SECTION 32 10 00
BASE FOR PAVEMENTS

PART 1 - GENERAL

1.01 DESCRIPTION

A. This section specifies providing base for pavements as shown, complete in place on previously constructed subgrades.

B. Related Work Specified Elsewhere:
   1. Grading, excavating and backfilling: Section 31 23 00
   2. Concrete pavement: Section 32 13 00.

1.02 QUALITY ASSURANCE:

A. Codes, Regulations, Reference Standards and Specifications:
   1. Comply with codes and regulations of the jurisdictional authorities.
   2. AASHTO: M147, T180, T191.

B. Source Quality Control:
   1. Not less than 10 days prior to the beginning of work, inform the Engineer of proposed source of supply of materials, for testing by the Engineer.
   2. Once approved, do not change source of supply.
   3. Do not construe approval as approval of the entire location but as approval only insofar as material continues to conform to specified requirements.
   4. Cooperate with the Engineer so that the Engineer may take samples and make tests as often as he deems necessary.
   5. The Engineer has the right to reject material at the job site by visual inspection, pending sampling and testing.

C. The Contractor shall use the services of an Independent Testing Laboratory, that is accredited by a recognized accreditation agency, to perform all laboratory and field testing.

1.03 SUBMITTALS:

A. Certification:
   1. Submit certified test reports for proposed materials from tests performed by an approved independent testing agency for all tests to demonstrate compliance with specified requirements.

PART 2 - PRODUCTS

2.01 MATERIALS:

1. Aggregate Base Material, General: AASHTO M147, Materials for Aggregate and Soil-Aggregate Base and Surface Courses, as amended in this section.
2. Use material which is free from frozen material.

3. Grading requirement

	Sieve Designation	Percentage By Weight Passing Square Mesh Sieves
	2 inches	100
	1 inch	70 - 100
	3/4 inch	60 - 95
	No. 4	40 - 75
	No. 10	25 - 65
	No. 40	10 - 45
	No. 200*	2 - 15

* Fraction passing the No. 200 sieve to be not greater than 2/3 of the fraction passing the No. 40 sieve.

PART 3 - EXECUTION

3.01 EQUIPMENT:

A. Place material using equipment designed for the purpose. Use equipment of size and weight necessary to shape material as shown and to compact material to specified minimum density.

B. Provide sufficient equipment to achieve specified compaction at rate consistent with rate of placement of base material.

C. Obtain approval of equipment prior to use on the work.

D. Maintain equipment in first class operating condition while in operation.

E. At the Engineers discretion, the Engineer may permit the use of graders for touching up and for working materials into areas not amenable to placing by other equipment, providing there is continuing conformance to the requirements.

F. Use approved mechanical tampers to compact material to the required density in areas that are not accessible to rollers.

3.02 PLACING MATERIAL:

A. Subgrade Preparation: In accordance with Section 31 23 00

B. Prior to placing the material, check the subgrade, make necessary repairs, and secure the Engineer's approval of the subgrade. Do not place on frozen subgrade. Do not dump the material directly on the subgrade.

C. Place material in its final location so as to provide uniformity of grading throughout work.

D. Use graders for touching up and for working materials into areas which do not permit use of other equipment providing there is continuing conformance to specified requirements and providing approval is obtained.

E. Place material in uniform layers so that each layer has compacted lift thickness of six inches maximum and three inches minimum.

F. Where thickness is shown or specified is more than six inches, place material in two or more layers of equal thickness so that specified requirements are met.

3.03 COMPACTION:

A. During placing and compacting, obtain moisture content and dry density within the allowable tolerances specified.

B. Compact each layer to required density before placing next layer.

C. Compact areas not accessible to rollers to required density by means of approved mechanical tampers.

D. Puddling or jetting is prohibited.

E. Density:
   1. Compact material under curbs and gutters, gutters, curbs and pavement to 100 percent of maximum density at proper moisture content.
   2. Compact material under sidewalks to 95 percent of maximum density at proper moisture content.

3.04 FIELD QUALITY CONTROL:

A. Allowable Tolerances:
   1. Construct base to the following tolerances:
      a. Thickness of base: Plus zero or minus 3/8 inch.
      b. Surface of base:
         1) Plus 1/8 inch or minus 3/8 inch of elevation shown.
         2) Deviation not more than 3/8 inch from steel straightedge as specified in Section 32 13 00.
   2. Maintain moisture content within one percent of optimum moisture content.

B. Tests:
   1. Determine maximum dry density and optimum moisture content in accordance with ASTM D1557.
   2. Determine in place density and moisture content in accordance with ASTM D2922 and ASTM D3017 respectfully, or other test methods acceptable to the Engineer.

3.05 MAINTENANCE:

A. Throughout placing and compacting, and until the placing of the succeeding pavement course, maintain base for pavement in specified condition.

3.07 DEFICIENT BASES:

A. Where directed, repair or remove and replace, with new material, pavement base that does not meet requirements.

END OF SECTION