

Part 1 General

1.1 REFERENCES

- .1 American Society for Testing and Materials International (ASTM)
 - .1 ASTM C117-04, Standard Test Method for Material Finer than 0.075 mm (No.200) Sieve in Mineral Aggregates by Washing.
 - .2 ASTM C136-05, Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.
 - .3 ASTM D422-63, Standard Test Method for Particle-Size Analysis of Soils.
 - .4 ASTM D698-00ae1, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (600 kN-m/m).
 - .5 ASTM D1557-02e1, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (2,700 kN-m/m).
 - .6 ASTM D4318-05, Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.
- .2 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-8.1-88, Sieves, Testing, Woven Wire, Inch Series.
 - .2 CAN/CGSB-8.2-M88, Sieves, Testing, Woven Wire, Metric.
- .3 Canadian Standards Association (CSA International)
 - .1 CAN/CSA-A3000-13, Cementitious Materials Compendium (Consists of A3001, A3002, A3003, A3004 and A3005).
 - .1 CSA-A3001-13, Cementitious Materials for Use in Concrete.
 - .2 CSA-A23.1/A23.2-14, Concrete Materials and Methods of Concrete Construction/Methods of Test and Standard Practices for Concrete.

1.2 UTILITY LINES

- .1 Before commencing work, Contractor to protect existing electrical and mechanical systems by all means necessary to maintain continuous operations of institution. Coordinate with electrical and mechanical.

1.3 PROTECTION

- .1 Provide protection to ensure no damage to existing foundations, facilities and equipment situated on site.
- .2 Effect approved measures to minimize dust as result of work.

1.4 DE-WATERING

- .1 Keep vault pits free from water at all times. Provide drainage trenches and sumps as necessary and pump water well away from pits. Discharge location to be approved by Departmental Representative. Do not discharge water onto private property.

Part 2 Products

2.1 MATERIALS

.1 CEMENT-STABILIZED FILL

- .1 Cement-Stabilized Fill material to comply with City of Winnipeg CW-2160 "Concrete Underground Structures and Works", Table 2160.1, item C.

Part 3 Execution

3.1 BACKFILLING

- .1 Do not commence backfilling until areas of work to be backfilled have been inspected and approved by Departmental Representative and Consultant.
- .2 Areas to be backfilled shall be free from debris, snow, ice, water or frozen ground.
- .3 Backfill simultaneously each side of walls and other structures to equalize soil pressure.
- .4 Where temporary unbalanced earth pressures are liable to develop on walls or other structures, erect bracing or shoring to counteract unbalance, and leave in place until removal is approved by Departmental Representative.
- .5 Place stabilized fill in continuous horizontal layers not exceeding 914 mm depth. Use methods to prevent disturbing or damaging buried services, insulation, damp proofing. Make good any damage.

3.2 FILL TYPES AND COMPACTION

- .1 Backfill for exterior of foundation walls and structures:
- .1 Keep heavy equipment at least 1.5m away from the foundation wall.
- .2 Backfill evenly around structures to minimize unbalanced lateral earth pressure.

3.3 INSPECTION AND TESTING

- .1 Testing of materials and compaction will be carried out by testing laboratory designated by Departmental Representative and as described in Division 0.

END OF SECTION