

**Part 1 - General**

**1.01 Description**

- .1 This Section specifies the requirement for supplying potable water, maintaining sewage and storm flows when they have been interrupted by the Contractor's construction operations.

**1.02 Related Specifications**

- .1 OPSS.MUNI 493 - Construction Specification for Temporary Potable Water Supply Services
- .2 Ontario Regulation 169/03 Drinking Water Quality Standards and 269/03 for Drinking Water Systems
- .3 ANS/AWWA C651 – Disinfecting Watermains

**1.03 Submittals**

- .1 Submit proposal for supplying potable water to Contract Administrator for review and approval one (1) week prior to commencement of the contract.

**1.04 Basis of Payment**

- .1 Basis of payment to be as set out in Special Provisions.
- .2 Cost of hydrant permit shall be borne by Contractor.

**Part 2 - Products**

**2.01 Products**

- .1 Watermains and Appurtenances – NSF 61
- .2 Holding Tanks – MECP approved
- .3 Backflow Device – CSA B64

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**Part 3 - Execution**

**3.01 Potable Water Supply**

- .1 Construct temporary potable water supply services to OPSS 493.
- .2 Obtain water from an approved source.
- .3 Potable water shall conform to MECP Ontario Regulation 169/03 Drinking Water Quality Standards and 269/03, Drinking Water Systems.
- .4 Use temporary above ground watermains, service connections, materials and fittings that are approved for potable water use or NSF 61 approved materials.
- .5 Vessels to be used as holding tanks for potable water shall be approved for use by the MOE as potable water containers. Contract Administrator may require verification of condition of vessel for storage of potable water including but not limited to sample testing.
- .6 Do not commence installation of the potable water supply system (temporary by-pass or holding tanks) until approval has been given by the Contract Administrator.
- .7 Connect potable water supply system to customers prior commencing work which may affect normal water supply.
- .8 Continue to supply potable water until the Contract Administrator orders supply to cease.
- .9 Provide potable water supply during construction work using one of the following methods:
  - .1 Temporary Connection to Existing Watermain(s)
    - .1 Supply and install temporary watermain by-pass line and service connections complete with valves, check valves and backflow prevention devices as required
    - .2 A CSA B64 approved double check valve assembly backflow prevention device shall be supplied and installed by the Contractor on the hydrant prior to making the connection with the temporary by-pass line. The Contractor shall supply to the Contract Administrator a current test report verifying

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that the backflow prevention device is operating to CSA B64 Standards.

- .3 Where the Contractor is to connect to the existing water distribution system via a hydrant, the Contractor shall obtain a Hydrant Permit from the Region of Durham before making such connection.
- .4 Protect the installation from damage at all road and driveway crossings and any other points where vehicular and/or pedestrian traffic can be expected.
- .5 Protect installation from freezing.
- .6 Maintain temporary watermain by-pass and water service lines in a safe and operative condition at all times and prevent injury to persons and damage to property.
- .7 Individual property connections shall be a minimum of 19 mm in diameter, designed to carry potable water at a working pressure of 860 kPa (125 psi), free from defects in material and workmanship. The pipe, hose and all other materials which are to be furnished by the Contractor for use in conjunction with the temporary service pipe and temporary connections to property services and branches shall be approved by the Contract Administrator and shall be fully adequate to withstand the pressures and all other conditions of use and shall be of material which does not impart any taste or odour to the water.

The temporary pipe and fittings shall be able to withstand the design pressure with minimal visible leakage. Care shall be exercised throughout the installation of any temporary pipe and service fittings to avoid any possible contamination of any Region of Durham watermain or services or contamination of the temporary service pipe proper.

- .8 Disinfect the temporary by-pass line in accordance with ANSI/AWWA C-651 Standards, continuous feed method. All chlorinated water shall be neutralized prior to discharge.

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- .9 The watermain shall be returned to service and the temporary water supply lines shall be removed only after receiving orders from the Contract Administrator.
  - .2 Temporary Portable Tanks and Trucked-In Water
    - .1 Supply and install closed tanks of 2,000 to 2,500 litre capacity beside building to be served together with connecting pipe to existing plumbing in building to provide water supply under pressure.
    - .2 Insulate temporary tanks and connecting pipe as necessary to prevent freezing and to ensure continued operation of water supply.
    - .3 Reconnect building plumbing to existing water supply; removal of the temporary tanks and pipe work shall be completed only after receiving orders from the Contract Administrator.
  - .10 All tanks, piping and other components of the Contractor's temporary water supply system shall become the property of the Contractor when no longer required for the Contract.
  - .11 The Region of Durham shall take water samples from the temporary water line effluent for residual and bacteriological testing after disinfection has been completed. Bacteriological testing shall not be considered a regulatory sample.
  - .12 Do not connect the temporary potable water supply system to existing plumbing until all bacteriological tests indicate that the water meets Ontario Regulation 169/03 Drinking Water Quality Standards and on the order of the Contract Administrator

### **3.02 Maintaining Existing Sewerage Flows**

- .1 Maintain existing sanitary sewerage flows, where applicable, and provide alternative interim service utilizing duplicate portable sewage pumps, tank trucks and other approved means. Prevent interruption to service throughout the construction period and until the new works are placed in service.

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- .2 Provide and install all temporary sumps, bulkheads and/or other works in existing sewers, maintenance holes and service connections and provide temporary pumps in duplicate and pipelines to dewater and control the sewage.
  - .3 Discharge sewerage flows only to those sanitary sewers remaining in service or to tank trucks for approved disposal. Under no circumstances shall contaminated water be discharged or permitted to enter any drainage or natural watercourse.
  - .4 Temporarily drain or pump any leakage to permit work to be performed in the dry. The Contractor's method shall be subject to the approval of the Contract Administrator.

### **3.03 Drainage Ditches and Storm Sewers**

- .1 All ditches, drainage channels and/or storm sewer systems, which may be affected by construction shall have their flows maintained at all times during construction, unless permission to the contrary has been obtained from the Contract Administrator. No extra cost shall be incurred by the Region of Durham for this work.
- .2 Include ditch and drainage channel maintenance in prices to account for variations in ditch flows or storm sewer flows. Drainage shall not be impeded, nor shall blockages or water backups be permitted. Any damage as a result of water or flooding shall be the responsibility of the Contractor.

END OF SECTION