
Part 1 General

1.1 REFERENCES

- .1 CSA International
 - .1 CSA S350, Code of Practice for Safety in Demolition of Structures.

1.2 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit demolition plan:
 - .1 Submit for review and approval, plans showing proposed method and work procedure.
- .2 Sustainable Design Submittals:
 - .1 Submit for review and approval, Erosion and Sedimentation Control plan
- .3 Submittals are to be submitted to Departmental Representative in accordance with Specification 01 33 00 – Submittal Procedures.

Part 2 Products

2.1 NOT USED

- .1 Not used.

Part 3 Execution

3.1 EXAMINATION

- .1 Inspect site with Departmental Representative and Consultant and verify extent and location of items designated for removal, disposal, alternative disposal, recycling, salvage and items to remain.
- .2 Locate and protect any utilities. Preserve active utilities traversing site in operating condition. It is understood that there are no utilities at the site, but this must be confirmed by the Contractor. Contractor is responsible for all locates of utilities and other related structures. Inform Departmental Representative of any utilities located, prior to commencing demolition.
- .3 Notify and obtain approval of utility companies before starting demolition.
 - .1 Immediately notify Consultant/Departmental Representative and utility company concerned in case of damage to any utility or service, designated to remain in place.
 - .2 Immediately notify the Consultant/Departmental Representative should uncharted utility or service be encountered, and await instruction in writing regarding remedial action.

3.2 PREPARATION

- .1 Temporary Erosion and Sedimentation Control:
 - .1 Provide temporary erosion and sedimentation control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, according to: sediment and erosion control plan, specific to site, that complies Parks Canada requirements.
 - .2 Inspect, repair, and maintain erosion and sedimentation control measures during demolition.
 - .3 Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal after completion of demolition work.
- .2 Protection of In-Place Conditions:
 - .1 Prevent movement, settlement, or damage to adjacent structures, utilities, and landscaping features to remain in place. Provide bracing and shoring as required.
 - .2 Keep noise, dust, and inconvenience to Parks staff and visitors to minimum.
 - .3 Provide temporary dust screens, covers, railings, supports and other protection as required.
 - .4 Do Work in accordance with Section 01 35 29.06 - Health and Safety Requirements.
- .3 Demolition/Removal:
 - .1 Remove items as indicated.

3.3 CLEANING

- .1 Progress Cleaning:
 - .1 Leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment from site.
- .3 Refer to demolition drawings and specifications for items to be salvaged for reuse.
- .4 Waste Management: separate waste materials for recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
 - .1 Remove recycling containers and bins from site and dispose of materials at appropriate facility.

END OF SECTION

Part 1 General

1.1 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Sustainable Design Submittals:
 - .1 Erosion and Sedimentation Control: submit erosion and sedimentation control plan in accordance with Parks Canada Requirements.

Part 2 Products

2.1 NOT USED

Part 3 Execution

3.1 EXAMINATION

- .1 Verification of Conditions:
 - .1 Examine soil report supplied.
 - .2 Before commencing work confirm no buried services on and adjacent to site. If buried services are located, inform Consultant prior to commencing work. Contractor is responsible for arranging and completing all utility locates and verification of existing conditions prior to the start of work.
- .2 Evaluation and Assessment:
 - .1 Arrange with appropriate authority for relocation of buried services that interfere with execution of work. Pay costs of relocating services.
 - .2 Before commencing work, conduct, with Departmental Representative and Consultant, condition survey of existing structures, trees and plants, fencing, and paving, survey bench marks and monuments which may be affected by work.
 - .3 The contractor is responsible for all layout and shall accept the site as-is prior to start of work.

3.2 SURVEY

- .1 The contractor is responsible for all survey required for layout and successful completion of the work.

3.3 PREPARATION

- .1 Temporary Erosion and Sedimentation Control:
 - .1 Use temporary erosion and sedimentation control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, in accordance with sediment and erosion control plan, specific to site.

- .2 Inspect, repair, and maintain erosion and sedimentation control measures during construction until permanent vegetation has been established.
- .3 Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.
- .2 Protection of in-place conditions:
 - .1 Protect excavations from freezing.
 - .2 Keep excavations clean, free of standing water, and loose soil.
 - .3 Where soil is subject to significant volume change due to change in moisture content, cover and protect to Consultant's approval.
 - .4 Protect natural and man-made features required to remain undisturbed. Unless otherwise indicated or located in an area to be occupied by new construction, protect existing trees from damage.
 - .5 Protect buried services that are to remain undisturbed.
- .3 Removal:
 - .1 Remove obsolete buried services within 2 m of foundations. Cap cut-offs.
 - .2 Remove obstructions, ice and snow, from surfaces to be excavated within limits indicated.
 - .3 Remove trees, stumps, logs, brush, shrubs, bushes, vines, undergrowth, rotten wood, dead plant material, exposed boulders and debris within areas designated on drawings.
 - .4 Remove stumps and tree roots below rip rap.

3.4 EXCAVATION

- .1 Shore and brace excavations as required, protect slopes and banks and perform work in accordance with Parks Canada regulations.
- .2 Topsoil stripping:
 - .1 Do not handle topsoil while in wet or frozen condition or in any manner in which soil structure is adversely affected.
 - .2 Strip topsoil to depths as indicated. Avoid mixing topsoil with subsoil.
 - .3 Strip topsoil over areas to be covered by new construction, over areas where grade changes are required, and so that excavated material may be stockpiled without covering topsoil.
 - .4 Stockpile in locations as directed by Departmental Representative.
- .3 Excavate as required to carry out work, in all materials met.
 - .1 Do not disturb soil or rock below bearing surfaces. Notify Consultant/Departmental Representative when excavations are complete.
 - .2 If bearings are unsatisfactory, additional excavation will be authorized in writing and paid for as additional work.

