

**Part 1 General**

**1.1 RELATED SECTIONS**

- .1 Section 02 20 00 Concrete Reinforcing.
- .2 Section 03 30 00 Cast-in-place concrete.
- .3 Section 31 05 16 Aggregate Materials.
- .4 Section 32 11 23 Aggregate Base Course.

**1.2 REFERENCES**

- .1 *Cahier des charges et devis généraux*, Infrastructures routières – construction et réparation, Édition 2015, Québec, MTQ.
- .2 *Ontario Provincial Standard Specifications*, Ontario Ministry of Transportation.
- .3 ASTM D698-07e1, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12 400 ft-lbf/ft<sup>3</sup> (600kN-m/m<sup>3</sup>)).
- .4 ASTM D260-86 (2001), Standard Specification for Boiled Linseed Oil.
- .5 CAN/CGSB-3.3-2007, Kerosene.

**1.3 INCLUSIONS**

- .1 Costs associated with the work described in this section must be included in the general lump sum portion of the contract under the fixed price item “Approach Road Works”. It shall not be measured.

**1.4 SUBMITTALS**

- .1 Submittals in accordance with Section 01 33 00 – Submittal procedures
- .2 Inform the Departmental Representative proposed source of materials and provide access for sampling at least 4 weeks prior to commencing work.
- .3 If materials have been tested by accredited testing laboratory approved by Departmental Representative within previous 2 months and have passed tests equal to requirements of this specification, submit test certificates from testing laboratory showing suitability of materials for this project.

**1.5 WASTE MANAGEMENT AND DISPOSAL**

- .1 Waste Management and Disposal:
  - .1 Separate waste materials for reuse and recycling in accordance with section 01 74 21 – Construction/Demolition waste Management and Disposal.

**Part 2 Products**

**2.1 MATERIALS**

- .1 Concrete mixes and materials: in accordance with section 03 30 00 – Cast-in-Place Concrete.

- .2 Reinforcing steel: in accordance with Sections 03 20 00 – Concrete Reinforcing.
- .3 Curing Compound: in accordance with Section 03 30 00 – Cast-in-Place concrete
- .4 Granular base: material to Section 31 05 16 – Aggregate Materials and following requirements:
  - .1 Type: Fill material of MG-20 type.
- .5 Non-staining mineral type form release agent: Chemically active release agents containing compounds that react with free lime to provide water-soluble soap.
- .6 Boiled linseed oil: to ASTM D 260.
- .7 Kerosene: to CAN/CGSB-3.3

### **Part 3 Execution**

#### **3.1 GRANULAR BASE**

- .1 Obtain the Departmental Representative's approval of subgrade before placing granular base.
- .2 Place granular base material to lines, widths, and depths as indicated.
- .3 Compact granular base in maximum 150 mm layers to at least 95% of maximum dry density to ASTM D 698.

#### **3.2 CONCRETE**

- .1 Obtain Departmental Representative approval of granular base and reinforcing steel prior to placing concrete.
- .2 Do concrete work in accordance with Section 03 30 00 – Cast-in-Place Concrete.
- .3 Immediately after floating, give sidewalk surface uniform broom finish to produce regular corrugations not exceeding 2 mm deep, by drawing broom in direction normal/perpendicular to centre line.
- .4 Provide edging as indicated with 10 mm radius edging tool.

#### **3.3 TOLERANCES**

- .1 Finish surfaces to within 3 mm in 3 m as measured with 3 m Straight edge placed on surface.

#### **3.4 EXPANSION AND CONTRACTION JOINTS**

- .1 Install tooled transverse contraction joints after floating, when concrete is stiff, but still plastic, at intervals of 2.9 m.
- .2 Install expansion joints as directed by Departmental Representative at intervals of 6 m.
- .3 When sidewalk is adjacent to curb, make joints of curb, gutter and sidewalk coincide.

**3.5 CURING**

- .1 Cure concrete by adding moisture continuously in accordance with paragraph 1.2 to expose finished surfaces or sealing moisture in by curing compound as directed by the Departmental Representative.
- .2 When burlap is used for moist curing, place two prewetted layers on concrete surface and keep continuously wet during curing period.
- .3 Apply curing compound evenly to form continuous film, in accordance with manufacturer's requirements.

**3.6 BACKFILL**

- .1 Allow concrete to cure for 7 days prior to backfilling.
  - .1 Backfill to designated elevations with material as directed by the Departmental Representative.
- .2 Compact and shape to required contours as directed by the Departmental Representative.

**3.7 LINSEED OIL TREATMENT**

- .1 Apply two coats of linseed oil mixture uniformly to surfaces of curbs, walks and gutters, after concrete has cured for specified curing time and when surface of concrete is clean and dry.
- .2 Linseed oil mixture to consist of 50% boiled linseed oil and 50% mineral spirits by volume.
- .3 Apply treatment when air temperature above 10 degree C.
- .4 Apply first coat at 135 mL/m<sup>2</sup>.
- .5 Apply second coat at 90mL/m<sup>2</sup> when first coat has dried.

**3.8 CLEANING**

- .1 On completion and verification of performance of installation, remove surplus materials, excess materials, rubbish, tools and equipment.

**END OF SECTION**