



1926 Construction Subpart L - Scaffolds

Scaffolds



source: [www.elcosh.org/NIOSH/John Rekus](http://www.elcosh.org/NIOSH/John_Rekus)

Scaffolds

Objectives

By the end of the session, students will be able to:

- Describe the role of a competent person related to scaffolding
- Identify the types of scaffolds commonly used on construction sites
- Describe hazards associated with scaffolds
- Discuss methods to prevent hazards associated with scaffolds
- Recognize employer requirements to protect workers from scaffold hazards.

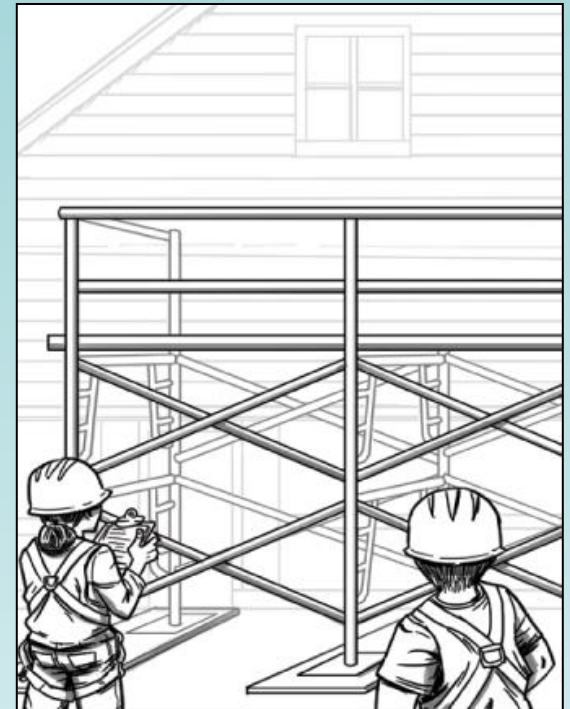


NIOSH/John Rekus/elcosh.org

Scaffolds

Competent Person

- Oversees assembly, disassembly, inspection, and safe use of scaffolds
- Trains all employees who erect, disassemble, move, operate, repair, maintain, inspect, or work on scaffolds



Source: OSHA

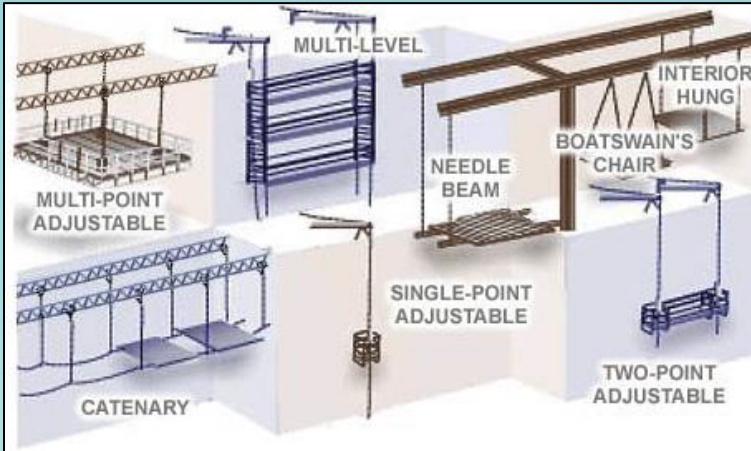
Competent Person

Process for designating an employee as the competent person:

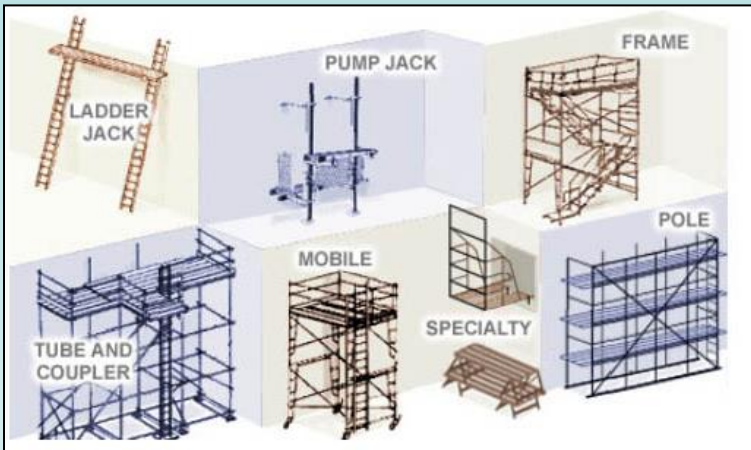
- Employer appointed
- Capability to identify hazards
- Executes qualified person design
- Authority to take prompt corrective action

