



HBACA Builder Safety Committee

Scaffold Safety Initiative

August 2023

Initiative & Stand Down Kit

The HBACA is excited to announce that August is Scaffolding Safety Awareness Month. All builders and trade partners are asked to join us in our Valley wide Safety Stand Down the week of August 14, 2023. In addition, feel free to break out the training topics throughout the month.

Distribution Network

HBACA members field employees and at the discretion of each builder and their trade partners. Builders are encouraged to distribute these accordingly and organize brief safety meetings/discussion sessions throughout their communities.

Elements of the Kit:

Tool Box Talk #1 – **Scaffolding Training**

Tool Box Talk #2 – **Scaffold Top 10**

Tool Box Talk #3 – **OSHA Tube and Coupler Scaffolds**



Learn more at www.hbaca.org

Scaffolding Training

Insure Compliance

Scaffold Definition

Means any temporary elevated platform (supported or suspended) and its supporting structure (including points of anchorage), used for supporting employees or materials or both.

Competent person

- ▶ Knowledgeable and authorized to determine needs of scaffolding work.
- ▶ Inspect scaffolding and components prior to each work shift
- ▶ Determine feasibility of providing fall protection and access
- ▶ Evaluate connections to support load and prevent swaying
- ▶ Determine structural soundness when intermixing components manufacturer
- ▶ Train erectors and dismantlers to recognize work hazards



Capacity of Scaffolds

- ▶ **Non-Adjustable**
 - ▶ Support its own weight and 4 x maximum intended load
 - ▶ Suspension rope and connecting hardware support 6 x maximum intended load
 - ▶ **Adjustable**
 - ▶ Stall load of scaffold hoist not to exceed 3 x rated load
 - ▶ Designed by a qualified person and built to loaded design
- ▶ 1926.451(a)



Platform construction

- ▶ Fully planked and decked
 - ▶ No more than 1" gap between adjacent units and platform and uprights
 - ▶ Max openings between platform and uprights 9 -1/2"
 - ▶ Platform and walkways at least 18" wide



Platform Construction

- ▶ Fully planked and decked
 - ▶ Ladder jack, top plate bracket, roof bracket, and pump jack scaffold at least 12" wide
 - ▶ Guardrails and/or personal fall arrest systems for platforms and runways not 18' wide



Platform Construction

- ▶ No paint on wood platforms, except edges that may be marked for identification
- ▶ Fully planked between from upright and guardrail
- ▶ No mixed components, unless compatible and integrity maintained
- ▶ No modification of mixed components unless approved by competent person
- ▶ No components or dissimilar metals unless competent person determines galvanic action will not reduce strength



Supported scaffolds

- ▶ Restrained from tipping by guys, ties, or equivalent when higher than 4:1 ratio
- ▶ Support installed per recommendations or at closest horizontal member to the 4:1 height



Supported scaffolds

- ▶ Never use scaffolds that do not have proper guardrails installed



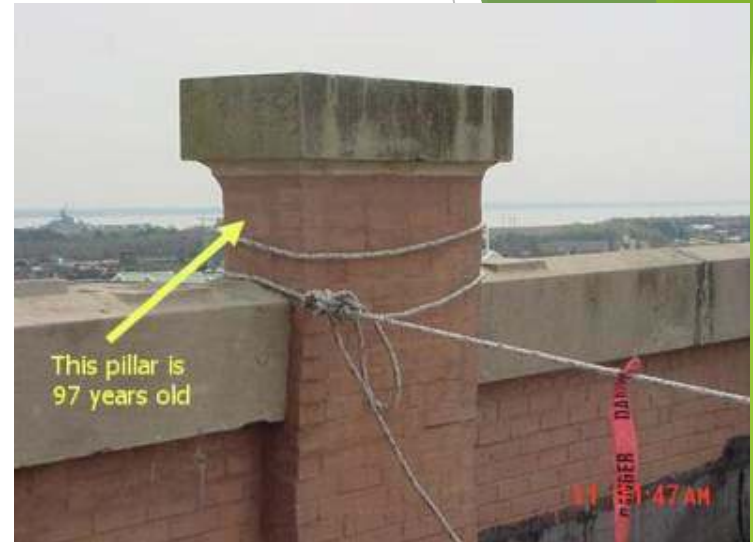
Supported scaffolds

- ▶ Must bear on adequate foundations
- ▶ Unstable objects will not be used as working platforms
- ▶ Plumbed and braced



