

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.