. Date Tested
3. Date and Time of Pavement Marking Application
4. Station of Test
5. Description of Equipment Used
6. Equipment Calibration / Service Date
7. Material Description - epoxy, waterborne, polyurea, etc.
8. Line Type - skip, solid, double solid, skip w/solid, etc.
9. Color of Stripe
10. Retroreflectivity Measurements
11. Specification Requirement

**NOTES:**

1. One test location per lane kilometer or three test locations per lane mile per stripe are required.
2. Centerline stripes must be tested in each direction as results may vary.
3. Review Retroreflectometer Operating Manual to familiarize yourself with the equipment that will be used.