PART 1 GENERAL

1.1 REFERENCES

.1 American Society for Testing and Materials International, (ASTM)

.1 ASTM C117, Standard Test Method for Material Finer Than 0.075 mm (No. 200) Sieve in Mineral Aggregates by Washing.

.2 ASTM C136, Standard Method for Sieve Analysis of Fine and Coarse Aggregates.

.3 ASTM D698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft3 (600 kN-m/m3)).

.2 Canadian General Standards Board (CGSB)

.1 CAN/CGSB-8.2, Sieves, Testing, Woven Wire, Metric.

.3 Canadian Standards Association, (CSA International)

.1 CAN/CSA-A23.1/A23.2- (June 2001), Concrete Materials and Methods of Concrete Construction/Methods of Test for Concrete.

.2 CAN/CSA-A23.4/A251-September 2000, Precast Concrete-Materials and Construction/Qualification Code for Architectural and Structural Precast Concrete Products.

.3 CAN/CSA-B66, Prefabricated Septic Tanks and Sewage Holding Tanks.

1.2 DESIGN REQUIREMENTS

.1 Design precast concrete sewage holding tank in accordance with CAN/CSA-B66.

1.3 SUBMITTALS

.1 Submit shop drawings in accordance with Section 01 33 00 - Submittal Procedures and in accordance with CAN/CSA-A23.4/A251.

.2 Shop drawings to indicate:

.1 Design calculations for items designed by manufacturer.

.2 Tables and bending diagrams of reinforcing steel.

.3 Camber.

.4 Formwork.

.5 Finishing schedules.

.6 Methods of handling and erection.

.7 Storage facilities.

.8 Openings, sleeves, inserts and related reinforcement.

.3 Each drawing submission shall bear stamp and signature of qualified professional engineer registered or licensed in Province of Alberta, Canada.

1.4 QUALIFICATIONS

.1 Manufacturers of precast concrete elements shall be certified by CSA as meeting requirements of CAN/CSA-A23.4/A251, for Category SC and SP products.

1.5 WASTE MANAGEMENT AND DISPOSAL

.1 Separate waste materials for in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

.2 Collect and separate for disposal packaging material for recycling in accordance with Waste Management Plan.

PART 2 PRODUCTS

2.1 CONCRETE MIXES AND MATERIALS

.1 Concrete mixes and materials: to CAN/CSA-B66 and CAN/CSA-A23.1/A23.2.

.2 Use type 50 cement.

2.2 MANUFACTURE

.1 Manufacture units in accordance with CAN/CSA-A23.4/A251, except where specified otherwise.

2.3 FINISHES

.1 Finish tanks to commercial grade to CAN/CSA-A23.4/A251.

2.4 ACCESS

.1 Provide access holes to surface to facilitate cleaning inspection.

2.5 TANK BEDDING

.1 Type 1, in accordance with Section 31 23 33 - Excavating, Trenching and Backfilling.

2.6 TANK SURROUND MATERIAL

.1 Type 4, in accordance with Section 31 23 33 - Excavating, Trenching and Backfilling

2.7 BACKFILL MATERIAL

.1 Type 3, in accordance with Section 31 23 33 - Excavating, Trenching and Backfilling.

PART 3 EXECUTION

3.1 INSTALLATION

.1 Place bedding and surround material in unfrozen condition.

.2 Do excavation in accordance with Section 31 23 33 - Excavating, Trenching and Backfilling.

.3 Place tank bedding material in accordance with details as indicated. Compact to 98% corrected maximum dry density.

.4 Make inlet joints of tank watertight.

.5 Conduct 24 hour leakage test on tank in presence of the Departmental Representative after backfilling. Fill tank and allow to stand for 24 hours prior to starting 24 hour test. Allowable leakage is zero.

.6 Do backfilling in accordance with Section 31 23 33 - Excavating, Trenching and Backfilling and design drawings.

.1 Compact to 98% corrected maximum dry density.

END OF SECTION