

**Part 1 - General**

**1.01 Description**

- .1 This Section is supplemental to OPSS.MUNI 416 and shall supersede conflicting specifications within OPSS 416.

**1.02 Related Specification**

- .1 Construction Specification Section 01330 - Submittal Procedures
- .2 Construction Specification Section 02240 - Dewatering
- .3 Construction Specification Section 02511 - Watermains
- .4 Construction Specification Section 02530 - Pipe Sewers
- .5 Construction Specification Section 02531 - Sewage Forcemains
- .6 OPSS.MUNI 404 - Construction Specification for Support Systems
- .7 OPSS.MUNI 416 - Construction Specification for Pipeline and Utility Installation by Jacking and Boring
- .8 OPSS.MUNI 1802 - Material Specification for Smooth Walled Steel Pipe
- .9 OPSS.MUNI 1820 - Material Specification for Circular and Elliptical Concrete Pipe

**1.03 Submittals**

- .1 Submit plan showing proposed locations of shafts, pits or approach of tunnels, and details of proposed method, materials and equipment to be used, at least one (1) week prior to commencement of work.
- .2 Submit design assumptions and material data, for review by Contract Administrator, when materials other than those specified are proposed for use.

#### 1.04 Method of Installation

- .1 Method of installation to be selected by Contractor subject to review of the Contract Administrator and to following limitations:
  - .1 Use only smooth walled steel or concrete pipe.
- .2 Provide hydraulically operated jacks in adequate number and capacity to ensure smooth and uniform advancement of pipe.
- .3 Use jacking head to transfer and distribute jacking pressure uniformly over entire end bearing area of pipe.
- .4 Provide two (2) or more lubricated guide rails or sills of sufficient length to fully support pipe at specified line and grade in jacking pit.

#### 1.05 Measurement for Payment

- .1 Measurement to be in metres along centreline of pipe.

#### 1.06 Basis of Payment

- .1 Payment for pipe installed by jacking and boring method to be at unit price bid in Form of Tender from face of bored section to face of bored section.
- .2 Include in unit price cost of supplying all materials, equipment and labour necessary to install pipe by jacking and boring as specified.

### **Part 2 - Products**

#### 2.01 Materials

- .1 Pipe materials:
  - .1 Steel Pipe to OPSS.MUNI 1802.
  - .2 Concrete Pipe to OPSS.MUNI 1820 “Jacking Pipe”, where specified.
- .2 Grout:
  - .1 Cement to CSA A3000
  - .2 Sand to CSA A82.56 M

### **Part 3 - Execution**

#### **3.01 Construction Shaft**

- .1 Provide construction shaft at locations approved by the Contract Administrator.
- .2 Support shaft excavation to OPSS.MUNI 404.
- .3 Maintain shaft in drained condition. Do dewatering to Section 02240.
- .4 Install 3.5 metre high close boarded fence, around perimeter of working areas when ordered by Contract Administrator.
- .5 Remove fence on completion of work.

#### **3.02 Pipe Installation**

- .1 Install pipe to line and grade specified or as directed by the Contract Administrator.
- .2 Avoid long delays between jacking operations.
- .3 Butt weld pipe joints as specified when steel pipe is used.
- .4 Concrete pipe:
  - .1 Use lubricated grade plank in heading.
  - .2 Protect joints from crushing by placing 20 mm thick plywood on spigot shoulder. Cut plywood to form ring with outer surface conforming to outer circumference of pipe.

#### **3.03 Filling Voids Outside Pipe/Casing**

- .1 Fill all voids remaining between pipe and excavation wall as soon as pipe is jacked.

#### **3.04 Removal of Excavated Material**

- .1 Separate good reusable excavated material from unwanted excavated material.
- .2 Remove excess soil offsite. Manage excess soil in accordance with O.Reg 406/19 – On-site and Excess Soil Management.

END OF SECTION