

A large background image showing a red excavator arm and bucket digging into a pile of brown soil. The excavator arm is in the upper left, and the bucket is in the lower right, partially filled with soil. The soil is uneven and rocky.

Excavation of Soil

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What is Excavation?



1. Excavation is the removal of earth/rock/soil from the ground to prepare foundations for the building.
2. It ensures the solidity of the building or structure to be built.
3. Depending on the depth and hardness of the soil, excavation is carried out.

Why is Excavation Required?

1. It is required to remove wide and shallow layers of the soil/rock and other unwanted materials.
2. It provides hard strata to transfer the load from the superstructure to the substructure and then to the ground.



How is Excavation Done?



1. Manual Means

- Spade
- Shovel
- Digging Fork

2. Mechanical Means

- Hard Disintegrated Rock and Fractured & Fissured Rock – Blasting
- Soil and Soft Disintegrated Rock – Backhoe loader and Poclain

Measurement

1. As per the norms of CPWD 1200, the mode of measurement is Cubic Meters, volume of the soil removed
2. $\text{Volume} = (\text{Length of PCC} + \text{Working Space}) \times (\text{Width of PCC} + \text{Working Space}) \times (\text{Height of PCC} + \text{Height of Footing} + \text{Height of Column})$



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