PART 1 – GENERAL

1.01 DESCRIPTION

.1 This Section is supplemental to OPSS 407 and OPSS 408 and shall supersede conflicting specifications within OPSS 407 and OPSS 408.

1.02 RELATED SPECIFICATION

.1 Construction Specification Section 02315 – Trenching, Backfilling and Compacting

.2 Construction Specification Section 02318 - Excavation, Backfilling and Compacting for Structures

.3 Construction Specification Section 02511 - Watermains

.4 Construction Specification Section 02530 - Pipe Sewers

.5 Construction Specification Section 02531 - Sewage Forcemains

.6 Region of Durham Approved Manufacturer's Products List and Region of Durham Standard Drawings

.7 OPSS 407 - Construction Specification for Maintenance Hole, Catch Basin, Ditch Inlet and Valve Chamber Installation

.8 OPSS 408 - Construction Specification for Adjusting or Rebuilding Maintenance Holes, Catch Basins, Ditch Inlets and Valve Chambers

.9 OPSS 441 - Construction Specification for Watermain Installation in Open Cut

1.03 MEASUREMENT FOR PAYMENT

.1 Measure for payment of Storm Sewer Maintenance Holes, Catch Basins and Ditch Inlets shall be on an each basis in accordance with Subsection 407.09.01.01 of OPSS 407.

.2 Measure for payment of Sanitary Sewer Maintenance Holes and Valve Chambers shall be on an lump sum basis for each individual structure.

1.04 BASIS OF PAYMENT

.1 The price bid for each structure shall include all labour, equipment and materials required to do the Work, including but not limited to:

a) Excavation to grade and disposal of surplus materials.

b) Bulkheads as required.

c) Supply, place and compact bedding material in accordance with Region of Durham Standard Drawings.

d) Cast-in-place concrete and reinforcing steel.

e) Precast concrete structures and sections.

f) Supply and installation of associated appurtenances in structures as specified and shown on Contract Drawings.

g) Benching, where specified.

h) Drop structures in accordance with Region of Durham Standard Drawings unless paid under a separate item.

i) Steps or ladders, as specified.

j) Safety grates in accordance with Region of Durham Standard Drawings.

k) Insulation where specified.

l) Frames and covers/grates as specified.

m) Modular adjustment units.

n) Backfill and compaction.

o) Restoration and clean up.

p) All other work necessary to complete installation of structure.

.2 Bid price for each structure shall also include any adjustment in grade to the within plus or minus 0.3 metres of what is shown on the Contract Drawings. No increase is to be given or deduction taken for adjustment within the 0.3 metre vertical tolerance.

PART 2 – PRODUCTS

2.01 BEDDING AND BACKFILL MATERIALS

.1 Bedding and backfill materials shall be as specified in Section 02315.

2.02 COATINGS FOR BENCHING AND CHANNELLING

.1 Capprock E-Epoxy Grouting Resin (Two-Component) for Industrial Sewer benching/channelling, manufactured and supplied by Cappar Limited, 39 Selby Road, Brampton, Ontario. L6W 1K5 Telephone (905) 453-5280.

2.03 VALVES IN CHAMBERS

.1 Handwheels are not approved and shall not be used.

PART 3 – EXECUTION

3.01 EXCAVATION AND BACKFILLING

.1 Excavate and backfill to Section 02318.

.2 Supply, place and compact 300 mm wide Granular ‘B’ backfill all around structure, full height, above bedding/cover material to sub-grade or bottom of surface treatment.

3.02 INSTALLATION

.1 Complete structures as pipe laying progresses.

.2 Pour cast-in-place bottom slab against undisturbed ground.

.3 Repair all visible leaks.

3.03 BENCHING AND CHANNELLING

.1 Bench invert of maintenance holes in accordance with OPSD-701.021 or as detailed. Maintain minimum of 225 mm width of benching platform on both sides of pipe opening.

.2 Set inlet and outlet pipes securely in concrete base and walls so that maintenance hole is watertight.

.3 Make channelling smooth and flush with adjacent pipe inverts with no pipe protruding into maintenance hole.

.4 All concrete to have steel trowel finish.

.5 Coat benching and channelling with Capprock 'E' Mortar when specified. Mortar mix to be trowelled over rough surface benching/channelling in 13 mm layer in accordance with manufacturer's recommended method. Mortar must be applied to a clean dry surface.

.6 Pre-benched precast sections will only be permitted in new subdivisions or when specifically approved by the Contract Administrator. Any alterations required to pre-benched maintenance holes will be at the expense of the Contractor.

3.04 ADJUSTING STRUCTURES

.1 After the addition or removal of brick or adjustment units, the existing bricks and adjustment units shall be cleaned and patched/parged to the satisfaction of the Contract Administrator.

.2 Where existing valve chambers include slide-type valve boxes, the valve box shall be adjusted to a maximum height of 300 mm. Additional new sections or total replacement shall be paid using the appropriate Schedule of Contingency Unit Prices item.

.3 The total height of adjustment units installed shall not exceed 300 mm.

3.05 STRUCTURE CHIMNEY

.1 Plaster and trowel smooth outside face of all adjustment rings with 12 mm thick mortar and coat with two separate coats of approved bituminous waterproofing.

.2 Parge exterior of adjustment units from top of uppermost adjustment unit extending down to 25 mm below the top of the uppermost precast section.

3.06 INSULATION

.1 Install insulation in roof, wall or access way in accordance with Region of Durham Standard Drawings and Contract Drawings.

.2 Install insulation to manufacturer's recommendation.

3.07 EXTENSION STEM AND BOXES FOR VALVE CHAMBERS

.1 Supply and install solid steel extension stems, sleeves and valve boxes in valve chambers in accordance with Region of Durham Standard Drawings and Contract Drawings.

.2 Install caps for valve boxes flush with final grade.

.3 Anchor guides for extension stem securely to concrete wall in accordance with Region of Durham Standard Drawings and Contract Drawings.

3.08 LEAKAGE TESTING

.1 Test sanitary sewer maintenance holes for leakage when specified in the Contract Documents or when ordered by the Contract Administrator.

END OF SECTION