

Part 1 General

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| 1.1 Related Requirements | .1 | Section 31 00 00.01 – Earthwork Short Form. |
| 1.2 References | .1 | ASTM International |
| | .1 | ASTM C136-06, Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates. |
| | .2 | ASTM C117-04, Standard Test Method for Material Finer Than 0.075 mm (No. 200) Sieve in Mineral Aggregates by Washing. |
| | .3 | ASTM D4318-05, Standard Test Method for Liquid Limit, Plastic Limit and Plasticity Index of Soils. |
| | .4 | ASTM D698-07e1, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft ³ (600 kN-m/m ³). |
| | .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. |
| 1.3 Administrative Requirements | .1 | Access: allow access to building at all times. |
| | .2 | Scheduling: co-ordinate paving schedule to minimize interference with normal use of premises. |
| 1.4 Action and Informational Submittals | .1 | Submit submittals in accordance with Section 01 33 01 – Shop Drawings, Product Data, and Samples. |
| 1.5 Delivery, Storage and Handling | .1 | Deliver, store and handle materials in accordance with Section 016110- Product Requirements and with manufacturer's written instructions. |
| | .2 | Store crushed stone as and where directed by Departmental Representative. |
| | .3 | Packaging Waste Management: remove for reuse and return pallets, crates, padding, packaging materials as specified in Construction Waste Management Plan, Waste Reduction Workplan in accordance with Section 01 74 19 - Waste Management and Disposal. |

Part 2 Products

2.1 Materials

- .1 Granular sub-base: in accordance with the following requirements:
- .1 Crushed, pit run or screened stone, gravel or sand consisting of hard durable particles free from clay lumps, cementation, organic material, frozen material and other deleterious materials.
- .2 Gradations: within limits specified when tested to ASTM C136 and ASTM C117. Sieve sizes to CAN/CGSB-8.1 CAN/CGSB-8.2.
- .2 Table:
- | Sieve Designation | % Passing |
|-------------------|-----------|
| 75 mm | 100 |
| 4.75 mm | 25-85 |
| 0.425 mm | 5-30 |
| 0.075 mm | 0-10 |
- .3 Granular base: in accordance with the following requirements:
- .1 Crushed stone or gravel: hard, durable, angular particles, free from clay lumps, cementation, organic material, frozen material and other deleterious materials.
- .2 Gradations: within limits specified when tested to ASTM C136 and ASTM C117. Sieve sizes to CAN/CGSB-8.1 and CAN/CGSB-8.2.
- .3 Table:
- | Sieve Designation | % Passing |
|-------------------|-----------|
| 25 mm | 100 |
| 19 mm | 75-100 |
| 9.5 mm | 50-100 |
| 4.75 mm | 30-70 |
| 2.00 mm | 20-45 |
| 0.425 mm | 10-25 |
| 0.075 mm | 3-8 |
- .4 Liquid limit: ASTM D4318 maximum 25.
- .5 Plasticity index: ASTM D4318 maximum 6.
- .4 Granular topping:
- .1 Screenings: hard, durable, crushed stone particles, free from clay lumps, cementation, organic material, frozen material and other deleterious materials.

- .2 Gradations: within limits specified when tested to ASTM C136 and ASTM C117.

| Sieve Designation | % Passing |
|-------------------|-----------|
| 9.5 mm | 100 |
| 4.75 mm | 50-100 |
| 2.00 mm | 30-65 |
| 0.425 mm | 10-30 |
| 0.075 mm | 5-10 |

Part 3 Execution

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| <u>3.1 Subgrade</u> | .1 | Ensure subgrade preparation conforms to levels and compaction required, to allow for installation of granular base. |
| <u>3.2 Granular Sub-Base</u> | .1 | Granular sub-base material minimum thickness: as indicated. |
| | .2 | Place material in uniform layers not to exceed 150 mm compacted thickness. |
| | .1 | Compact layer to 100 % Standard Density in accordance with ASTM D698. |
| <u>3.3 Granular Base</u> | .1 | Granular base material thickness: as indicated. |
| | .2 | Spread and compact granular base material in uniform layers not exceeding 100 mm compacted thickness. |
| | .3 | Compact to a density of not less than 100 % Standard Density in accordance with ASTM D698. |
| <u>3.4 Granular Topping</u> | .1 | Place granular topping to compacted thickness as indicated. |
| | .2 | Place material in uniform layers not to exceed 50 mm compacted thickness. |
| | .1 | Compact layer to 100 % Standard Density in accordance with ASTM D698. |
| <u>3.5 Field Quality Control</u> | .1 | Inspection and testing of crushed stone paving: carried out by designated testing laboratory. |
| <u>3.6 Cleaning</u> | .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 19 - Waste Management and Disposal.
 - .1 Remove recycling containers and bins from site and dispose of materials at appropriate facility.

3.7 Protection

- .1 Prevent damage to trees and adjacent property.
 - .1 Repair damages incurred.
- .2 Provide access to building at all times. Co-ordinate paving schedule to minimize interference with normal use of premises.

END OF SECTION