

Sizing up scaffold safety

Concrete repair is one of the fastest growing segments in the construction industry. Some experts believe this market will top \$21 billion annually in a few years. Concrete contractors are understandably drawn to this market because many of their core skills apply, making it a big opportunity. But there's one area of expertise they may not have.

Repair contractors frequently work in a vertical orientation or overhead on tasks that require using heavy tools from elevated surfaces. And many of the techniques used are multi-stepped. These projects are typically fast-tracked and involve a minimum of workers in remote settings. Often, in these types of job settings (like inspecting and repairing beams, columns and double tees in parking decks) the use of mobile scaffolds is essential.



Online scaffold user

hazard awareness training. Concrete and repair contractors can comply with the hazard training requirements for employees who are using scaffolds. The Scaffold & Access Industry Association has converted its popular Scaffold User Hazard Awareness Program to an online format. The training program is designed to help the scaffold user recognize the hazards associated with various types of scaffolding. It is approximately four hours long and incorporates a PowerPoint presentation and student interaction that encourages participation. This course is not designed for workers that do any type of scaffold erection and it has a three-year certification.

Register for the SAIA Hazard Awareness Program here:
[Saia Training and Education](#)

Mobile scaffolds are configured in many ways to match jobsite conditions. Designs can be tube and coupler, fabricated frame or modular and can be supported by casters or wheels. They can also be powered or unpowered. The most common type of mobile scaffold used is a single bay supported scaffold tower with casters.

It's important to understand that scaffolding of any kind draws greater attention from inspectors. In 2016, OSHA issued more than 3,200 citations for contractor violations of the scaffolding standard, [1926.451](#). It was the year's third most commonly assessed violation.

That means it's critical for contractors to develop operational plans that include access equipment to perform repairs safely when scaffolds are involved. But a solid [fall protection](#) program for mobile scaffolds involves more than just adding a few ladders to a worker's truck. It must conform to the same requirements that cover stationary scaffolds - with one big difference - repair contractors typically erect their own mobile scaffolds.

Whatever scaffold type is chosen, a competent person must conduct a thorough job safety analysis for tasks to be performed. And the focus should be on three key areas: (1) setting up the project workplace, (2) inspecting the mobile scaffold before work begins and (3) considering how employees will use it to perform tasks. When contractors need to develop these programs, contacting their White Cap Account Manager to get the lowdown on some available safety resources is a good place to start.

The perfect pre-work inspection

At the Site.

- Before rolling tower scaffolds get to the work site, walk the entire project area. Consider the effect any subcontractor work in the same area might have on your operations. Also, remove equipment and materials that might be a hazard to the crew.
- When performing repairs on active facilities, develop a parking plan that eliminates working around vehicles. Consider the effect work may have on parking decks directly above and below the work area. It may be best to hang work barriers to limit non-worker access and contain dust and debris.
- Check the overhead area and vertical surfaces for electrical and communication wires. Work with the building owner and general contractor to de-energize any wires.
- Note the working floor's condition. Rolling tower scaffolds must only be used on solid, flat, defect-free surfaces. The American Society of Concrete Contractors offers a checklist outlining common hazards found on work decks. If the crew must repair the concrete floor, use a fast-setting repair material to be sure the proper surface strength is achieved quickly.
- Protect the floor surface. White Cap offers many durable, surface-protecting products that protect surfaces from splatter and scratching that could hamper smooth scaffold movement.

Giving equipment the once-over

Whether the repair contractor owns or rents their mobile scaffold, the crew will need to thoroughly inspect it before use. Their inspection must find that all components are complete, functioning properly and correctly assembled. Some key inspection points are:

