

**SECTION 7  
AGGREGATE SUBBASE**

**7-1 GENERAL** - Aggregate subbase shall be Class 2 mineral aggregate as specified herein.

**7-2 MATERIALS** - Mineral aggregate for the aggregate subbase, at the time it is deposited, shall conform to the following requirements:

**7-2.1 Quality** - - Aggregate furnished for the subbase shall be hard, sound, durable aggregate of uniform quality free from vegetable matter and other deleterious substances. It shall be of such nature that it can be compacted readily under watering and rolling to form a firm stable subbase. Aggregate may be delivered with water added. It shall have a minimum R-Value of 60 and minimum Sand Equivalent (per CA Test 217) of 18.

**7-2.2 Gradation** - The percentage composition by weight of aggregate subbase shall conform to the following grading when determined by Test Method No. CA 202.

Sieve Size	Percent Passing
3" (75mm)	100
2-1/2" (63mm)	90-100
#4 (4.75mm)	40-90
#200 (75µm)	0-25

**7-2.3 Recycled Aggregate Subbase** - Existing uncontaminated asphalt concrete and aggregate base to be removed, may be recycled as aggregate subbase. Such recycled materials shall conform to the gradation requirements as specified in Section 7-2.2 "Gradation" above.

Recycled materials shall be mixed to a uniform gradation prior to spreading and compaction.

**7-3 SPREADING** - Aggregates for subbase shall be delivered to the roadbed as uniform mixtures and shall be deposited in layer or windrow. Segregation shall be avoided and the material shall be free from pockets of coarse or fine material. The layers or windrows shall be shaped to such thickness that after watering and compacting the completed subbase will conform to the grade and cross section as required.

**7-4 COMPACTING** - Where the required thickness is 0.5 foot or less, the aggregate subbase may be spread and compacted in one layer. Where the required thickness is more than 0.5 foot, the subbase or base aggregate shall be spread and compacted in two or more layers of approximately equal thickness. The maximum compacted thickness of any one layer shall not exceed 0.5 foot. Each layer shall be spread and compacted in a similar manner.

At locations where the aggregate subbase is to be placed over areas inaccessible to the spreading equipment, the aggregate subbase or base may be spread and compacted by any approved means to obtain the specified results.

The relative compaction of each layer of compacted aggregate subbase shall not be less than 95 percent as determined by CA Test Method No. 216 and No. 231 applicable at the time of Work.

**7-5 TOLERANCE** - The finished surface of the aggregate subbase shall not vary more than one-half inch from the specified grade and cross section. Variations within the above-specified tolerances shall be compensating so that the average grade and cross sections specified are met.

Subbase, which does not conform to the requirements herein, shall be reworked, watered and thoroughly re-compacted to conform to the specified requirements.

**7-6 TESTS** - The aggregate subbase shall conform to the following tests:

Characteristic	CA Test Method	Minimum Requirement
Resistance (R-Value)	301	60
Sand Equivalent	217	18

The R-Value requirements may be waived provided that the aggregate subbase conforms to the specified grading and has a Sand Equivalent (per CA Test 217) value of 25 or more.

**7-7 MEASUREMENT** - Measurement shall be by the cubic yard based on the theoretical volume obtained from the planned cross section on the Contract Plans. Volume shall be based on actual field measurement of the horizontal surface of the material placed. No allowance shall be made for aggregate subbase placed outside of the planned dimensions, unless ordered by the Engineer.

**7-8 PAYMENT** - The Contract unit price per cubic yard shall include all materials, tools, equipment, labor, compacting, water, preparation of recycled material, and incidentals necessary to perform and complete the work as shown on the Contract Plans and as directed by the Engineer, and no additional compensation shall be made therefor.