

Bailey's Brook SCH Containment Cell Access Road Construction

Pictou County, N.S.

R.112132.001

Granular Sub-Base

Page 1

PART 1 - GENERAL

- 1.1 Related Work .1 Refer to other Specification Sections for related information.
- 1.2 Reference Standards .1 ASTM D698-12e1 (or latest edition), Standard Compaction Characteristics of Soil Using Standard Effort (600kN-m/m³).
- 1.3 Measurement for Payment .1 Granular sub-base will be measured in accordance with **Section 01 29 00**.
- .2 Backfill will be measured in accordance with **Section 01 29 00**.

PART 2 - PRODUCTS

- 2.1 Materials .1 Granular sub-base material to **Section 31 05 17** and following requirements:
- .1 Borrow, crushed stone or gravel consisting of hard durable angular particles free from clay lumps, cementation, organic material, frozen material and other deleterious materials (Gravel Borrow definition as per the Nova Scotia Transportation and Infrastructure Renewal (NSTIR) Standard Specification for Highway Construction, Division 3, Section 1).

ASTM SIEVE SIZE	% PASSING BY MASS
112 mm	100
14 mm	15 - 65
0.08 mm	3 - 10

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Page 2

- .2 Type 2 granular material gradation will be within the following limits (Type 2 definition as per the Nova Scotia Transportation and Infrastructure Renewal (NSTIR) Standard Specification for Highway Construction, Division 3, Section 2):

ASTM SIEVE SIZE	% PASSING BY MASS
80 mm	100
56 mm	70 - 100
28 mm	50 - 80
14mm	35 - 65
5mm	20 - 50
0.16mm	3 - 10
0.08mm	0 - 7

PART 3 - EXECUTION3.1 Inspection of
Existing Sub-Base
Surface

- .1 Do not place new granular sub-base until underlying gravel borrow and backfill material is compacted, inspected and approved by the *Departmental Representative*.

3.2 Placing

- .1 Place material only on a clean unfrozen surface, properly shaped and compacted and free from snow or ice.
- .2 Place Type 2 (Class 'C') and gravel borrow to full width in uniform layers not exceeding 300 mm uncompactd thickness. *Departmental Representative* may authorize thicker lifts (layers) if specified compaction can be achieved.
- .3 Shape each layer to a smooth contour and compact to specified density before the succeeding layer is placed.
- .4 Remove and replace portion of a layer in which material has become segregated during spreading.

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R.112132.001

Granular Sub-Base

Page 3

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- 3.3 Compacting
- .1 Compact to density of not less than 95% maximum dry density in accordance with ASTM D698 (Standard Procter).
 - .2 Shape and roll alternately to obtain a smooth, even and uniformly compacted sub-base.
 - .3 Apply water as necessary during compaction to obtain specified density. If sub-base is excessively moist, aerate by scarifying with suitable equipment until moisture content is corrected.
 - .4 In areas not accessible to rolling equipment, compact to specified density with approved mechanical tampers.
- 3.4 Finish Tolerances
- .1 Granular sub-base compacted thicknesses will be as follows: maximum compacted lifts of 300mm.
 - .2 Backfill material will be compacted to the thickness as required to attain the grades indicated on the drawings.
 - .3 Finish compacted surface to within plus or minus 25 mm of established grade but not uniformly high or low.
 - .4 Correct surface irregularities by loosening and adding or removing material until surface is within specified tolerance.
- 3.5 Maintenance
- .1 Maintain finished gravel borrow sub-base in condition conforming to this section until succeeding Type 2 sub-base is constructed, or until gravel borrow sub-base is accepted by *Departmental Representative*.
 - .2 *Departmental Representative* will pay costs for inspection and testing. Refer to **Section 01 45 00.**
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