

Lecture 35

Detailed Estimate for Community Well

Estimation & Costing

Agenda

- 1. Components of a Well
- 2. Earthwork and Sinking
- 3. Brick Steining
- 4. Platform and Parapet
- 5. Summary

Components of a Community Well

A traditional open community well consists of several key structural parts:

- **Well Curb:** An RCC or timber ring with a cutting edge at the bottom.
- **Steining:** The cylindrical brick or stone masonry wall forming the body of the well.
- **Parapet Wall:** Masonry built above ground level for safety.
- **Platform:** Concrete or paved area around the well for users and drainage.

Earthwork and Sinking

Estimation for well excavation is unique because it involves **sinking**.

Sinking Process

The curb is laid at a shallow excavated depth. Steining is built over it. Earth is excavated from inside the curb, causing the entire structure to sink under its own weight.

Measurement: Excavation (sinking) is paid per cubic meter, but rates increase for different depth slabs (e.g., 0-3m, 3-6m) and for different strata (dry soil, wet soil, rock).

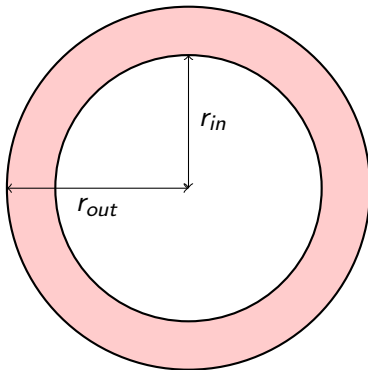
Summary

Community wells involve specific structural elements like the curb and steining.

Excavation is specialized (sinking) and rates vary by depth and soil type.

Next: Use of computers in estimation.

Brick Steining Calculation



Plan View of Steining

Volume of Steining:

$$V = \pi(r_{out}^2 - r_{in}^2) \times \text{Height}$$