

PART 1 GENERAL

1.1 DESCRIPTION

- .1 This section specifies the requirements for the supplying, producing and placing crushed gravel as a granular base course directly beneath the slab on grade portions of work or as directed by Departmental Representative. Granular base course will not be measured for payment (include costs in the lump sum).

1.2 REFERENCES

- .1 ASTM C 117-04, Test method for material finer than 0.075 mm sieve in mineral aggregates by washing.
- .2 ASTM C 131-06. Test method for resistance to degradation of small size coarse aggregate by abrasion and impact in the Los Angeles machine.
- .3 ASTM C 136-6, Method for sieve analysis of fine and coarse aggregates, CAN/CGSB-8.2-M88, Sieves testing, woven wire, metric.

1.3 DELIVERY, STORAGE AND HANDLING

- .1 Deliver and stockpile aggregates as directed by Departmental Representative.

PART 2 PRODUCTS

2.1 MATERIALS

- .1 Granular base fill (Class A) will consist of clean, hard, durable crushed gravel or stone, free from shale, clay, friable materials, organic matter and other deleterious substances and graded within the following limits when tested to ASTM C136 and ASTM C117 and giving a smooth curve without sharp breaks when plotted on a semi-chart.

ASTM Sieve Designation	% Passing
19.0 mm	100

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9.51 mm	50-80
4.76 mm	35-60
1.20 mm	15-35
300 um	7-20
75 um	3-6 (Pit Source)
	3-8 (Rock Source)

.2 Physical Requirements for Class A:

- .1 Liquid Limit ASTM D4318: Maximum 25
 - .2 Plasticity Index ASTM D4318: Maximum 0
 - .3 Los Angeles Abrasion ASTM C131-81 Maximum % loss by weight: 35
 - .4 Crushed Fragments: 50%. The percent of crushed particles will be determined by examining the fraction retained on the 4.76mm sieve and dividing the weight of the crushed particles by the total weight retained on the 4.76 mm sieve.
 - .5 CBR: ASSHTO T193-72 Min 100 when compacted to 100% of AASHTO T180-74 Method D.
- .3 Materials from deposits acceptable as to the quality of the particles, but deficient in sizes to provide the required gradation, may be accepted if the contractor furnishes and satisfactorily incorporates into the product supplementary sizes from other sources to produce the required grading. If the deficiencies occur in Class "A" materials, corrections may be attempted by crushing to a smaller maximum particle size. In that event, the Departmental Representative will furnish special grading limits on the actual maximum particle size.
- .6 Class "A" shall be processed by crushing and, when necessary, to eliminate surplus fines passing the 4.76 mm sieve, shall be screened and washed.

PART 3 EXECUTION

3.1 INSTALLATION

- .1 Place granular base after sub-base surface is inspected and approved by Departmental Representative.
- .2 Placing:
 - .1 Construct granular base to depth and grade in area indicated.
 - .2 Ensure no frozen material is placed.
 - .3 Place material only on clean unfrozen surface, free from snow and ice.
 - .4 The contractor shall place all granular bases in such a manner as to prevent contamination by other materials and to prevent segregation.
 - .5 All granular bases shall be placed in uniform layers such that the thickness of the compacted layer does not exceed 50 mm.
- .3 Compaction Equipment:
 - .1 Compaction equipment to be capable of obtaining required material densities.
- .4 Compacting:
 - .1 All Class "A" materials shall be compacted to not less than 100% of the maximum Standard Proctor Dry Density ASTM D698-07e1 Method D.

3.2 INSPECTION AND TESTING

- .1 Testing of materials and compaction will be carried out by testing laboratory designated by the Departmental Representative.
- .2 Contractor will pay costs for inspection and testing.
- .3 Sieve Analysis: proposed granular material will be tested to confirm suitability for intended use and conformity with specifications.
- .4 Frequency of Tests: to be determined by the Departmental Representative.