

Scaffolding

Toolbox Talks

Discuss with crews on _____

Although scaffolding can provide an efficient and safe means of performing work, many incidents happen because scaffolds are improperly used or installed. Falls from improperly constructed or used scaffolds can result in injuries ranging from sprains to death.

Scaffolding consists of a temporary elevated platform that is used to support materials and employees while they work at heights. In most cases, scaffolding can be equipped with guardrails at any edge that exposes an employee to heights.

Different types of scaffolds are:

Wood Scaffolds - A supported scaffold consisting of a platform supported by brackets attached to a building or structural walls.



Metal Scaffolds -

Horse Scaffolds - A supported scaffold consisting of a platform supported by construction horses (sawhorses). Horse scaffolds made of metal are also called trestle scaffolds.



Ladder Jack Scaffolds - A supported scaffold consisting of a platform resting on brackets attached to ladders.

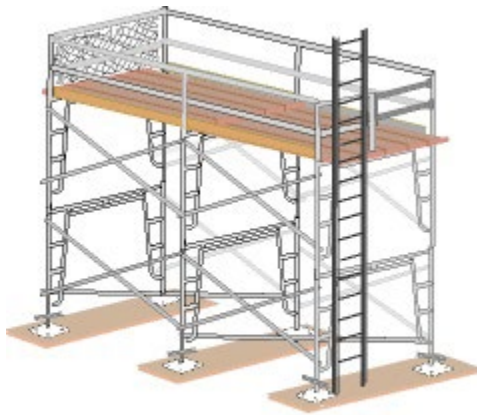


Pump-jack Scaffolds - A supported scaffold consisting of a platform supported by vertical poles and movable support brackets.

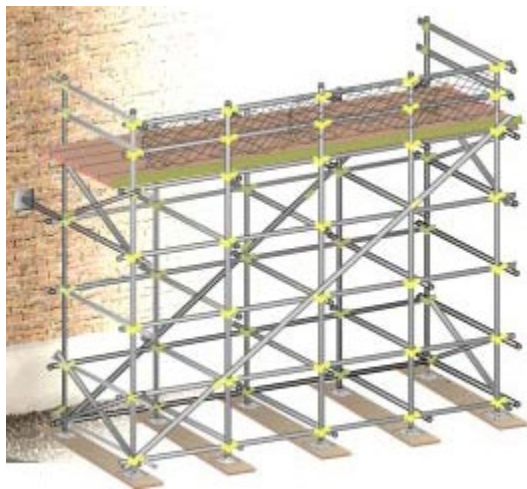


Mobile Rolling Scaffolds - A portable caster or wheel-mounted supported scaffold.

Frame Scaffolds - Popular and widely used scaffolds because of the simplicity of design, speed at which they can be erected, component availability, portability, and ease of use. They can range from light duty to extra heavy duty depending on the size and spacing of the components.



Tube and Clamp Systems - Consist of various lengths of steel or aluminum tubing being connected with rigid clamps where vertical and horizontal members intersect, and swivel clamps where diagonal members are used.



Hazards associated with scaffolding are:

- Access
- Collapse
- Failure of guardrails, planks, and platforms
- Electrical
- Falls
- Falling objects/items
- Instability

Proper preplanning and appropriate controls help make sure the scaffold is erected safely and used properly. This includes:

- Choosing the type of scaffold appropriate for the job.
- Determining the maximum load of the scaffold.
- Assuring a good foundation.
- Avoiding electrical hazards.
- Inspecting all components of a metal scaffold or wood scaffold for defects.
- If using a manufactured scaffold, it is erected, used, maintained, and dismantled in accordance with the manufacturer's specifications.
- If over 3 m in height, or a mobile rolling scaffold, installing guardrail systems along all open sides and ends of platforms.
- Providing safe access to scaffold platforms.
- If using a metal scaffold, access must be provided from ground level. If less than 6 m in height, providing a continuous access ladder or stairway. If 6 m or more in height, providing a continuous access stairway.
- Making sure no one climbs cross-bracing as a means of access.

It is important to know how to identify defects in planks. Common defects of scaffold planks are:

- Checks - Lengthwise crack or separation occurring across annual rings. No such splits or cracks are permitted within three inches from the edge of the plank, and planks with splits wider than 10 mm (3/8") must be removed from use.
- Shakes - Lengthwise separations along the grain, the greater part of which occurs between the annual rings.
- Wane - The bark or lack of wood on the face of a plank.
- Knots: Must be sound, tight, and well-spaced. The maximum allowable size for the wide face of a 2" x 10" plank is 50 mm or 1 7/8". For 2" x 12" planks the maximum is 60 mm or 2 3/8". On the edges there should be no knots larger than 10 mm or 3/8" in the middle third of the plank. Planks with spike knots should be rejected. [Source: Legislative Interpretation: Scaffold planks]

As an employer, you must:

- Ensure that a scaffold:
 - Can sustain a minimum uniformly distributed load of 1.4kPa.
 - Can support at least four times the load that may be used on it.
 - That is over 3 m, has a guardrail that meets the requirements of Section 97, or if a mobile rolling scaffold, has guardrails regardless of the height.
 - Has lockable wheels if it is a mobile rolling scaffold.
 - Is erected plumb and level.
 - Has vertical supports resting on a firm foundation or sills.
 - Is secured to prevent lateral movement.
 - Has a platform that is at least 500mm wide. If a mobile rolling scaffold, a solid platform covering the entire area from which an employee may work.
- Ensure that when a guardrail is removed adequate precautions are taken to ensure employee safety and that the area is not left unguarded until the guardrail is reinstalled.
- Ensure spacing of vertical supports and bearers are at intervals not exceeding 3 m for light work and 2.1 m for heavy work (bricklaying, masonry, etc.).
- Ensure that a wood plank in a scaffold is at least 50 mm thick by 250 mm wide, has a span not longer than 3 m, extends at least 150 mm, is laid flat with an overlap of 300 mm and is secured.
- Provide safe means of access to all working levels of scaffold.
- Ensure that employees who work below a scaffold are protected from falling objects by overhead protection or by other means such as tying off tools.
- Prohibit the use of ladders to gain greater heights on scaffolds.
- Ensure that materials, snow, ice, etc. that could cause trips and falls are removed.
- Review the sections of legislation pertinent to the type of scaffolding used and ensure compliance.

As an employee, you must:

- Be trained to inspect, erect, and dismantle scaffolding, identify the associated hazards and understand the procedures to control or minimize those hazards.
- Keep only materials for current use on the scaffold.
- Not move the scaffold with employees or unsecured items on the scaffold.
- Only remove the diagonal supporting brace at the working level to access that level, and only then if other precautions are taken to ensure the scaffold's strength. Ensure the brace is replaced when the work is completed.
- Tie off tools or equipment and handle materials safely to protect the safety of employees below.

- Only use the scaffolding when it is safe (guardrails installed, properly secured, cross-braces installed, safe access and egress, sitting on safe footings, etc.).
- Use scaffolds only when at a safe distance from electrical wires.
- Not work on a scaffold when there are high winds.