Many residential and commercial construction projects require the use of some form of scaffolding. Unsafe scaffolding procedures can cause accidents, serious injuries and even death. Accidents involving scaffolding mainly involve workers falling, incorrect operating procedures, environmental conditions, and falling materials. This course will discuss the elements of an effective Scaffold Safety Program (SSP) with emphasis on pre-planning the erection, use and dismantling processes.
OSHAcademy Course 803 Study Guide

Scaffold Safety Program Management

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This study guide is designed to be reviewed off-line as a tool for preparation to successfully complete OSHAcademy Course 803.

Read each module, answer the quiz questions, and submit the quiz questions online through the course webpage. You can print the post-quiz response screen which will contain the correct answers to the questions.

The final exam will consist of questions developed from the course content and module quizzes.

We hope you enjoy the course and if you have any questions, feel free to email or call:

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Course Introduction

Many residential and commercial construction projects require the use of some form of scaffolding. Unsafe scaffolding procedures can cause accidents, serious injuries and even death. Accidents involving scaffolding mainly involve workers falling, incorrect operating procedures, environmental conditions, and falling materials.

As with many considerations on construction projects, safety is very important in scaffolding design and use. There are a number of legal requirements, legislations, and regulations that must be met by a construction company. According to OSHA, it is mandatory for employers to “furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees”. Developing a Safe Scaffold Program (SSP) is an effective way to make sure the company meets these requirements.

An important support organization for those involved with the use of scaffolds is the Scaffold & Access Industry Association. In 2013, OSHA renewed an Alliance agreement with SAIA to mutually share information on OSH laws and standards, and to continue educational opportunities to forge solutions to OSH issues.

This course will discuss the elements of an effective Scaffold Safety Program (SSP) with emphasis on pre-planning the erection, use and dismantling processes.

Note: Special thanks goes out to the North Carolina Department of Labor (NCDOL), Occupational Safety and Health Division, for providing the primary source document for this course, A Guide to Safe Scaffolding. NCDOL provides many other valuable publications for safety professionals, and we recommend visiting their website.
Module 1: The Scaffold Safety Program

Introduction

When scaffolds are not erected or used properly, falls from elevation can occur. About 2.3 million construction workers frequently work on scaffolds. According to OSHA, protecting these workers from scaffold-related accidents would prevent an estimated 4,500 injuries and 50 fatalities each year.

It’s very important everyone working around scaffolds is familiar with scaffold safety requirements. Employees who erect or work on scaffolds should be properly trained. To make sure that happens, develop an effective formal Scaffold Safety Program (SSP).

First, as a short review, let’s cover some scaffold basics.

Quiz Instructions

After each section, there is a quiz question. Make sure to read the material in each section to discover the correct answer to these questions. Circle the correct answer. When you are finished go online to take the final exam. This exam is open book, so you can use this study guide.

1. How many lives in the United States may be saved each year if workers are properly protected while working on scaffolding?
   a. 5
   b. 10
   c. 20
   d. 50

Scaffold Definition

A scaffold is defined as an elevated, temporary work platform. The three basic types of scaffolds are described below:

1. Supported scaffolds: Consist of one or more platforms supported by rigid, loadbearing members, such as poles, legs, frames, outriggers, etc.

2. Suspended scaffolds: Suspended scaffolds are platforms suspended by ropes, or other non-rigid means, from an overhead structure.
3. Other scaffolds: Principally man lifts, personnel hoists, etc., which are sometimes thought of as vehicles or machinery, but can be regarded as another type of supported scaffold.

2. Which type of scaffold is supported by rigid, load-bearing members, such as poles, legs, frames, outriggers, etc.?
   a. Unsupported
   b. Supported
   c. Suspended
   d. Unsuspended

Who Uses Scaffolds

Workers on scaffolds can be divided into two groups, erectors/dismantlers and users.

Erectors/Dismantlers: Erectors and dismantlers are those workers who are mainly responsible for assembling and disassembling scaffolding. This is done before other work can continue, and/or after work has been completed.

Users: Scaffold users are those whose work requires them, at least some of the time, to be supported by scaffolding. Employers are required to have a qualified person provide training to each employee who uses the scaffold. The training should teach employees to recognize the hazards associated with the type of scaffold being used. They should also understand the procedures to control or minimize those hazards. Here are a few of the hazards:

- Falls from elevation, due to lack of fall protection;
- Collapse of the scaffold, caused by instability or overloading;
- Being struck by falling tools, work materials, or debris; and
- Electrocution, principally due to proximity of the scaffold to overhead power lines.

