1.0 GENERAL

1.1 Scope

1.1.1 The work shall consist of the placement of sub-drainage layer for granular based structures. The un-compacted sub-drainage course shall be placed to the lines, grades and cross-sections shown on the plans or as directed by the Engineer.

1.2 Related Sections

1.2.1 Section 02130 – Subgrade Preparation

1.2.2 Section 02220 - Subbase

2.0 PRODUCTS

2.1 Granular Material

2.1.1 The gradation of the sub-drainage sand shall be within the following limits:

SIEVE DESIGNATION	PERCENT PASSING BY WEIGHT
28 mm	100
12.5 mm	90 – 100
5 mm	75 – 100
2 mm	55 – 100
800 μm	35 – 75
400 μm	20 – 50
160 μm	0 – 15
80 μm	0 – 5

2.1.2 Minimum Permeability is 1×10^{-4} cm/sec

2.1.3 Gradation shall be used to determine suitability but permeability specification will be used as guide for acceptance of the material.

3.0 EXECUTION

3.1 Construction

3.1.1 The placement of sub-drainage sand layer will be carried out in a manner such that hauling and placing operations do not deform the subgrade or over compact the surface along defined routes, resulting in non-uniform density. In general the hauling operation should be carried out in such a manner that traffic on the subgrade is limited to unloaded vehicles.

3.1.2 Ideally the placement would involve a dump and doze operation from a working pad of sub-drainage layer and sub-base, with no equipment travelling across the prepared subgrade.

3.1.3 Construction shall be completed and trimmed to ± 20 mm vertically and ± 100 mm. Deviations shall be neither consistently high nor consistently low.

3.2 Materials Testing Requirement for Quality Control

3.2.1 A sample shall be taken every 500 tonnes and at least one per day to confirm gradation according to ASTM D698.

3.2.2 Permeability test to confirm acceptance.