Getting a grip on OSHA's scaffolding regulations

Follow this guide for a better understanding of the new requirements

By Jeff Ende

OSHA recently modified its regulations concerning scaffolding—29 CFR 1926 Subpart L. The standard was reorganized in order to be easier to follow, and several changes were made affecting capacity requirements, safe access, fall protection, and falling-object protection.

The masonry contractors interviewed for this article say that because they've always been committed to safety, they will not be impacted significantly by the new requirements. "They will make more of a difference to the company that hasn't been building scaffolds properly," says Jerry Painter of Painter Masonry Inc., Gainesville, Fla.

Dante Marcario of Genco Masonry, Bethesda, Md., agrees. "We have better safety habits than some of the jobs I've seen. I've observed guys standing on a board on concrete blocks—who are not tied off to the roof—when putting up a chimney. Those companies would be better off having OSHA watch them."

Dan SchifferofHolt,Mich.-based Schiffer Mason Contractors Inc. and others echo this philosophy. "We consider the OSHA regulations to be the bare minimum."

The information presented here is compiled from several sources. The standard itself, OSHA Instruction CPL 2-1.23, and the Summary and Explanation of the Final Rule are summarized. This article is not meant to be used as an all-inclusive reference for the scaffolding regulations. Rather, it is a summary of some of the major topics, and it is intended to clarify some of the more difficult-to-understand portions of the standard.

Additional information

For copies of the standard or the other sources of this article, contact: OSHA Office of Information and Consumer Affairs, (202-219-8151) or visit the OSHA Web site at (http://www.osha.gov/).

EZ Scaffold Corp.

Any place where tools, debris, or materials are piled higher than the toeboard, a screen must be built from the toeboard to the top of the guardrail to prevent items from falling.

Competent Person

While the regulations allow for flexibility in the scaffold design, a contractor is required to have a competent person (CP) determine whetherfallprotectionis required, assess the structural integrity of the scaffold, and make sure the scaffold is used safely. The OSHA compliance officer will inquire about the identity of the CP and will determine if his or her training and experience are sufficient.

OSHA defines a "competent person" in 29 CFR 1926.450(b) as "one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them." He or she must have had specific training and be knowledgeable about the structural integrity of scaffolds. This person must also know the procedures used to maintain the scaffolds and have the authority to shut down the job if there is something wrong with the scaffolding.

Only the CP has the authority to make certain decisions concerning the scaffolding. The CP must authorize any scaffolding modification and must decide if the use of scaffolding parts made of different materials or by different manufacturers will cause a dangerous situation. The duties of the CP may be shared among several individuals. However, each person must possess the qualifications required for his or her area of responsibility. For example, the CP for the erection process may or may not be the same person who authorizes modifications to the scaffolding.

The CP must inspect the scaffolding before every shift and must not allow work to take place until any problems with the scaffolding are corrected. The CP must also supervise any erection or dismantlement of the scaffolding. Other duties are stated in the category under which they fall.

Qualified Person

The new standard requires that scaffolds be designed by a qualified person (QP), defined in 29 CFR 1926.450 (b) as "one who, by possession of a recognized degree, certificate, or professional standing, or by extensive knowledge, training, and experience, has successfully demonstrated his/her ability to solve or resolve problems related to the subject matter, the work or the project." In most situations, the QP does not need to be an engineer. However, certain circumstances require that an engineer design the scaffolding. For example, a "registered professional engineer" must design:

- Masons' adjustable multipoint suspension scaffolds
- Pole scaffolds over 60 feet high
- Tube-and-coupler scaffolds over 125 feet high
- Fabricatedframescaffolds reaching more than 125 feet above their baseplate
- Outrigger scaffolds

The QP also has other responsibilities, such as designing the supporting rope on single-point adjustable scaffolds if the rope is not going to be vertical.

Requirements by scaffold type

Section 1926.452 lists the requirements for specific types of scaffolding. The following scaffolds are covered in the appropriate section:

a. Pole scaffolds
b. Tube and coupler scaffolds
c. Fabricated frame scaffolds (tubular welded frame scaffolds)
d. Plasterers', decorators', and large area scaffolds
e. Bricklayers' square scaffolds (squares)
f. Horse scaffolds
g. Form scaffolds and carpenters' bracket scaffolds
h. Roof bracket scaffolds
i. Outrigger scaffolds
j. Pump jack scaffolds
k. Ladder jack scaffolds
l. Window jack scaffolds
m. Crawlingboards(chickenladders)
n. Step, platform, and trestle ladder scaffolds
o. Single-point adjustable suspension scaffolds
p. Two-point adjustable suspension scaffolds (swing stages)
q. Multipoint adjustable suspension scaffolds,stonesetters' multipoint adjustable suspension scaffolds, and masons' multipoint adjustable suspension scaffolds
r. Catenary scaffolds
s. Float (ship) scaffolds
t. Interior hung scaffolds
u. Needle beam scaffolds
v. Multilevel suspended scaffolds
w. Mobile scaffolds
x. Repair bracket scaffolds
y. Stilts

