

**METHODS OF SAMPLING AND TESTING**  
**MT 224-04**  
**TERMS RELATING TO SUBGRADE, SOIL AGGREGATE**  
**AND FILL MATERIALS**

**1 Scope:**

1.1 These definitions cover terms used in descriptions and specifications of materials occurring as or employed in the construction of sub-grades, soil-aggregate base and surface courses and fills.

**2 Definitions of Rock and Soil:**

2.1 **Rock** - Natural solid mineral matter occurring in large masses of fragments.

2.2 **Soil** - Sediment or other unconsolidated accumulation of solid particles produced by the physical and chemical disintegration of rocks and which may or may not contain organic matter.

2.3 **Broken Rock** - Angular fragments of rock which will be retained on a 3-inch sieve.

2.4 **Boulders** - Rounded fragments of rock, which will be retained on a 3-inch sieve.

**3 Definitions of Soil- Aggregate and its Components:**

3.1 **Soil – Aggregate (Dense- Grade Aggregate)** - Natural or prepared mixtures consisting predominately of stone, gravel, or sand and containing silt-clay (minus No. 200 material).

3.2 **Stone** - Crushed or naturally angular particles or rock which will pass a 3- inch sieve and be retained on a No. 10 sieve.

3.2.1 **Coarse Stone** - Stone passing the 3-inch sieve and retaining on the 1-inch sieve.

3.2.2 **Medium Stone** - Stone passing the 1-inch sieve and retaining on the 3/8-inch sieve.

3.2.3 **Fine Stone** - Stone passing the 3/8-inch sieve and retaining on the No. 10 sieve.

3.3 **Gravel** - Rounded particles of rock, which will pass a 3-inch sieve and be retained on a No. 10 sieve.

3.3.1 **Coarse Gravel** - Gravel passing the 3-inch sieve and retaining on the 1 –inch sieve.

3.3.2 **Medium Gravel** - Gravel passing the 1-inch sieve and retaining on the 3/8-inch sieve.

3.3.3 **Fine Gravel** - Gravel passing the 3/8-inch sieve and retained on the No. 10 sieve.

3.4 **Sand** - Granular material resulting from the disintegration, grinding, or crushing of rock and which will pass the No. 10 sieve and be retained on the 200 sieve.

3.4.1 **Coarse Sand** - Sand passing the No. 10 sieve and retaining on the No. 40 sieve.

3.4.2 **Fine Sand** - Sand passing the No. 40 sieve and retaining on the No. 200 sieve.

**3 Definitions of Soil- Aggregate and its Components: (continued)**

**3.5 Silt-Clay (minus No. 200)** - Fine soil particles which will pass the No. 200 sieve.

**3.5.1 Silt Fraction** - Material passing the No. 200 sieve. and larger than .005 mm.

**3.5.2 Clay Fraction** - Materials smaller than .005 mm.

**3.6 Colloids** - Materials smaller than .001 mm.

**4 Definitions of Pavement Substructure Components:**

**4.1 Embankment Foundation** - The material on which an embankment is placed.

**4.2 Embankment (Fill)** - A raised structure of soil, soil-aggregate, or rock.

**4.3 Sub-grade** - The prepared and compacted soil immediately below the pavement system and extending to such depth as will affect the structural system.

**4.4 Sub-base** - The layer used in pavement system between the sub-grade and the base course.

**4.5 Base** - The layer used in a pavement system to reinforce and protect the sub-grade or sub-base.

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