

1 GENERAL

1.01 RELATED REQUIREMENTS

- .1 Section 31 05 16 - Aggregate Materials.

1.02 MEASUREMENT AND PAYMENT

- .1 Measure core stone, filter stone: in tonnes of material acceptably incorporated into the work, under this contract.
- .2 Measure armour stone, toe protection: in tonnes of material acceptably incorporated into the work under this contract.
- .3 Mobilization/demobilization of equipment to be paid under section 02 41 16.
- .4 Construction and maintenance of haul roads will not be measured for payment.

1.03 REFERENCES

- .1 ASTM International
 - .1 ASTM C 117-2004, Standard Test Method for Material Finer than 0.075 mm Sieve in Mineral Aggregates by Washing.
 - .2 ASTM C 136-2006, Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.
- .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.

1.04 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Shop Drawings:
 - .1 Submit drawings stamped and signed by professional engineer registered or licensed in Province of New Brunswick, Canada.
- .3 Samples
 - .1 Inform Departmental Representative of proposed source of materials and provide access for sampling at least 3 weeks prior to commencing Work.
 - .2 Submit 20 to 70 kg samples representative of quarry, minimum 3 weeks prior to beginning Work.

1.05 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements.

2 PRODUCTS

2.01 MATERIALS

- .1 Rock materials:
- .1 Free from cracks, seams and other defects which may impair durability; relative density (formally specific gravity) minimum 2.64; slate and shale not acceptable.
- .2 Crushed stone material: in accordance with Section 31 05 16 - Aggregate Materials and to following requirements:
- .1 Gradations to be within limits specified when tested to ASTM C 136 and ASTM C 117. Sieve sizes to CAN/CGSB-8.1, CAN/CGSB-8.2.
- | <u>Sieve Designation</u> | <u>% Passing</u> |
|--------------------------|------------------|
| 200 mm | - |
| 75 mm | 100 |
| 50 mm | - |
| 38.1 mm | - |
| 25 mm | - |
| 19 mm | 30-70 |
| 12.5 mm | - |
| 9.5 mm | - |
| 4.75 mm | 10-40 |
| 2.00 mm | - |
| 0.425 mm | - |
| 0.180 mm | - |
| 0.075 mm | 0-8 |
- .2 Core stone: quarried rock with percent by mass passing 12.5 mm sieve not to exceed 10.
- .1 Core Stone sizes to be in range of 0.1kg to 100kg.
- .3 Filter layer stone quarried rock:
- .1 Greatest dimensions of each stone not to exceed two times least dimension.
- .2 Filter layer stone sizes to be in range of 400 kg to 800 kg.
- .4 Toe protection stone:
- .1 Greatest dimension of each stone not to exceed 2 times least dimension.
- .2 Stone sizes to be in range of 4 Tonnes to 6 Tonnes.
- .5 Armour stone: quarried rock:
- .1 Greatest dimension of each stone not to exceed 2 times least dimension.
- .2 Stone sizes to be in range of 2 Tonnes to 4 Tonnes.

3 EXECUTION

3.01 PREPARATION

- .1 Haul roads: construct and maintain haul roads.

3.02 CORE

- .1 Place core material to lines, grades and dimensions as indicated.

- .2 Place core layer material in 300mm courses.

3.03 GRANULAR FILTER LAYER

- .1 Place filter layer material to lines, grades and dimensions indicated.
- .2 Place filter layer material in 300mm courses.

3.04 TOE PROTECTION

- .1 Place toe protection stone to lines, grades and dimensions as indicated or as directed by Departmental Representative.
- .2 Place each Toe Protection stone in stable position.
- .3 Place geotextiles in accordance with Section 31 32 19.01 - Geotextiles.

3.05 ARMOUR STONE

- .1 Place armour stone to lines, grades and dimensions as indicated.
- .2 Place each armour stone in stable position.

3.06 TOLERANCES

- .1. Completed component layers to be within following tolerances of lines and grades as indicated:
 - .1 Core: plus or minus 300 mm.
 - .2 Filter Stone layer: plus or minus 300 mm.
 - .3 Toe protection: plus or minus 300 mm.
 - .4 Armour: plus or minus 300 mm.

3.07 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
 - .1 Leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.
- .3 Waste Management: separate waste materials 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