Suspension scaffolds

- ▶ Support devices must support 4 x imposed load
- ▶ Outrigger beams, metal or equivalent material, and restrained
- ▶ Outrigger beams stabilized to floor or roof deck
- ▶ Direct connection evaluated by competent person
- ▶ 1926.451(b)



Anchor point for lifeline rope not evaluated prior to use

Access

- ▶ Must have safe access
- ▶ Cross-braces prohibited as means of access
- ▶ Bottom rung no more than 24' high
- ▶ Rest platforms required at 35' intervals
- ▶ Slip-resistant treads on all steps and landings
- ▶ September 2, 1997, sets access for erectors and dismantlers
- ▶ Can use end frames for access
- ▶ 1926.451(e)



Access

- ▶ Hook-on attachable ladders
 - ▶ Specifically designed for type of scaffold
 - ▶ Lowest rung no more than 24 inches above level on which scaffold is supported
 - ▶ Rest platforms at 35 foot intervals when more than 35 feet high
 - ▶ Minimum rung length $11 \frac{1}{2}$ inches, and a maximum space between rungs $16 \frac{3}{4}$ inches



Use

- ▶ Never overloaded
- ▶ Erected, moved, dismantled and altered near power lines
- ▶ Repair in place or replace damaged components
- ▶ Restrict horizontal movement with employees unless designed by registered P.E.
- ▶ Prohibit work activities during high winds unless authorized by C.P.
- ▶ Remove whole scaffold from service until repaired

- ▶ 1926.451(f)



Use

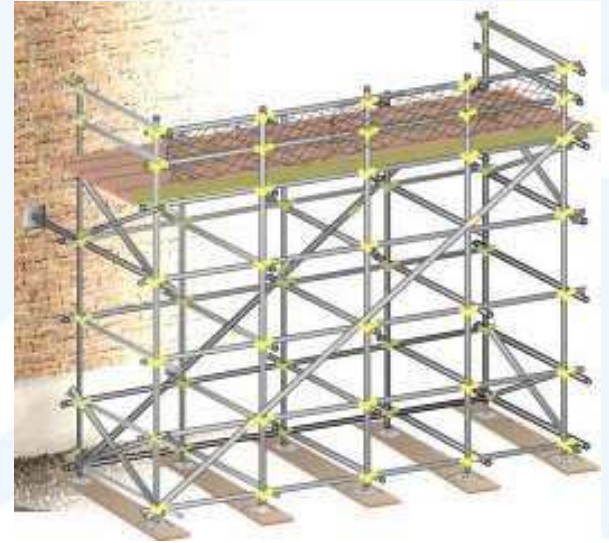
Proper clearance near overhead lines



Keep 10 foot minimum unless de-energized,
Relocated, or installed protective covering installed!

Tube and Coupler

- ▶ When platforms are being moved to the next level, the existing platform must be left undisturbed until the new bearers have been braced and set in place
- ▶ Couplers must be made of a structural metal
- ▶ Couplers made from gray cast iron is prohibited
- ▶ Designed by P.E. if over 125 feet

