

**ALDOT-439**  
**CONTRACTOR'S METHOD FOR RETROREFLECTIVITY MEASUREMENT**  
**OF TRAFFIC MARKING MATERIALS**

**1. SCOPE**

This method covers measurement of the retroreflectivity of traffic marking materials: thermoplastic, hot spray thermoplastic, preformed thermoplastic, preformed traffic tape, and traffic paint (waterborne and solvent based).

**2. METHOD**

Evaluate all striping materials in an "as is" condition per ASTM D 6359.

Zones of measurement as defined by ASTM D 6359 are:

- (a) 300 m (1000 ft) – One randomly located checkpoint area.
- (b) 300 m (1000 ft) – 1 km (0.5 mile) – Two checkpoint areas are required for zones up to 1 km (0.5 mile).
- (c) 1km (0.5 mile) – 10 km (6 miles) Three checkpoint areas are required and shall be taken at the start, midpoint and end of the zone.
- (d) Greater than 10 km (6 miles) – Checkpoint areas shall be located at the start and end of the zone and every 5 km (3 miles) within the zone.

A Checkpoint area is 100 m (300 ft) long.

The sample size shall be 20 measurements on each line within each checkpoint area approximately every 5 m (15 ft.) along the line as defined in section 6.2 of ASTM D 6359. The number of checkpoint areas within a given project will vary according to the length of the project and the number of lanes in the project and will be determined using the paragraph above.

Pass / fail criteria are based on the Department's specification for each type of traffic marking.

**3. EQUIPMENT**

Use an approved 30 meter geometry retroreflectometer meeting ASTM E 1710.

#### **4. TESTS**

Retroreflectivity: Measure the retroreflectivity with an approved measuring device meeting the requirements of Item 3 per the written instructions of the manufacturer. Calibrate the instrument at the beginning of each day of use. Perform additional calibrations if the instrument is turned off, recharged, or if testing conditions change, e.g. substantial change in ambient temperature. Mark the location of measurements to allow subsequent measurements in the same location.

Record all data on form BMT-194 titled "Retroreflectivity Reading Certification" to document the retroreflectivity of traffic marking materials.