412 MUNI CONSTRUCTION SPECIFICATION FOR SEWAGE FORCEMAIN INSTALLATION IN OPEN CUT

412.02 Reference

This specification refers to the following standards, specifications or publications:

ADD in the following:

GSSS 442 - Specification for Corrosion Protection of Metallic Fittings.

412.05.02 Ductile Iron Pipe Products

DELETE the entire subsection.

412.05.03 Concrete Pressure Pipe Products

DELETE the entire subsection:

412.05.04 Polyvinyl Chloride Plastic Pressure Pipe Products

ADD in the following:

Polyvinyl Chloride (PVC) pipe shall be DR 25 conforming to AWWA C-900 unless otherwise specified.

412.05.05 Polyethylene Plastic Pressure Pipe Products

ADD in the following:

Polyethylene Pressure Pipe shall be minimum high density Class 100.

412.05.06 Steel Pipe Products

DELETE the entire subsection:

ADD the following subsection:

412.07.11.01 Connection to Existing Structures and Forcemains

Where a pipeline is to be connected into an existing maintenance hole, neat openings of the size necessary to accommodate the pipeline shall be made in the walls of the maintenance hole and the pipeline shall be securely and neatly grouted in place with non-shrink grout/mortar. The end of the pipeline shall be flush with the inside of the structural wall and benching in the maintenance hole shall be altered to accommodate the flow in the new pipe.

Where connections to existing piping require the abandonment of part of the existing piping, all abandoned pipes shall be bulkheaded with concrete as part of the work of constructing the new pipeline.

412.07.12.02 Ductile Iron Pipe

DELETE the entire subsection.

412.07.12.03 Concrete Pressure Pipe

DELETE the entire subsection.

412.07.12.06 Steel Pipe

DELETE the entire subsection.

412.07.14 Change in Line and Grade

412.07.14.01 Ductile Iron Pipe

DELETE the entire subsection.

412.07.14.02 Concrete Pressure Pipe

DELETE the entire subsection.

412.07.14.03 Polyvinyl Chloride (PVC) Pressure Pipe

DELETE entire subsection.

ADD in the following:

Pipe joints may be deflected up to a maximum of 100 mm, unless manufacturer's recommendation is less than 100 mm. Otherwise, fabricated bends shall be used.

412.07.14.05 Steel Pipe

DELETE the entire subsection.

412.07.16 Thrust Restraints

DELETE the first paragraph.

ADD in the following:

All connections, caps, and bends shall be restrained by concrete thrust blocks, unless otherwise specified.

Installation of concrete thrust blocks shall be as per GSSD 1103.010 and 1103.020.

412.07.18 Cleaning and Flushing Forcemains

ADD in the following:

The Contractor will be required to flush a foam swab, of a larger diameter than the forcemain, through the newly installed forcemain, in order to ensure removal of all debris from the forcemain prior to it being put into service.

ADD in the following subsection:

412.07.21 Corrosion Protection

All metallic components shall be installed with corrosion protection as per GSSS 442 - Specification for Corrosion Protection of Metallic Fittings.

ADD in the following subsection:

412.07.22 Closed Circuit Television (CCTV) Inspection:

Prior to the placement of the final lift of asphalt, the following camera work shall be performed by the Contractor and video report provided to the General Manager.

i) Where blasting occurs, all existing sewer mains and laterals within the limits of construction, the Contractor shall be paid for the camera work.

ii) All existing sewer mains and laterals which were crossed either above or below by the installation of the new forcemain. The Contractor shall be paid for the camera work.

All sewers mentioned above found to be deficient shall be repaired and camera inspected at the Contractor's expense until acceptable to the City.

412.10.01 Forcemains

DELETE item "Forcemains"

ADD in the following:

Forcemains (Including Fittings and Corrosion Protection)

DELETE second paragraph.

ADD in the following:

When the Engineer raises or lowers the invert of a forcemain by up to 500 mm from the original design grade, it shall not constitute a Change in the Work and no adjustment shall be made to the payment. When the invert of a forcemain is raised or lowered by more than 500 mm from the original grade, then this shall constitute a Change in the Work for the full extent of the change and an adjustment shall be made to the payment (credit or increase). All of the above also applies to all appurtenances associated with the forcemain work.