Scaffolds

3 Basic Types of Scaffolds



Suspended



Supported

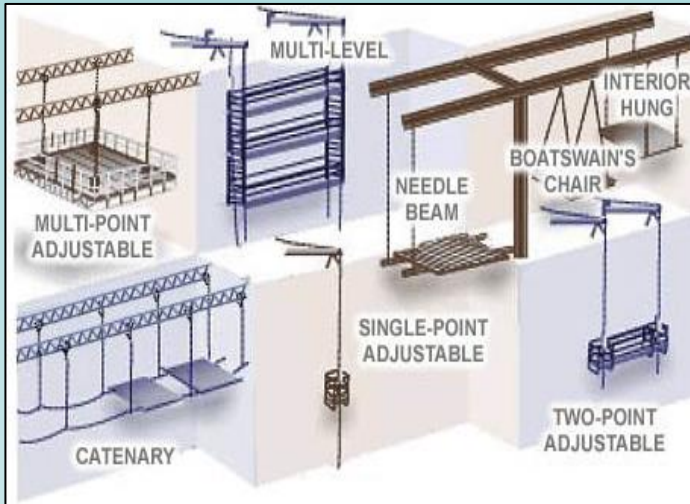


Aerial lifts

Scaffolds

How Are Scaffolds Constructed?

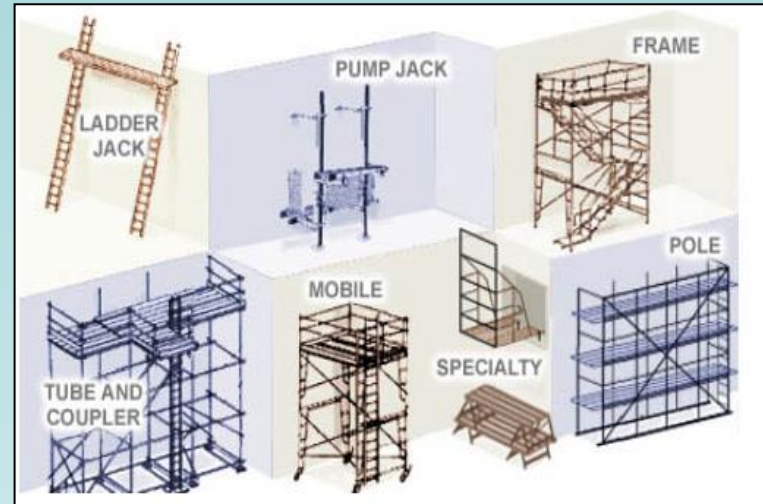
Suspended



Supporting cables

Platform of some kind

Supported



Base Plate

Posts or Uprights

Cross Bracing

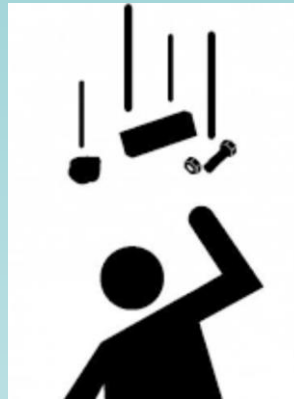
Platform or Planking

Guardrail system

Scaffolds

Hazards Associated with Scaffolds

- Falls
- Falling object(s)
- Electrical hazards
- Collapse hazards
- Planking hazards
- Weather conditions
- Collisions or struck-by



Source: OSHA

Scaffolds

Reducing and Eliminating Hazards

- Proper access
- Guardrails
- Personal Fall Arrest System (PFAS)
- Protection from falling objects
- Protection from electrical hazards
- Precautions for moving scaffolds
- Safe scaffold construction and disassembly