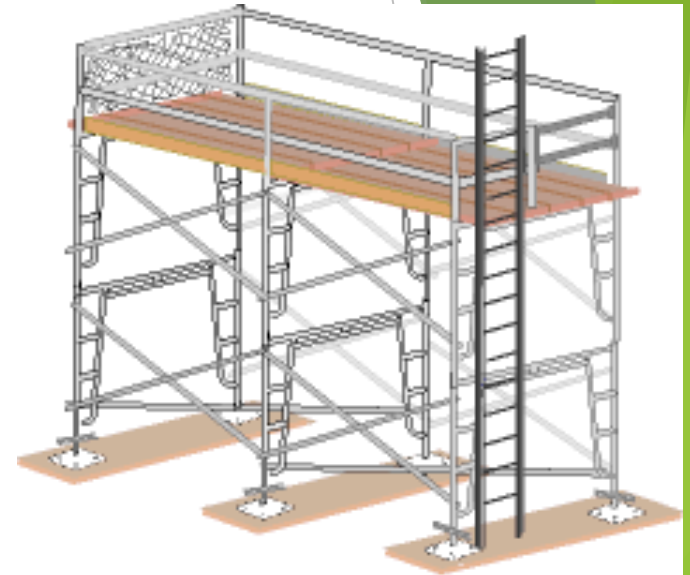


Tube and Coupler (cont'd)

- ▶ Transverse bracing forming an "X" across the width of the scaffold must be installed at the scaffold ends, and at least at:
 - ▶ Every third set of posts horizontally (measured from only one end)
 - ▶ Every fourth runner vertically
- ▶ Bracing must extend upward diagonally to opposite sides of the scaffold
- ▶ Where length is *greater* than their height, longitudinal bracing must be repeated beginning at least at every fifth post
- ▶ On outside posts, tube and coupler guardrails and midrails may be used in lieu of outside runners

Fabricated frame

- ▶ Existing platforms remain until the frames are set / braced
 - ▶ Joined with stack pin
- ▶ Must be designed by registered engineer when over 125 ft.



Mobile

- ▶ Plumb, level and squared
- ▶ Braced to prevent collapse
- ▶ Casters and wheels locked to prevent movement while in a stationary position
- ▶ Platforms must not extend beyond the base supports of the scaffold, unless stability is ensured



1926.454 Training

- ▶ Employees must receive training from qualified person that covers:
 - ▶ Nature of hazards, electrical, falls, and falling items
 - ▶ Use of scaffold / handling
 - ▶ Maximum intended load and load carrying capabilities of scaffold
 - ▶ Procedures for setup, dismantling or moving the system
 - ▶ Requirements of subpart “L”

Retraining

- ▶ When the employer has reason to believe an employee lacks the skill or understanding needed for safe work involving scaffolds, retraining shall be performed until proficiency is established
- ▶ Retraining is also required when:
 - ▶ Additional or new hazards exist
 - ▶ Changes occur in the type of scaffold and fall protection exist
 - ▶ Where there are inadequacies in an employee's work

Common OSHA Citations

- ▶ 451(g)(1) Fall protection at 10 feet
- ▶ 453(b)(2)(v) Aerial lifts - Body belt and lanyard
- ▶ 451(e)(1) Scaffold access
- ▶ 451(b)(1) Scaffold platform construction
- ▶ 454(a) Scaffold user training

Resources

- ▶ www.osha.gov
 - ▶ 29 CFR 1926.451
 - ▶ NSHA-OSHA Job Site Safety Handbook
- ▶ <http://www.osha.gov/publications/osh2202.html>
 - ▶ Construction Industry Digest
 - ▶ Scaffolding Industry Association
- ▶ <http://www.scaffold.org>
 - ▶ American National Standards Institute
 - ▶ A92 (SIA): Scaffolds and other elevating devices

Scaffold Top 10

1. Anyone working on scaffold must have been trained in Scaffold Hazards.
2. Scaffold must be inspected by a competent person prior to each work shift, or after any incident that could affect the integrity of the scaffold.
3. Mud sills (pads) must be used on all scaffold except when on concrete.
4. Ladders must be used to access any scaffold.
5. Fall protection (guard rails) must be used on any scaffold platform that is 6' off the ground.
6. All working levels must be fully planked.
7. Do not overload the scaffold. The scaffold tag should show the load rating of the scaffold. (25 psf-light duty, 50psf-medium duty or 75psf-heavy duty). **The designated Competent Person should be trained in this.**
8. The scaffold is no more than 14" away from the work surface unless it is used **Solely** by the **Plastering Contractor** when it is allowed to be up to 18".
9. Do not cross between the scaffold platform and the building unless an access point with handrails has been installed.
10. **Do not alter the scaffold for any reason.** If additional access is required, contact the **Scaffold Provider**.