You can learn more about basic scaffold safety by taking OSHAcademy course 604 Scaffold Safety.

3. Most scaffold accidents are due to _____.
   a. scaffold collapse
   b. falls from elevation
   c. being struck by falling objects
   d. slips and trips
**Scaffold Safety Program Defined**

A Scaffold Safety Program (SSP) may be thought of as a plan of action to accomplish a safety objective related to work with scaffolds. An effective SSP is designed around the processes, procedures, and practices normally assigned to employees and integrates safety-related decisions and precautions into them. Construction contractors must initiate and maintain safety programs as may be necessary to comply with CFR 1926.451, Scaffolds.

Now let’s talk about the critical components to help ensure a successful scaffold safety program.

**Safety Culture**

The scaffold safety program is never going to be successful unless the company has an effective safety culture. Believe it or not, OSHA actually has a pretty good definition for a safety culture. OSHA defines culture as “a combination of an organization's, attitudes, behaviors, beliefs, values, ways of doing things, and other shared characteristics of a particular group of people.”

It's important to understand that, from the employer's point of view, the company's corporate culture is something to be managed. However, if you ask an employee to define culture, he/she will likely tell you it's just "the way things are around here."

<table>
<thead>
<tr>
<th>4. If a company's scaffold safety program is ever going to be successful what must it have?</th>
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<tbody>
<tr>
<td>a. Safety equipment</td>
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<tr>
<td>b. Safety managers</td>
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<tr>
<td>c. An effective safety culture</td>
</tr>
<tr>
<td>d. Funding for safety committees</td>
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**Commitment**

The success of your company's scaffold safety program also depends on the willingness of top management to demonstrate a long-term serious commitment to protect every employee from injury and illness on the job.

Managers will invest serious time and money into effective safety management by developing safety policies, programs, plans and procedures. They will also display leadership through effective accountability and recognition of behaviors and results.
Leadership

For the SSP to be truly successful, employers must understand that the simple expression of tough-caring safety leadership (being tough about safety standards while working with scaffolds because they care about each worker’s safety) a result in enormous benefits. The ability to perceive leadership opportunities improves the company’s potential to succeed.

Tough-caring leaders also assume their workers, at all levels of the organization, are good people trying to do the best they can with the skills they have.

5. What type of leader assumes their workers are good people trying to do the best they can with the skills they have?

   a. Tough-Caring
   b. Gentle-Caring
   c. Tough-Coercive
   d. Tough-Controlling

Accountability

Accountability ranks right at the top with management commitment as a critical ingredient in a company’s scaffold safety program. When you are held accountable, your performance is measured against specific criteria and consequences (discipline or recognition) are administered appropriate to the level or quality of performance. Employers have a responsibility to provide everything workers need to do the job safely. If employers don’t do that, then justification for discipline is not established.

It’s important to understand employers should make sure adequate physical resources (tools, equipment, machinery, materials, etc.), training, time to do the job, and supervision have been provided before they consider administering discipline for non-compliance while working on a scaffold.

6. To be justified in disciplining an employee, what must an employer have provided?

   a. Adequate equipment
   b. Everything needed to work safely
   c. Adequate training
   d. Enough time to do the work
Elements of an Effective SSP

Safe scaffold erection and use should begin by developing a SSP that includes at least the following elements:

- a written plan
- policy statement
- work rules
- hazard identification and controls

Written Scaffold Safety Plan

It’s important to create a written plan that clearly states policies, rules, responsibilities, etc. This will help reduce confusion, aid in training scaffold safety, and formalize processes.

Click here to download a Sample Scaffold Safety Plan.

7. Why is it important to create a written scaffold safety plan?

   a. To slow down the project
   b. To help create more work for you
   c. So that you don’t have to constantly explain the plan to workers
   d. To reduce confusion, conduct training, and develop processes

Policies and Work Rules

Policies and work rules should concentrate on:

- sound design
- assigning personnel
- fall protection
- rules for use
- inspections
- selecting the right scaffold for the job
- instruction and training
- rules for proper erection
- rules for alteration and dismantling
- maintenance and storage

Sources of information for policy development and work rules include OSHA and ANSI standards, scaffold trade associations, scaffolding suppliers, and safety and engineering consultation services.
8. What should policies and work rules concentrate on?

a. Sound program design  
b. Purchasing  
c. Accomplishing tasks  
d. Enforcement

Sound Design

The scaffold should be capable of supporting its own weight and at least four times the maximum intended load to be applied or transmitted to the scaffold and components. Suspension ropes should be capable of supporting six times the maximum intended load. Guardrails should be able to withstand at least 200 pounds of force on the top rail and 100 pounds on the midrail. On complex systems, the services of an engineer may be needed to determine the loads at particular points.