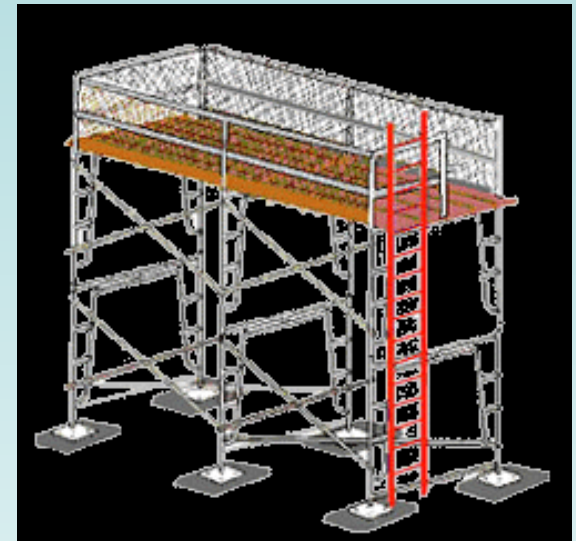
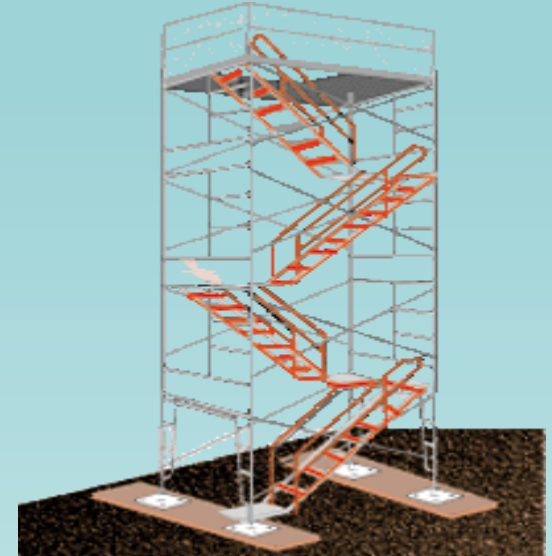


Source: OSHA

Scaffolds

Proper Access

- Required when platforms are more than two feet above or below a point of access
- Examples of permitted access
 - ladders, stair towers, ramps, walkways
- Do not use crossbraces or unapproved ladder-like ends for access



Source: OSHA

Scaffolds

Guardrails

- Must be installed on open sides and ends of scaffolds
- If front edge (working edge) is more than 14 inches from work, guardrail and/or PFAS system must be used



Source: OSHA

Scaffolds

Guardrails

- Toprails
 - Supported scaffolds manufactured or placed in service after 1/1/2000 must be 38-45" above platform
- Midrails
 - Halfway between top rail and scaffold platform
- Crossbracing, when used as a top rail or mid rail, must meet certain height requirements

Scaffolds

Personal Fall Arrest System (PFAS)

- Components
- Selection of fall protection
- Engineering or qualified person design
- When to inspect
- Free-fall limit



Source: OSHA

Scaffolds

Platforms

- Each platform must be fully planked or decked between the front uprights and the guardrail supports
- Planks must only be scaffold grade lumber and overlap at supports
- Decks should be in good condition and should be inspected



Scaffolds

Protection From Falling Objects

- Protection must be provided when there is potential of being struck by falling objects
- Methods of protection:
Barricades, toeboards, screens or paneling, canopy or mesh nets, placement of large, heavy objects
- Wear a hardhat when working around or below scaffolds



Scaffolds

Protection From Electrical Hazards

- Minimum distance based on voltage
 - Insulated lines
 - Uninsulated lines
- When exceeding minimum distance as necessary to perform work, utility company must be notified to
 - De-energize or relocate line

OR

 - Install protective coverings to prevent contact



Scaffolds

Moving Scaffolds

Workers may only be on moving scaffold when:

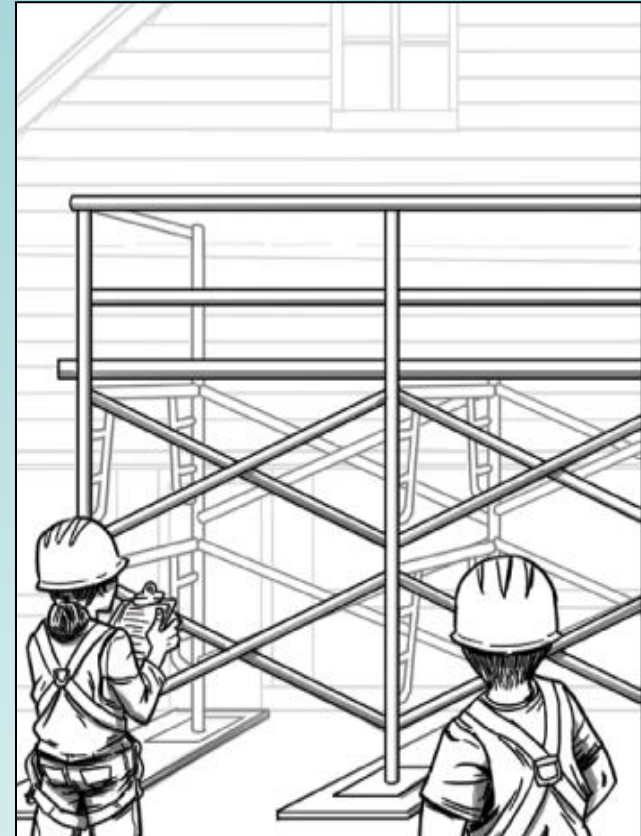
- Level ground surface
- Height to width ratio
- Outriggers installed on both sides
- Standing inside the wheel base
- Competent person onsite



