

1.0 GENERAL

1.1 Scope

1.1.1 This section refers to the excavation and repair of excavations for shallow (< 2.0 m) buried utilities (i.e. gas, telephone, power, cable, etc.)

1.2 Related Sections

1.1.1 Section 2000 - Clearing & Grubbing

1.1.2 Section 2010 - Sawcutting

1.1.3 Section 2050 - Concrete Removal

1.1.4 Section 2070 - Asphalt or Concrete Pavement Removal

1.1.5 Section 2075 – Cold Planing

1.1.6 Section 2200 – Roadway Gravel

1.1.7 Section 2220 – Subbase Course

1.1.8 Section 2230 – Granular Base Course

1.1.9 Section 2240 – Concrete Base

1.1.10 Section 2500: Supply of Portland Cement Concrete

1.1.11 Section 2550: Concrete Sidewalk, Crossings, Medians, Curb and Gutter

1.1.12 Section 2240: Concrete Base Course

1.1.13 Section 2325: Supply of Asphaltic Concrete

1.1.14 Section 2350: Placement of Asphaltic Concrete

1.1.15 Section 2640: Lawn Repairs

1.1.16 Section 2645: Coarse Grass Seeding

2.0 PRODUCTS

2.1 Insitu Backfill Material

2.1.1 Insitu Backfill Material is original trench material that does not contain boulders or rocks larger than 100 mm in diameter, organic soils, frozen lumps of earth, rubble or deleterious material from trench excavation.

2.2 Low Shrink Material

2.2.1 Refer to Section 2500 Supply of Portland Cement Concrete

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- 2.2.2 Low shrink material is to be used as follows:
 - .1 when the excavation is less than 600 mm in width.
 - .2 when the Engineer deems the use of low shrink fill is required.
 - 2.3 Granular Materials
 - 2.3.1 Refer to Section 2220 for Subbase Course
 - 2.3.2 Refer to Section 2230 and Base Course
 - 2.3.3 Refer to Section 2200 for Roadway Gravel
 - 2.4 Concrete Base
 - 2.4.1 Refer to Section 2240 for Concrete Base
 - 2.5 Asphalt
 - 2.4.1 Refer to Section 2325: Supply of Asphaltic Concrete
 - 2.6 Landscaping Restoration
 - 2.6.1 Refer to the following sections:
 - .1 Section 2640 for Lawn Repairs
 - .2 Section 2645 for Coarse Grass Seeding
 - 2.7 Quality Control Materials Testing
 - 2.7.1 Materials testing for the above mentioned materials shall be provided at the frequency of testing as outlined in each section.

3.0 EXECUTION

- 3.1 Protection of Existing Utilities and Surface Features
 - 3.1.1 Utility Placement
 - .1 New utility cable, conduit, duct or duct bank shall be separated 1.5 metres laterally from the edge of the pipe or other facility and separated 600 mm vertically from the top or bottom of the pipe or other facility, unless otherwise approved by the City.
 - .2 New utilities shall be installed at a minimum depth of 1.0 metres and maximum depth of 2.0 metres, unless otherwise approved by the City.
 - .3 The Contractor shall identify any conflicts between existing City utilities and the new installation. Expose any City utility where there may be a conflict. The elevation of the new installation in relation to existing utilities must be determined in the field by the Contractor prior to excavation or drilling.

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- .4 The Contractor is responsible for the cost of repair for any damage to public property or works located thereon that may occur as a result of undertaking work.
 - .5 Maintain minimum 2.0 metres separation between utility and trees as determined by the Regina Urban Forest Management Strategy. Maintain a 5.0 metres separation from trees for major utilities.
 - .6 Bore at a minimum depth of 1.5 metres under all trees; where the standard offset is not possible.
 - .7 Shoring of the excavation may be required if the depth of the utility excavation exceeds 2.0m, and the utility excavation is less than 2.5m from an existing cast iron or asbestos cement water main, vitrified clay sanitary sewer, brick or block manhole or other City owned facility that the City deems to be at risk.

3.2 Site Preparation

3.2.1 Clearing and Grubbing

- .1 Removal of any City owned trees requires prior approval by the City. For removal of shrubs and trees, refer to Section 2000 for Clearing & Grubbing.
- .2 All excavated material; not used for backfill, shall be hauled away and disposed of off-site.
- .3 Snow and ice from work areas shall be removed and disposed of in designated snow dumps.

3.2.2 Saw Cut

- .1 Refer to Section 2010 for Sawcutting.
- .2 Saw cuts shall be made on a control joint on walk, curb and gutter. A second cut; 150 mm from the first cut, shall be made to facilitate removal without damaging abutting concrete or asphalt.
- .3 When a concrete or asphalt edge is not clean and straight the Contractor or Utility shall be charged for additional saw cutting.

3.2.3 Concrete Removal

- .1 Refer to Section 2050 for Concrete Removal
- .2 Concrete walk, curb and gutter shall be removed to the nearest control joint.

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- 3.2.4 Asphaltic or Concrete Pavement Removal
 - .1 Refer to Section 2070 for Asphalt or Concrete Pavement Removal
 - 3.3 Excavation
 - 3.3.1 Refer to Section 2110 for Excavation and Section 2120 for roadway excavation and compaction of embankment
 - 3.4 Trench Backfill and Compaction
 - 3.4.1 Refer to Section 2315 for Trench Excavation and Backfill of utility installations by open trench.
 - 3.5 Cut Repair
 - 3.5.1 Cut Reporting
 - .1 All cuts (concrete, asphalt or landscape) shall be reported to the City of Regina on the appropriate form; within 48 hours of the excavation.
 - .2 If work completed by a Contractor for the Utility Company is not satisfactory, the work will be repaired to a satisfactory state or the City of Regina shall make the appropriate repairs at the Utility Company's expense.
 - .3 The City of Regina requires a two (2) year warranty on work carried out by a Contractor for a Utility Company.
 - 3.5.2 Asphalt
 - .1 Refer to Sections 2350 for Placement of Asphaltic Pavement.
 - .2 A minimum 200 mm lift of concrete base will be required below the existing asphalt when concrete base occurs on a street or alley or at the direction of the Engineer.
 - .1 This concrete base shall be tied into existing concrete base with 10M rebar, 1.0 metre on centre where possible.
 - .4 The asphalt lift shall be a minimum 80 mm thick or match the existing asphalt thickness; whichever is greatest.
 - .1 If the asphalt thickness to be placed is greater than 80 mm; then the asphalt shall be placed in two (2) lifts.
 - 3.5.3 Concrete Repair to Pavement
 - .1 The City may on occasion request that the cut be repaired with a minimum of 300mm of concrete base from the top of existing

asphalt.

- .2 The concrete shall be level with the existing asphalt.
- .3 The concrete shall be broom finished perpendicular to the direction of travel.
- .4 The contractor shall be responsible for any additional cost for concrete repairs to pavement.

3.5.4 Concrete Walk, Curb and Gutter repair.

- .1 Refer to Section 2550 for Concrete Sidewalk, Crossings, Medians, Curb and Gutters.

3.5.5 Paving Stones

- .1 See Section 2515 - Unit Paving for the repair of interlocking paving stones.

3.5.6 Landscape Repairs

- .1 Refer to the following sections for lawn repairs:
 - .1 Section 2640 for Lawn Repairs
 - .2 Section 2645 for Coarse Grass Seeding
- .2 Refer to the Open Space Specification Section of the City of Regina Standard Construction Specifications for repairs to pathways, irrigation systems and other landscape items in open spaces.
- .3 The City of Regina will determine whether the area is to be repaired with seed or sod.