Selecting the Right Scaffold for the Job

You cannot contract away the responsibility for selecting the right scaffold for your job. But if you do contract for scaffolding:

- Choose a scaffold supplier, rental agency and/or erector who is thoroughly knowledgeable about the equipment needed and its safe use.
- Obtain the owner’s manual prepared by the scaffolding manufacturer, which states equipment limitations, special warnings, intended use, and maintenance requirements.

9. How much weight should a scaffold be able to support?

a. Its own weight and at least two times the maximum intended load  
b. At least four times the maximum intended load  
c. Its own weight and at least four times the maximum intended load  
d. At least two times the maximum intended load

If you are to select your own scaffold, begin by reviewing the written requirements (blueprints, work orders, etc.) to determine where scaffolds should be used and the type of scaffolding needed. Make sure that the scaffolds meet all government and voluntary requirements. Consider that scaffolds are generally rated light, medium and heavy duty.

- Light duty scaffolds can support a limited number of employees and hand tools.
Medium duty scaffolds should be capable of safely holding workers, hand tools and the weight of construction materials being installed.

Heavy duty scaffolds are needed when the scaffold should sustain workers, tools and the weight of stored materials.

Account for any special features of the building structure in relationship to the scaffold, including distinctive site conditions. Factor these considerations into your policy:

- experience of erection and working personnel
- length and kind of work tasks to be performed
- weight of loads to be supported
- hazards to people working on and near the scaffolding
- needed fall protection
- material hoists
- rescue equipment (particularly for suspended scaffolds)
- weather and environmental conditions
- availability of scaffolding, components, etc.

10. When selecting scaffolds make sure they meet _____.
   a. design and use requirements
   b. OICC and union safety standards
   c. ISHM and BCSP recommendations
   d. ANSI and NFPA guidelines and standards

Hazard Identification and Control

Controlling exposures to worksite hazards while working on scaffolds is the fundamental method of protecting workers. Traditionally, the widely-accepted hierarchy of controls has been used as a means of determining how to implement feasible and effective controls.

ANSI/AIHA Z10-2005 discusses the five control measures below:
1. **Elimination** – doing the work at ground level if possible, eliminates any fall-from-elevation hazard

2. **Substitution** – replacing an old scaffold with a new one

3. **Engineering controls** – redesigning the scaffold to provide more protection

4. **Administrative controls** – safe practices and rules for safe behavior

5. **Personal protective equipment** – harnesses, lifelines, etc.

The idea behind this hierarchy is the control methods at the top of the list are potentially more effective and protective than those at the bottom. Following the hierarchy normally leads to the implementation of inherently safer systems. The risk of illness or injury should be substantially reduced.

**11. Using the Hierarchy of Controls, which hazard control method should be considered first to reduce or eliminate risk?**

   a. Personal protective equipment
   b. Administrative controls
   c. Warnings
   d. Engineering controls
Module 2: Project Supervision

CFR 29 1926.451, Scaffolding, was the #3 most cited standard by OSHA in 2013. If employers had focused their compliance efforts on these sections of the standard, they could have not only reduced workers’ compensation costs by lessening their employees’ exposure to some extremely serious workplace hazards, but they would have also significantly reduced their risk of receiving a citation.

Immediate supervisors on construction projects should review, investigate, and take any necessary and appropriate action on all employee reports of hazards or potential hazards.

Minimum OSHA Requirements

OSHA dictates that employers in the construction industry provide a safe and healthful workplace, including:

- providing employees with sanitary and safe working conditions
- assigning safety and health responsibilities
- giving safety and health designees authority to correct hazards
- ensuring employees may voice safety and health concerns without fear of reprisal
- informing employees of worksite hazards
- coordinating hazard communication with other employers on site
- posting the OSHA state or federal poster

1. What action should a supervisor take if an employee reports a hazard?

   a. Report it to the safety committee
   b. Inform the safety manager of the hazard
   c. Investigate and take appropriate action
   d. Look into it if there is enough time

Responsibilities

It’s important to understand who is responsible for safety on the construction worksite. According to OSHA, there are four employer roles or categories on a multi-employer worksite.
1. **Creating employer:** The employer who caused a hazardous condition that violates an OSHA standard. An example would be a contractor who erects a defective scaffold.