Tube and Coupler Scaffolds — Erection and Use

Workers building scaffolds risk serious injury from falls and tip-overs, being struck by falling tools and other hazards, and electrocution from energized power lines. Before starting any scaffold project, the employer should conduct a hazard assessment to ensure the safety of workers.

A tube and coupler scaffold has a platform(s) supported by tubing, and is erected with coupling devices connecting uprights, braces, bearers, and runners (see Fig. 1). Due to their strength, these scaffolds are frequently used where heavy loads need to be carried, or where multiple platforms must reach several stories high. These scaffolds can be assembled in multiple directions, making them the preferred option for work surfaces with irregular dimensions and/or contours.

When Erecting a Scaffold

- Use footings that are level, sound, rigid and capable of supporting the load without settlement or displacement.
- Plumb and brace poles, legs, posts, frames, and uprights to prevent swaying and displacement.
- Position the first level of bracing as close to the base as possible.
- Plumb and level the scaffold as it is being erected.
- Fasten all couplers and/or connections securely before assembling the next level.
- Install guys, ties, and braces according to the manufacturer's recommendations.
- Do not intermix scaffold components from different manufacturers, unless you can do so while maintaining the scaffold's structural integrity.
- When platform units are abutted together to create a long platform, each abutted end must rest on a separate support surface.
- Once erected, provide toeboards on all railed sides to prevent falling object hazards.

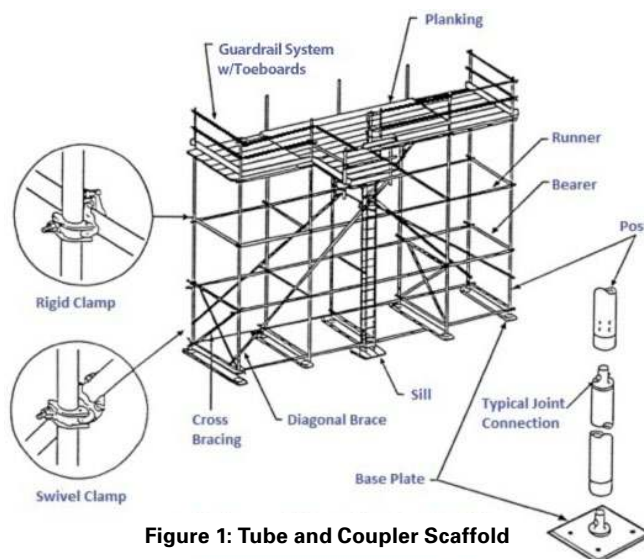


Figure 1: Tube and Coupler Scaffold

When Using a Scaffold

- Make sure that a competent person inspects the scaffold before each work shift.
- If during the inspection a defect or damage to the scaffold is discovered, the scaffold must be tagged out and not used until repairs are made. Attach tags at the access point to the scaffold.

One common tagging system uses the following tags:

Red tag indicates: unsafe, do not use.

Green tag indicates: ready to use.

- Use scaffolds according to the manufacturer's instructions.
- Never load a scaffold beyond its maximum intended load or rated capacity.
- Do not use makeshift methods to increase the working height of the scaffold platform, such as with ladders, buckets or blocks.

- Employees must not work on platforms covered with snow, ice, or other slippery material.
- The employer must provide suitable access to and between scaffolds, such as portable ladders, hook-on ladders, attachable ladders and stairway-type ladders.

