

Item [No.] Permanent Durable Pavement Markings

These items refer to the white dashed and solid lane lines, including markings for left and right turn lanes, white dashed and solid bike lane lines, white edge lines and yellow directional dividing lines. Materials shall conform to the requirements of OPSS 1713 or OPSS 1714 and OPSS 1750.

The permanent durable pavement markings shall be applied to the final surface course in the locations shown on the Drawings and in accordance with OPSS 710.

General Requirements

Scope of Work

The Contractor shall supply and apply reflectorized, non-coning, permanent durable pavement markings.

The Contractor shall provide premarking to establish the position of all pavement markings in accordance with OPSS 710.

The Contractor shall ensure that all freshly painted lines are protected from being tracked or smeared by the travelling public, by the use of appropriate traffic control measures.

A self-propelled pavement marking unit, capable of producing top quality markings, with true edges, free from waviness or variations, shall be used. The unit shall have positive skip line mechanisms capable of varying both line and skip distances from a 3 metre line and a 3 metre skip to a 3 metre line and a 6 metre skip to a 3 metre line and a 9 metre skip. The unit shall be capable of spraying paint and glass beads at the rate required. The lane line unit shall be equipped with two tanks with a minimum combined capacity to hold 1900 litres of paint, three paint guns (two left and one right), two outboard booms (one left and right), paint heaters, paint pumps and a pressurized glass bead system with dispensers. The unit shall have a large sign with a checkerboard border mounted on the rear of the vehicle to advise motorists that line painting operations are in progress and shall be equipped with a full complement of lights for safety.

Equipment Requirements

The Contractor shall supply and operate the following equipment during the performance of the Work, at a minimum:

- Two safety warning trucks equipped with a full complement of lights for safety.

- Rotating amber lights mounted on each vehicle and clearly visible from the front and the rear of each vehicle.
- Four way flashers on each vehicle.
- Rear mounted bi-directional arrow board sign (TC 12), in accordance with the Ontario Traffic Manual, Book 7, for each vehicle.
- All vehicles shall be equipped with a mobile radio for direct truck to truck communication.

The equipment shall be subject to inspection and approval by the Region.

Materials

All non-coning permanent durable markings and reflectorizing glass beads supplied for the Work under this Contract shall be from sources indicated in the Ministry of Transportation's Designated Sources Manual (DSM).

Non-coning permanent durable markings shall meet the requirements of OPSS 1713 or OPSS 1714, and reflectorizing glass beads shall meet the requirements of OPSS 1750.

The Contractor shall provide proof that the material is from an approved source under the Ministry of Transportation's DSM and meets the requirements of the applicable OPSS, referenced above.

Operations

The Contractor shall ensure that all pavement marking work is carried out in accordance with OPSS 710, as amended herein:

1. Traffic control shall be maintained in accordance with the requirements of the Ontario Traffic Manual, Book 7. The Contractor shall ensure that freshly painted lines are not tracked or smeared by motorists.
2. All Work shall be carried out in compliance with the Occupational Health and Safety Act, Highway Traffic Act and Environmental Protection Act and all applicable Regulations of these statutes.
3. Actual painting operations shall be restricted to the hours between 9:00 a.m. and 4:00 p.m. These hours of work may be extended only with the prior written approval of the Region.
4. Qualified operators who have all of the necessary licensing requirements to carry out the work shall be provided.

5. Paint application shall have a wet film thickness of 0.40 mm and a dry film thickness of 0.30 mm, plus or minus 10%. No paint thinners shall be used. The rate of paint application shall be a minimum of 20 metres per litre and a maximum of 18 metres per litre.
6. Glass beads shall be applied at the rate of 0.7 kg/litre of raw paint applied.
7. The minimum width of line applied shall not be less than 100 mm. Where double line is applied, the space between the two lines shall not be less than 100 mm. The maximum width of the above described line or space shall not exceed 115 mm.
8. Centre line markings shall be yellow 10 cm wide line(s).
9. Pavement markings shall be applied when the temperature is above 10 degrees Celsius and the pavement is completely dry, as determined by the Region.
10. Any workmanship that does not conform to the requirements of OPSS 710, as amended herein, shall be corrected at the Contractor's expense.
11. It shall be the Contractor's responsibility to correct any severe tracking situation which was created by the Contractor, or as a result of poor traffic control operations or other errors/omissions on the part of the Contractor.
12. Any claims received as a result of the Contractor's operations shall be the Contractor's responsibility for settlement, in accordance with the requirements of GC 22 of the General Conditions. The Contractor shall provide the contact information for forwarding any received claims to the Contractor for settlement and shall comply with all other requirements as stipulated in GC 22 of the General Conditions.

Payment

Measurement payment shall be by the horizontal length in metres of 10 cm wide lines, excluding gaps. Wider lines shall be measured in 10 cm equivalents.

Payment shall be made at the unit price per metre and shall be full compensation for all labour, materials and equipment required to complete the work as specified in the Contract Documents.