

## **PART I - GENERAL**

- 1.1 Related Work .1 Pre-cast Concrete : Section 03400
- 1.2 Scope of Work .1 This section specifies the supply and installation of all labour and materials for the concrete work as shown on the drawings as specified herein.
- .2 Coordinate work in this section with work in all other sections.
- 1.3 Reference Standards .1 Do cast-in-place concrete work in accordance with these specifications and with the OPSS and OPSD.
- 1.4 Product Delivery, Storage, Handling .1 To conform to the OPSS.
- 1.5 Guarantee .1 The contractor shall guarantee all material and workmanship for a period of two years from the date of Preliminary Acceptance by the City.

## **PART II - PRODUCTS**

- 2.1 Concrete .1 All material to be used for cast-in-place concrete curbs to be OPSD 600.03 Type J: 0.084 and to conform to the OPSS and will be tested for compliance with the following:
- |                   |  |
|-------------------|--|
| Class of Concrete | 30 Mpa at 28 days                          |
| Coarse Aggregate  | 19 mm nominal max. size                    |
| Air Content       | 7.0% +/- 1.5%, measured prior to placement |
| Maximum Slump     | 60 mm                                      |
- .2 All material to be used for concrete footings to conform to the OPSS and will be tested for compliance with the following:
- |                   |  |
|-------------------|--|
| Class of Concrete | 25 Mpa at 28 days                          |
| Coarse Aggregate  | 19 mm nominal max. size                    |
| Air Content       | 7.0% +/- 1.5%, measured prior to placement |
| Maximum Slump     | 70 +/- 20 mm                               |

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|--|----|--|
| <u>2.2 Granular Base<br/>for CIP Curbs</u> | .1 | Sound, hard, durable Granular 'A' and Granular 'B', free from clay or organic matter and in accordance with Detail #02510-3.   |
| <u>2.3 Sono Tubes</u>                      | .1 | Sono tubes shall be sized in accordance with the approved drawings and details with a wall thickness of 5 mm minimum. Sono tubes shall be protected from rain and moisture on site until used. |
| <u>2.4 Expansion Joints</u>                | .1 | Expansion joints to be 12 mm thick Bituminous fibre installed as per approved working drawings.  |

### **PART III - EXECUTION**

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|-------------------------|----|---|
| <u>3.1 Installation</u> | .1 | The contractor will be required to excavate, fill, compact, or undertake other measures as required to ensure that the soil materials located within a 300 mm depth below the subbase are placed and compacted to 98% of SPD. |
|                         | .2 | The contractor will be required to install the granular materials to the depths indicated on the drawings. The granular material will be placed and compacted to 98% SPD.   |
|                         | .3 | Obtain the Community Services Department's approval before placing concrete. Provide 24 hour notice prior to placing of concrete.   |
|                         | .4 | All work shall be carried out as per OPSS and OPSD, latest edition(s) and the approved drawings.  |
|                         | .5 | Ensure reinforcement and inserts are not disturbed during concrete placement.   |
|                         | .6 | Obtain Community Services representative's approval of proposed method for protection of concrete during placing and curing in adverse weather, prior to placing of concrete.   |
|                         | .7 | Maintain accurate records of cast-in-place concrete items to indicate date, location of pour, air temperature and test samples taken.   |
|                         | .8 | All formed concrete to be formed with clean wood.   |

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- .9 While concrete is being placed, it shall be thoroughly and continuously worked so as to flow completely throughout the entire excavation area so as to leave the mass solid and without holes or honey combing. Suitable tools shall be used for this work.
- .10 Placing shall be continuous until section is completed.
- .11 Air temperatures shall be 5°C and rising, and all necessary precautions shall be taken during cold weather to the satisfaction of the Community Services representative.
- .12 No concrete shall be placed on frozen ground.
- .13 All edges, control joints and finishes shall be in accordance with the OPSD and approved working drawings.
- 3.2 Concrete Finishing
- .1 The form of the curb may be stripped after initial set of the concrete has been achieved to facilitate finishing on exposed vertical and horizontal surfaces.
- .2 On exposed formed surfaces, neatly chip off fins, unsightly ridges, or other imperfections, fill small surface voids with grout and rub flush with the general surfaces.
- .3 Slope surfaces as indicated.
- .4 All walkway surfaces shall have a broom finish.
- 3.3 Curing
- .1 Concrete surfaces shall be cured for either 3 days at a minimum temperature of 10°C, or for the time necessary to attain 35% of the specified 28 day compressive strength of the concrete.
- .2 Concrete shall be cured by the installation of a curing compound or polyethylene vapour barrier ensuring complete coverage of the concrete.
- 3.4 Defective Concrete
- .1 Any portion of the work not acceptable to the Community Services representative shall be broken out from expansion joint to expansion joint encompassing the work, and replaced to the specifications, at no cost to the City.
- 3.5 Inspection and
- .1 Inspection and testing of concrete and concrete materials shall

Testing

be carried out by an independent inspection and testing laboratory. Tests shall be obtained by the contractor, at the contractor's expense, and submitted to the Community Services representative.

3.6 Clean up

- .1 Promptly as the work proceeds and upon completion, clean up and remove from the site rubbish and surplus material resulting from the work in this section.

**END OF SECTION 03300**