- Begin at the bottom. Wheels should spin freely and bearing races should turn freely and smoothly. Attach plain-stem casters to frames or adjustment screws by pins or other suitable means. Check casters and wheel stems for worn or damaged wheels and missing or damaged snap rings. Replace damaged casters and wheel stems.
- Inspect end frame access ladders and guardrail end frames for loose or missing caster bushings and stack pins. Replace bent parts. Replace damaged ladders and guard rails.
- Check trusses and guardrail sides. Be sure locking pins are straight and locks work. Replace bent parts.
- Pay very close attention to the planking used on the scaffolds. All engineered wood products used as scaffold plank should have the logo of an independent third-party agency embossed or stamped on the face or the edge of the plank. All solid-sawn lumber planks should have a grade stamp from a nationally accredited lumber grading agency. The grade stamp should indicate it's a scaffold plank grade. If the crew isn't sure of the flooring material's status, contact your White Cap Account Manager for assistance.
- Check platforms for loose or missing edge banding, holes or thin spots where plywood is worn. Replace worn or damaged boards. Don't use acids or other corrosive substances on platform boards.
- Don't mix manufacturer platforms, casters, trusses, end frame access ladders or other components.

Falls in Construction/Fixed Scaffolds

No Description

Using scaffolds safely

Here are some common safety suggestions that could be included in the worksite's Job Safety Analysis document.

- The scaffold must be erected with cross, horizontal, or diagonal braces, or a combination of these to prevent racking and provide a rigid structure.
- Before workers use the scaffold, a competent person must check and determine that the structure is plumb, level and squared with all brace connections securely fastened.
- Measure the top platform height from the rolling surface. Many safety regulations state that a rolling scaffold must not exceed four times the smallest base dimension. Some government agencies require a stricter ratio of 3:1. Your local White Cap Account Manager may be able to help you determine the requirements of your jurisdiction.
- Don't use brackets or other platform extensions without compensating for the overturning effect. Platforms must not extend outward beyond the base supports of the scaffold unless outrigger frames or equivalent devices are used to ensure stability.
- Check the scaffolds movement when unlocked. The manual force used to move the scaffold must be applied as close to the base as possible, but not more than 5 feet above the supporting surface.
- Make sure that no more than 12 inches of the screw jack extends between the bottom of the adjusting nut and the top of the caster.
- Wheels or casters must be locked to prevent caster rotation and scaffold movement when the

scaffold is in use. And remind workers to exercise caution when entering or leaving a work platform.

- Remind workers to not overreach and to keep their bodies within the boundaries of the guardrail and scaffold section. They must not use ladders, chairs, boxes or makeshift devices to increase the working height from the platform. And it is against regulations to stand on a guardrail or use any components of the guardrails to gain additional standing height.
- Keep the platform free from trip hazards. Do not allow loose objects and debris to accumulate on the platform.
- Don't overload. Follow the manufacturer's safe working load recommendations.
- Protect the work platform surface. This is a special concern when using pretreatment acidic cleaners and chipping tools.
- Never leave the scaffold unattended. If you do leave the scaffold unattended, re-inspect the scaffold prior to using it again.

Scaffold common citations

OSHA Fine	Scaffold
STANDARD NUMBER	29 CFR 1926.451(g)(1)(i)
DESCRIPTION	Each employee on a scaffold more than 10 feet (3.1 m) above a lower level shall be protected from falling to that lower level. Paragraphs (g)(1)(i) through (vii) of this section establish the types of fall protection to be provided to the employees on each type of scaffold. Paragraph (g)(2) of this section addresses fall protection for scaffold erectors and dismantlers.
STANDARD NUMBER	29 CFR 1926.451(g)(1)(i)
DESCRIPTION	Each employee on a boatswains' chair, catenary scaffold, float scaffold, needle beam scaffold, or ladder jack scaffold shall be protected by a personal fall arrest system;
STANDARD NUMBER	29 CFR 1926.451(g)(1)(vii)
DESCRIPTION	For all scaffolds not otherwise specified in paragraphs (g)(1)(i) through (g)(1)(vi) of this section, each employee shall be protected by the use of personal fall arrest systems or guardrail systems meeting the The Scaffold & Access Industry Association (SAIA) offers training for both supported and suspended scaffolding through the SAIA University. Additionally, User Hazard Awareness Training, Mast Climber Operator training, Aerial Work Platform (AWP) and Journeyperson Scaffold Program is included in the SAIAU curriculum. The course materials have been developed by experts within the association and scaffold industry.

Still Have Questions About Product Use or Training?

Call 800-944-8322 and we'll connect you with your local Safety Professional

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