Safe access and fall protection during erection/dismantlement

This portion of the regulation does not take effect until September 2, 1997. OSHA recognizes that fall protection while erecting or dismantling scaffolding will not be feasible in all situations, but it must be provided when it is feasible and does not create a greater hazard. Determining the feasibility of fall protection is the responsibility of the CP. It is a violation not to use fall protection during erection/dismantlement when it is feasible and safer. It is also a violation when a CP fails to assess a situation before scaffold erection or dismantlement. OSHA is still determining what is feasible and what is not. The agency's report will be put into a nonmandatory appendix to the standard in September 1997.

General fall protection requirements

Fall protection is required for employeesworking10feetormore abovethelevelimmediatelybelow. The different types of scaffolds have different requirements for fall protection. These are spelled out in 1926.451 (g)(1), sections (i) through (v). Fall protection must be provided on all supported and suspended scaffolds. In most cases this will be a guardrail system. For some types of scaffolds, both guardrails and personal fall-arrest systems are required. These include, but are not limited to, single-point and two-point-adjustable suspension scaffolds. Some scaffolds, such as catenary, float, needle-beam, and roof-bracket scaffolds, require only personal fall-arrest systems. The fall protection provided for workers in aerial lifts will vary depending on lift type.

The requirements for the top rail height will change after January 1, 2000. Previously, the top rail had to be 36 to 45 inches high. The new requirements state that the top rail has to be 38 to 45 inches high. However, when personal fall-arrest systems are required on a certain type of scaffolding system, the top rail can remain at 36 inches. This new standard also allows for the cross-bracing to be used as guardrails. A cross-brace can be used as either a top rail or a midrail, provided it crosses at the specified height.

Capacity requirements

The new standards require that the scaffold be able to support four times the maximum intended

load, not the rated load. The intended load includes all personnel, equipment, and supply loads; often it will be less than the rated load, but it should never exceed this without the manufacturer's and an engineer's approval. Each type of scaffold has its own requirement. For example, the direct connections and counterweights on adjustable suspension scaffolds must be able to withstand four times the tipping moment of the scaffold. The inspector will not calculate the required values but will verify whether or not the CP has.

Access

In 1926.451 (e), access to the scaffolding is discussed. Crossbraces are not allowed to be used as points of access. While removable rails, chains, or gates are preferred, there is no restriction on climbing over or through guardrails to access a scaffold. Ladder climbing devices or cages are not required on scaffolds. There is now a requirement that any integral part of the scaffold used as a ladder must have a rung width of at least 8 inches. Also, there must be a resting platform at least every 35 feet. Vertical access is discussed in both sections (e)(1) and (e)(8), but only section (e)(8) discusses horizontal access.

Training

Section 1926.454 discusses the training requirements for employees working on scaffolding. Each employee must be trained to understand the associated hazards, methods of protection, maximum intended load, and the load-carrying capacities of the scaffold. Training for workers involved in erection and dismantlement also is covered by section 1926.454 (b). The training required for the Competent Person is not specifically defined in the standard: It is left up to the compliance officer to determine if the Competent Person is really competent. (This appears to be similar to the "adequate bracing" clause in 1926.706, Requirements for Masonry Construction.)

No certification or record keeping is required to show that training has occurred. The compliance officer will evaluate employee training by observing work habits and the rigging of the scaffolding. He or she will also interview the employees to determine their training level. Retraining may be deemed necessary if training has occurred but the employees do not understand or are not adhering to the safety practices. By regularly retraining employees and documenting this, a citation may be avoided.

Falling-object protection

The new standard clarifies that hard hats cannot always be the sole means of falling-object protection. Toeboards, screens, or guardrail systems must be used to protect the workers from falling hand tools, debris, and other small objects. Where a danger of these items falling exists, the area under the scaffold must be barricaded to prevent entry. Any place where tools, debris, or materials are piled higher than the toeboard, a screen must be built from the toeboard to the top of the guardrail (to prevent items from falling). The contractor has the option of building a canopy, net or platform to catch any items before they come into contact with the employees.

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