

Part 1 General

1.1 SCOPE

- .1 This section refers to the location, protection, removal and replacement of existing structures and utility works.
- .2 Interpret existing structures as being all existing pipes, ducts, ditches or other works forming a part of sewerage, drainage, water, telephone, electrical, gas or other utility systems as well as sidewalks, curbs, poles, fences, buildings and other manmade things that may be encountered during construction.

Part 2 Products

2.1 SUPPLY

- .1 Supply all materials required for the specified location, protection, removal and replacement of existing structures.
- .2 Unless specified otherwise, materials supplied for replacement of existing structures will be at least equal to those being replaced.

Part 3 Execution

3.1 BURIED UTILITIES

- .1 The Contractor shall cross buried utilities in accordance with the requirements of the utility company. The Contractor shall be responsible for repairing any damages resulting from his work to the satisfaction of the utility company and the Departmental Representative.
- .2 The Contractor shall use hand tools to expose existing buried works. Type 'C' granular backfill shall be used within three metres of any existing utility works and shall be considered incidental to the work.

3.2 WORK ADJACENT TO EXISTING WORKS

- .1 The Contract may require the Contractor to work near existing structures; therefore, it shall be the Contractor's responsibility to establish locations of existing underground works (water lines, forcemains, sewer lines) which may lie along the proposed buried pipeline route. The Contractor shall take all precautions necessary to avoid damage to existing works. The Contractor shall co-ordinate the tie into water systems with the Departmental Representative a minimum of 48 hours prior to commencing construction.

3.3 WORK IN VICINITY OF OVERHEAD POWER LINES

- .1 Request power company to relocate, de-energize or guard any energized conductor where construction equipment may operate within 3 m of conductor.
- .2 Obtain power company approval prior to operating any equipment within 3 m of energized conductor.

- .3 Where practical, avoid storage of metallic pipe sections under high voltage overhead power lines.
- .4 If pipe sections must be stored under power lines, protect personnel from effects of induced currents by grounding pipe sections at two (2) locations with AWG #2 copper ground conductors and grounding rods.

3.4 LOCATION OF STRUCTURES

- .1 Locate all existing surface and underground structures that may affect the work or may be damaged during construction.
- .2 Drawings or descriptions, verbal or otherwise, of existing structures, or their location, are intended only as an aid for the Contractor to locate these structures. Measurements and location of the existing underground structures shown on the drawings are not guaranteed to be accurate, and must be verified prior to proceeding with construction.
- .3 On request from the Departmental Representative, excavate and uncover underground structures for the purpose of establishing line or grade for proposed installation of piping or other works.

3.5 PROTECTION OF STRUCTURES

- .1 Unless authorization from the Departmental Representative is received for their removal, protect all underground and surface structures encountered during construction from any damage.
- .2 The Contractor will repair or replace, at his expense, any structures damaged from his construction operation, to a condition which is at least equal to that which existed prior to construction.

3.6 EMERGENCY SITUATIONS

- .1 In emergency situations resulting from the construction operation, where life or property are endangered, immediately take whatever action is possible to eliminate the danger and notify the appropriate authorities of the situation.

3.7 CURTAILMENT OF UTILITY SERVICE

- .1 Where existing utilities such as water, sewer, electricity, telephone, and gas are serving the public, plan and execute work such that there is no curtailment of service provided by these utilities without prior receipt of approval of the authorities responsible for provision and maintenance of these utilities. Obtain the above approvals from the recognized authorities controlling these utilities. If approval for such disruption of utility service is not granted, it may be possible to establish temporary facilities to provide continuous utility service during the course of construction. Implement such temporary facilities only after receiving the approval of the utility authority.

3.8 SUPPORT OF STRUCTURES AND UTILITY WORKS

- .1 Protect existing structures and utilities against damage from settlement by means of supports or compaction of backfill as approved by the Departmental Representative. Where necessary, supports shall remain in place following backfill of excavations.
- .2 Compact backfill which is placed under or adjacent to existing structures and utilities which have been undermined during excavation in a manner which will prevent damage of the structure or utility from settlement. Backfill with approved crushed granular material less than 50 mm in diameter.

3.9 DRAINAGE FACILITIES

- .1 Keep clear of excavated material, at all times during construction, existing culverts, enclosed drains, flumes and ditches, and other drainage structures affected by the work but left in place.
- .2 When it is necessary to temporarily remove an existing drainage structure, provide suitable temporary ditches or other approved means of handling the drainage during construction.

END OF SECTION