

PART 1 - GENERAL

1.1 RELATED SECTIONS

- .1 Section 01 33 00 - Submittal Procedures.

1.2 REFERENCES

- .1 Sulphide:
 - .1 Sulphide Bearing Material Disposal Regulations made under Section 66 of the Environmental Act, NS. Reg 57/95.
- .2 Definitions:
 - .1 Rock: any solid material in excess of 1.00 m³ and which cannot be removed by means of heavy duty mechanical excavating equipment with 0.95 m³ bucket. Frozen material not classified as rock.

1.3 MEASUREMENT PROCEDURES

- .1 Rock excavation for underground services and building foundations to be in cubic metres. The volume of rock excavation to be determined by the product of the following measurements in place:
 - .1 Width - The width of the rock excavation to be the actual width of trench measured horizontally.
 - .2 Depth - The depth of rock excavation to be measured from the existing rock surface to a maximum of 300 mm below the pipe invert or lowest level of required excavation.
 - .3 Length - The length of rock excavation is measured horizontally along the centreline of the trench to the outside limits of the backfill for the associated structure or to the outlet end of a pipe where it emerges from the rock.
 - .4 Horizontal - The horizontal measurement for chambers is the:
 - .1 The length and width to the external surface of a rectangular structure or square structure plus 300 mm on all sides.
- .2 Sections to be taken at 15.0 m intervals or at significant changes in grade.
- .3 Bedrock elevations are shown in the location of the building structure. Where no boreholes are located contractor is to assume that bedrock is located 1 meter below the surface in the area of structures that require such excavation.

PART 2 - PRODUCTS

2.1 MATERIALS

- .1 Not used.

PART 3 - EXECUTION

3.1 ROCK REMOVAL

- .1 Perform excavation in accordance with Erosion and Sedimentation Control Plan.
 - .2 Co-ordinate this Section with Section 01 35 29 - Health and Safety Requirements.
 - .3 Remove rock to alignments, profiles, and cross sections as indicated.
 - .4 Explosive blasting is permitted. Contractor must follow Federal Provincial and Municipal (By-Law B600) Regulation. Permits are required.
 - .1 Amount of explosives on-site must not exceed the daily volume.
 - .2 Vibration monitoring of adjacent structures will be required.
 - .3 Foam injection rock splitting technology is preferred.
 - .5 Use rock removal procedures to produce uniform and stable excavation surfaces. Minimize overbreak, and to avoid damage to adjacent structures.
 - .6 Excavate rock to horizontal surfaces. Where footings are indicated to bear directly on rock the existing rock surface shall be excavated to a level surface such that the entire footing will be constructed on a consistent level rock surface.
 - .7 Prepare rock surfaces which are to bond to concrete, by scaling, pressure washing and broom cleaning surfaces.
 - .8 Excavate trenches to lines and grades to minimum of 150 mm below pipe invert indicated. Provide recesses for bell and spigot pipe to ensure bearing will occur uniformly along barrel of pipe.
 - .9 Cut trenches to widths as indicated.
 - .10 Remove boulders and fragments which may slide or roll into excavated areas.
 - .11 Contractor to remove rock to within minus 150 mm below underside of footing.
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3.2 CLEANING

- .1 Clean in accordance with Section 01 74 11 - Cleaning.
- .2 Rock Disposal:
 - .1 Dispose of surplus removed rock off site in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
 - .2 Do not dispose removed rock into landfill. Send material to appropriate location as approved by Departmental Representative.
- .3 Waste Management: separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

3.3 PROTECTION

- .1 Prevent damage to surroundings and injury to persons in accordance with Section 01 56 00 - Temporary Barriers and Enclosures.