3.5 SITE QUALITY CONTROL

- .1 Prepared surfaces to be inspected and approved by Consultant/Departmental Representative prior to rip rap placement.

3.6 CLEANING

- .1 Progress Cleaning:
 - .1 Dispose of cleared and grubbed material off site daily to a location approved by the Departmental Representative. There may be a requirement to dispose outside of the Park if no suitable site is available within the Park.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment.

END OF SECTION

Part 1 General

1.1 MEASUREMENT PROCEDURES

- .1 Measure rip-rap in cubic metres of material placed.

Part 2 Products

2.1 STONE

- .1 Stone as obtained from Parks Canada Marmot Pit, to meet following size distribution for use intended:
- .1 Armour rip-rap:
 - .1 Nominal diameter 800 mm.
 - .2 None greater than 1100 mm diameter.
 - .3 All greater than 500 mm diameter.
 - .4 20 -50% greater than 900 mm diameter.
 - .5 50 – 80% greater than 800 mm diameter.

2.2 GEOTEXTILE FILTER

- .1 Geotextile: in accordance with Section 31 32 19.01 - Geotextiles.

Part 3 Execution

3.1 PLACING

- .1 Where rip-rap is to be placed on slopes, excavate trench at toe of slope to dimensions as indicated.
- .2 Fine grade area to be rip-rapped to uniform, even surface. Fill depressions with suitable material and compact to provide firm bed.
- .3 Place geotextile on prepared surface in accordance with Section 31 32 19.01- Geotextiles and as indicated. Avoid puncturing geotextile. Vehicular traffic over geotextile not permitted.
- .4 Place rip-rap to thickness and details as indicated.
- .5 Place stones in manner approved by Consultant to secure surface and create a stable mass. Place larger stones at bottom of slopes.

END OF SECTION

Part 1 General

1.1 RELATED REQUIREMENTS

- .1 Section 31 37 00.

1.2 MEASUREMENT AND PAYMENT

- .1 Measure geotextiles in square metres of surface covered by material. No allowance will be made for seams and overlaps.

1.3 REFERENCES

- .1 ASTM International
 - .1 ASTM A123/A123M, Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
 - .2 ASTM D6241, Standard Test Method for the Static Puncture Strength of Geotextiles and Geotextile-Related Products Using a 50-mm Probe
 - .3 ASTM D4533, Standard Test Method for Trapezoid Tearing Strength of Geotextiles
 - .4 ASTM D4632 / D4632M, Standard Test Method for Grab Breaking Load and Elongation of Geotextiles
- .2 CSA International
 - .1 CSA G40.20/G40.21, General Requirements for Rolled or Welded Structural Quality Steel/Structural Quality Steel.

1.4 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
 - .1 Submit manufacturer's instructions, printed product literature and data sheets for geotextiles and include product characteristics, performance criteria, physical size, finish and limitations.

1.5 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance with manufacturer's written instructions.
- .2 Storage and Handling Requirements:
 - .1 Store materials in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
 - .2 Store and protect geotextiles from direct sunlight and UV rays.
 - .3 Replace defective or damaged materials with new.

Part 2 Products

2.1 MATERIAL

- .1 Geotextile: non-woven synthetic fibre fabric, supplied in rolls.
- .2 Physical properties:
 - .1 Grab tensile strength and elongation: to ASTM D4632.
 - .1 Breaking force: minimum 875 N.
 - .2 Elongation at failure: 50%.
 - .2 CBR strength: to ASTM D6241, minimum 550 N.
 - .3 Trapezoidal strength: ASTM D4533, minimum 350 N.
- .3 Securing pins and washers: to CSA G40.21, Grade 300W, hot-dipped galvanized with minimum zinc coating of 600 g/m² to ASTM A123/A123M.
- .4 Factory seams: sewn in accordance with manufacturer's recommendations.
- .5 Thread for sewn seams: equal or better resistance to chemical and biological degradation than geotextile.

Part 3 Execution

3.1 EXAMINATION

- .1 Verification of Conditions: verify that conditions of substrate previously installed under other Sections or Contracts are acceptable for geotextile material installation in accordance with manufacturer's written instructions.
 - .1 Visually inspect substrate in presence of Consultant.
 - .2 Inform Consultant of unacceptable conditions immediately upon discovery.
 - .3 Proceed with installation only after unacceptable conditions have been remedied.

3.2 INSTALLATION

- .1 Place geotextile material by unrolling onto graded surface in orientation, manner and locations indicated and retain in position with 6 mm diameter steel pins.
- .2 Place geotextile material smooth and free of tension stress, folds, wrinkles and creases.
- .3 Place geotextile material on sloping surfaces in one continuous length from toe of slope to upper extent of geotextile.
- .4 Overlap each successive strip of geotextile 300 mm over previously laid strip.
- .5 Pin successive strips of geotextile with securing pins at 1000 mm interval at mid-point of lap.
- .6 Protect installed geotextile material from displacement, damage or deterioration before, during and after placement of material layers.
- .7 After installation, cover with overlying layer within sufficient time that ultraviolet damage does not occur; in no case shall this time exceed 7 days for ultraviolet material and 14 days for ultraviolet protected and low ultraviolet susceptible polymer geotextiles.

- .8 Replace damaged or deteriorated geotextile. Any damage shall be repaired by use of patches that extend at least 1 m beyond the perimeter of the tear or puncture.
- .9 Place rip-rap in accordance with Section 31 37 00 – Rip-Rap.

3.3 CLEANING

- .1 Progress Cleaning: leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment.
- .3 Dispose of any waste materials as per the Waste Management Plan or as specified by the Departmental Representative.

3.4 PROTECTION

- .1 Vehicular traffic not permitted directly on geotextile.

END OF SECTION