Scaffolds

Safe Scaffold Construction and Disassembly

- Use appropriate scaffold construction methods
- Provide proper scaffold access
- Use a competent person
- Follow manufacturers' instructions



Source: OSHA

Scaffolds

Suspension Scaffolds

Requirements:

- Must solidly attach to the structure
- All parts in good repair
- Guardrails, toprails, midrails, and toeboards
- Platforms at least 20" wide, no wider than 36"
- Must be evaluated by a competent person
- Wire ropes must be inspected prior to a work shift by a competent person



Source: OSHA

Scaffolds

Employer Requirements

Employers must Comply with OSHA standards related to scaffolds for:

- Training
- Inspection
- Designating competent person
- Comply with manufacturers' requirements and recommendations
- Follow plans designed by qualified person

Scaffolds

Scaffold Hazard Recognition

Identify hazards and solutions

Hazards:

Fall hazards – ladder not secured at top; no guardrails, planks extend too far

Solutions:

Secure ladder at proper angle, use guardrails, use planks of proper length.



Scaffolds

Scaffold Hazard Recognition

Identify hazards
and solutions

Hazards:
Fall hazard – no guardrails

Solution:
Use guardrails



Scaffolds

Scaffold Hazard Recognition

Identify hazards
and solutions

Hazards:

Fall hazards:

- No ladder
- not fully planked
- planks extend too far.

Solutions:

- Platform needs to be fully planked
- planks should not extend more than 12" beyond the scaffold support.



Scaffolds

Scaffold Hazard Recognition

Identify hazards and solutions

Hazards:

- Items may fall from scaffolding (no toeboard)
- no fall protection or proper guardrail.

Solutions:

- Use toeboard
- secure items to prevent from falling
- use fall protection/guardrail.



Scaffolds

Scaffold Hazard Recognition

Identify hazards and solutions

Hazards:

- Ladder is not used for intended purpose (A-Frame ladder)
- Improper planking
- Questionable scaffold assembly.

Solutions:

- Use ladder properly and for its intended purpose
- Use properly assembled scaffold with proper planking.



Scaffolds

Always Remember

Employers must:

- Designate a competent person for scaffold
- Ensure that employees are trained in proper assembly, disassembly, and use of scaffolds
- Train employees to recognize scaffold hazards
- Utilize strategies to prevent and reduce scaffold hazards



Scaffolds

Knowledge Check

1. Who trains employees that work on scaffolds?
 - a. Employees do not need training
 - b. Employees are responsible for their own training
 - c. Fellow employees who have experience
 - d. Employer-designated competent person
- d. Employer-designated competent person**

Scaffolds

Knowledge Check

2. Scaffolds must be designed by a ____.
- a. Competent person
 - b. Construction site manager
 - c. Qualified person
 - d. Experienced scaffold worker

c. Qualified person

Scaffolds

Knowledge Check

3. Which of the following is NOT an example of proper access?
- a. Ladders
 - b. Crossbraces
 - c. Stair towers
 - d. Walkways

b. Crossbraces

Scaffolds

Through the Alliance between OSHA's 10 Regional Offices and the Elevator Contractors of America (ECA), Elevator Industry Work Preservation Fund (EIWPF), International Union of Elevator Constructors (IUEC), National Association of Elevator Contractors (NAEC), National Elevator Industry Educational Program (NEIEP), and National Elevator Industry Inc. (NEII), collectively known as The Elevator Industry Safety Partners, developed this Scaffold Industry Specific Training for informational purposes only. It does not necessarily reflect the official views of OSHA or the U.S. Department of Labor. May 2021

Under the Occupational Safety and Health Act, employers are responsible (<http://www.osha.gov/as/opa/worker/employer-responsibility.html>) for providing a safe and healthy workplace and workers have rights (<https://www.osha.gov/workers>). OSHA can help answer questions or concerns from employers and workers. OSHA's On-Site Consultation Program (<https://www.osha.gov/consultation>) offers free and confidential advice to small and medium-sized businesses, with priority given to high-hazard worksites. For more information, contact your regional or area OSHA office (<https://www.osha.gov/contactus/bystate>), call 1-800-321-OSHA (6742), or visit <https://www.osha.gov/>.

Scaffolds