When Dismantling a Scaffold

Check to ensure that the scaffold has not been structurally altered in a way which would make it unsafe. Before beginning dismantling procedures, reconstruct and/or stabilize the scaffold as necessary.

Training Workers

Only trained and authorized persons should be allowed to use a scaffold. This training must be provided by a qualified person who understands the hazards associated with the type of scaffold being used and who knows the procedures to control or minimize those hazards. Training must include how to safely:

- Use the scaffold, handle materials on the scaffold and determine the maximum load limits when handling materials.
- Recognize and avoid scaffolding hazards such as electric shock, falls from heights, and being hit by falling objects.
- Erect, maintain and disassemble fall and falling object protection systems.

Erectors and dismantlers of tube and coupler scaffolds are at particular risk because their work starts before ladders, guardrails and platforms are completely installed. These workers must also be trained to:

- Recognize scaffold hazards.
- Properly erect, move, operate, repair, inspect, maintain and disassemble the scaffold;
- Identify the maximum load-carrying capacity and intended use of the scaffold.

Employers should train workers on the following safety factors:

- The shape and structure of the building to be scaffolded.

- Distinctive site conditions and any special features of the building structure in relation to the scaffold (i.e., overhead electric power lines or storage tanks). Also consider the proximity and condition of surrounding buildings.
- Weather and environmental conditions.
- Fall protection requirements for workers using scaffolds, such as guardrail systems or personal fall arrest systems.
- The type and amount of scaffold equipment needed to access all areas to be worked on.
- Proper storage and transporting of scaffolding components, materials and equipment.
- How to access the scaffold, (i.e., via ladders, stair rail systems, etc.).

Workers building scaffolds risk serious injury from falls and tip-overs, being struck by falling tools and other hazards, and electrocution from energized power lines.

To avoid scaffold hazards, employers must:

- Ensure that a competent person supervises and directs workers erecting, moving, dismantling, or altering a scaffold.
- Provide a safe means of access for each worker erecting or dismantling the scaffold. As early as possible, install hook-on or attachable ladders.
- Ensure that workers do not climb diagonal braces to reach the scaffold platform.
- Provide fall protection for workers erecting or dismantling the scaffold.
- Secure scaffolds to the structure during erection and dismantling.

For more information on scaffolding, see OSHA's Safety and Health Topics page at www.osha.gov/SLTC/scaffolding.

Contact OSHA

For more information, to report an emergency, fatality or catastrophe, to order publications, to file a confidential complaint, or to request OSHA's free on-site consultation service, contact your nearest OSHA office, visit www.osha.gov, or call OSHA at 1-800-321-OSHA (6742), TTY 1-877-889-5627.

Worker Rights

Workers have the right to:

- Working conditions that do not pose a risk of serious harm.
- Receive information and training (in a language and vocabulary the worker understands) about workplace hazards, methods to prevent them, and the OSHA standards that apply to their workplace.
- Review records of work-related injuries and illnesses.
- File a complaint asking OSHA to inspect their workplace if they believe there is a serious hazard or that their employer is not following OSHA's rules. OSHA will keep all identities confidential.
- Exercise their rights under the law without retaliation, including reporting an injury or raising health and safety concerns with their employer or OSHA. If a worker has been retaliated against for using their rights, they must file a complaint with OSHA as soon as possible, but no later than 30 days.

For more information, see [OSHA's Workers page](#).

This is one in a series of informational fact sheets highlighting OSHA programs, policies or standards. It does not impose any new compliance requirements. For a comprehensive list of compliance requirements of OSHA standards or regulations, refer to Title 29 of the Code of Federal Regulations. This information will be made available to sensory-impaired individuals upon request. The voice phone is (202) 693-1999; teletypewriter (TTY) number: 1-877-889-5627.

For assistance, contact us. We can help. It's confidential.



www.osha.gov (800) 321-OSHA (6742)



U.S. Department of Labor