GRANULAR BASE

PART 1 GENERAL

1.1 Description or Work

.1 The Contractor shall provide all materials, equipment, and labour necessary to haul, place, and compact the granular base material for the parking lot, walkways, retaining wall, and cast-in-place concrete wall and steps in accordance with the specifications and details, or as specified in any other section or detail.

1.2 Related Work

.1 All Division 1
.2 Section 02743 .....Asphalt Concrete Paving
.3 Section 03300 .....Cast-In-Place Concrete

1.3 Warranty

.1 All granular required by the Work of this Contract shall be replaced by the Contractor to the requirements of these specifications, at his or her own expense. Should defects surface due to materials or Workmanship, for a period of twenty four (24) months from the date of written Substantial Performance of the Work of this Contract. Refer to **Section 01700 Contract Closeout, Takeover & Warranties** for submittal requirements.

PART 2 PRODUCTS

2.1 Materials

.1 Type 1 (19 mm 'Crusher Run' limestone) fill: clean, hard, durable crushed limestone, free from shale clay, organic matter and other deleterious substances and graded as follows:

Sieve designation	% Passing
25 mm	100
16 mm	75-95
#4	35-55
#16	15-35
#50	7-20
#200	3-10

.2 Type 2 (50 mm crushed limestone) fill: clean, hard, durable crushed limestone, free from shale clay, organic matter and other deleterious substances and graded as follows:

Sieve designation	% Passing
63mm	100
50mm	85-100
33mm	70-90
25mm	55-75
16mm	40-50
#4	20-35
#16	10-23
#50	5-12
#200	2-6

.3 Geogrid to be installed as per manufacturer's specifications.

PART 3 EXECUTION

3.1 Inspection of Underlying Sub-Base or Subgrade

.1 Do not place granular base until finished sub-grade surface is inspected and compaction tests confirm 95% S.P.D. for undisturbed subgrade or 98% S.P.D. for disturbed sub grade.

.2 All granular base material specified to be used shall comply and be laid in accordance with the requirements of OPSS standards.

.3 The Contractor shall coordinate compaction testing for all granular bases. Should any test results be sub-standard and not in accordance with the specifications, the Contractor shall correct all deficiencies and re-test areas corrected at the Contractor's expense

3.2 Placing

.1 Place material only on clean unfrozen surface, properly shaped and compacted and free from snow and ice.

.2 Place using methods which do not lead to segregation or degradation of aggregate.

.3 Place material to full width in uniform layers not exceeding 150 mm compacted thickness. The Consultant may authorize thicker lifts (layers) if specified compaction can be achieved.

.4 Shape each layer to smooth contour and compact to specified 98% S.P.D. before succeeding layer is placed.

.5 Remove and replace that portion of layer in which material becomes segregated during spreading.

3.3 Compaction Equipment

.1 Compaction equipment must be capable of obtaining required densities in materials on project.

3.4 Compacting

.1 Compact to density not less than 98% maximum dry density in accordance with ASTM D698-78 unless otherwise directed by the Geotechnical Engineers report.

.2 Shape and roll alternately to obtain smooth, even and uniformly compacted base.

.3 The material shall be sprinkled with water during rolling, tamping and blading when and if directed by the Contractor to aid in compacting or to reduce dust nuisance or both. If material is excessively moist, aerate with suitable equipment until moisture content is corrected.

3.5 Finish Tolerances

.1 After the required thickness has been attained; the finished surface shall be shaped and compacted by additional rolling as necessary to produce the required contour of the surface. The tolerance in cross sections or longitudinal profile shall not be more than plus or minus 10mm.

.2 Correct surface irregularities by loosening and adding or removing material until surface is within specified tolerance.

3.6 Proof Rolling

.1 Proof roll top of base upon completion of fine grading and compaction.

.2 Make sufficient passes with proof roller to subject every point on surface to three separate passes.

.3 Where proof rolling reveals areas of defective subgrade, at no extra cost:

.1 Remove base, Sub-base and subgrade material to depth and extent directed by the Consultant.

.2 Place geogrid or backfill excavated subgrade with material as directed by the Consultant and compact in accordance with this

section.

.3 Replace sub-base material and compact in accordance with this section.

.4 Replace base material and compact in accordance with this section.

3.7 Maintenance

.1 Maintain finished base in condition conforming to this section until succeeding material is applied or until Substantial Performance of the work.

END OF SECTION - 02233