

5. SCAFFOLD

✓ Definition:

It is a temporary elevated working platform to support men or material or both.

✓ Components of scaffold:

1. Top rail/main guard rail
2. Mid rail/intermediate handrail.
3. Kick board/toe board.
4. Platform.
5. Transom.
6. Standards/poles/posts.
7. Horizontal/ledgers.
8. Bracing.
9. Couplers.
10. Scafftag.
11. Cross bar/kickers lift.
12. Base plate/wheel brake.
13. Mudsill/sole board/sill board.
14. Ladder.



Guard rail system:

- It must be installed along the open sided edge.
- It consists of top rail, mid rail and toe board.
- The maximum distance between vertical poles of guard rail system should not exceed 8 feet.

1. Top rail:

- It must be 38-45 (950mm) inches above the walking or working surfaces.
- It's with stand capacity is 200 pounds of force.

2. Mid rail:

- It must be half of the top rail or 21 inches high (470mm).
- It's with stand capacity is 150 pounds of force.

3. Kick board:

- Toe boards are usually scaffold planks laid on their edge at right angles (90°) to the working platform.
- It must be 3.5 inches or 150mm.
- Toe boards prevent small objects, such as rubble and tools, from falling to the lower level.
- **Mesh system or Brick guard** used to prevents material from falling to the lower level when the materials are above the toe board level. Brick guards

prevent a more substantial amount of material from falling and have a secondary function of helping prevent people from falling as well.

Platform:

- The minimum width of platform is 18 inches.
- It is made up of grade wood planks.
- The maximum gap allowed in between the planks is 1 inch.
- The maximum over hang or extended platform distance is 6 inches.
- The maximum over lapping platform distance is 12 inches.

Base plate:

- It is in square shape.
- It distributes the load equally to all corners.

Standard:

- These are the vertical tubes will be used for supporting.
- It transfers the load to the ground or to a base plate.
- Standards are sometimes called uprights because they stand upright.

Ledger:

- These are the horizontal tubes tying the scaffold structure longitudinally, usually running parallel to the face of the building.
- They may also act as guard rails.

Transom:

- The tubes spanning across ledgers to tie a scaffold transversely, positioned at right angles (90°) to the face of the building.
- They may also be used to support a working platform.

Mudsill or sole board:

- It provides more stable or rigid surface or a firm to the scaffold structure.
- Usually hard wood sheets or metal sheets are used for mudsill.
- These are larger than base plate.
- Where there is a risk of sinking into soft ground, sole boards may be laid.

Screw jock:

- It is used to fix the standards.

Bracing:

- It prevents the side collapse of scaffold.
- It can be installed diagonal or zigzag style.
- It provides more stability to scaffold.

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