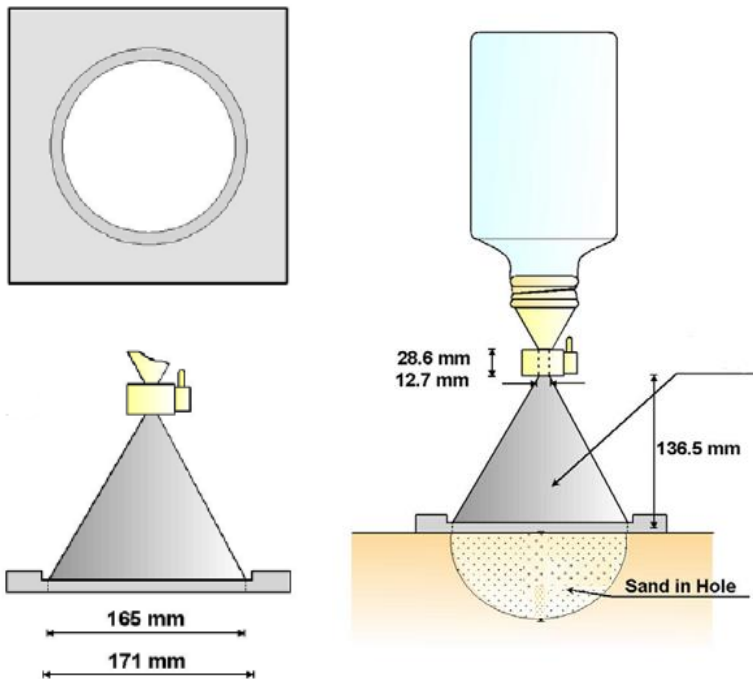


Sand Cone Apparatus



Field Test



The field density test is a field control test for the compaction soil or any other pavement layer. The Field Density test by the Sand Cone Method was carried out in accordance with ASTM D1556-00 "Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method.

Field density apparatus, clean sand, field density plate, container and balance works are used to conduct this test. A dry clean sand of uniform gradation which density has been calibrated in the lab shall be used. The field density apparatus consists of one-gallon plastic container with detachable metal cone with valve.

Approximately 60 cm² of area of the soil to be tested shall be trimmed to level surface, approximately to the size of container. Then the metal try shall be placed on surface and excavation shall be carried out to the volume equal to that of container. Following that, the calibrated sand shall be poured in the hole from the cylinder until the hole is concentrically covered. The remaining weight of sand shall be measured from the container. From the known unit weight and remaining weight of sand in container the volume of the hole is calculated. Thus, the insitu field density is calculated dividing the weight of the soil excavated (W_s) to the volume of hole (V_H)

This method is rapid, fast, easy and reliable to determine the field density of the soil. Compared to laboratory determination of density the field density tends to provide more practical results.