2. **Exposing employer:** This is an employer whose own employees are exposed to the hazard. An example would be an employer who allows his own employees to work on a scaffold without proper guardrails.

3. **Correcting employer:** This is an employer who is engaged in a common undertaking, on the same worksite as the exposing employer, and is responsible for controlling or otherwise eliminating a hazard. This usually occurs when an employer is given the responsibility of installing and/or maintaining particular safety/health equipment or devices such as scaffolds.

4. **Controlling employer:** This is an employer who has general supervisory authority over the worksite, including the power to correct safety and health violations itself or require others to correct them. Control can be established by contract or, in the absence of explicit contractual provisions, by the exercise of control in practice. An example would be the general contractor who has control over the erection of scaffolds on the worksite.

### 2. On a multi-employer worksite which employer category causes a hazardous condition that violates an OSHA standard?

- a. Creating employer
- b. Exposing employer
- c. Correcting employer
- d. Controlling employer

**Assigning Competent and Qualified Personnel**

Employers should select scaffold workers based on their knowledge, skills, and abilities (KSAs) to perform work including scaffold selection, erection, use, movement, alteration, dismantling, maintenance and inspection. Only trained employees who demonstrate adequate KSAs should be considered qualified to work on scaffolding.

**Competent Person**

- A Competent Person 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 authority to take prompt corrective measures to eliminate
them. The competent person, who has primary responsibility for supervising and
directing all scaffolding erection, dismantling, and altering work, should:

- have training and knowledge of OSHA requirements applicable to the types of scaffolds
  used;

- identify and correct existing and predictable hazards encountered in scaffold work;

- be trained in the structural integrity of the types of scaffolds used; and

- have authority from the employer to promptly abate hazardous worksite conditions.

- It's important to know that successful completion of a course does not, alone,
necessarily establish an individual as a "competent person" for a number of reasons:

- by its terms, the definition of a "competent person" compels the employer to select an
  employee based upon his or her capability to identify hazards;

- the definition of a competent person requires the individual to have the authority to
  take prompt corrective action. No course can provide that authority, since it can only be
  provided by the employer;

- a course may not be sufficiently comprehensive with respect to the information needed
  to meet the knowledge requirement in the definition. The type and extent of the
  knowledge will vary with what is necessary to successfully perform the task required of
  the competent person in the standard; and

- the course may not adequately test the employee's understanding of the course
  material.

- Note: OSHA compliance officers will determine the identity of the competent persons
  and asses their training and experience qualifications at an early stage of any inspection.

3. When assigning personnel to work on scaffolding, they must _____.

   a. have 2 years experience
   b. not have had a prior accident
   c. be trained and experienced
   d. have an OSHA 10-hour card
Competent Person Duties

A competent person’s duties can be shared as long as each person is qualified to perform the duty and has authority to correct hazards promptly. Competent persons must be able to do the following:

General

- Select and direct employees who erect, dismantle, move, or alter scaffolds.
- Determine if it is safe for employees to work on or from a scaffold during storms or high winds and to ensure that a personal fall arrest system or wind screens protect these employees. (Note: Windscreens should not be used unless the scaffold is secured against the anticipated wind forces imposed.)

For Training:

- Train employees involved in erecting, disassembling, moving, operating, repairing, maintaining, or inspecting scaffolds to recognize associated work hazards.

For Inspections:

- Inspect scaffolds and scaffold components for visible defects before each work shift and after any occurrence which could affect the structural integrity and to authorize prompt corrective actions.
- Inspect ropes on suspended scaffolds prior to each work shift and after every occurrence. This could affect the structural integrity and to authorize prompt corrective actions.
- Inspect manila or plastic (or other synthetic) rope being used for top rails or mid rails.

For Inspections:

- Evaluate direct connections to support the load.
- Evaluate the need to secure two-point and multi-point scaffolds to prevent swaying.

For Erectors and Dismantlers:

- Determine the feasibility and safety of providing fall protection and access.
- Train erectors and dismantlers to recognize associated work hazards.

**For Scaffold Components:**

- Determine if a scaffold will be structurally sound when intermixing components from different manufacturers.
- Determine if galvanic action has affected the capacity when using components of dissimilar metals.

| 4. A competent person has the authority to do all of the following EXCEPT _____.
| --- |
| a. selecting scaffold erectors/dismantlers  
| b. enforcing scaffold safety rules  
| c. inspecting and evaluate scaffolds  
| d. determining scaffold structural soundness |

**Competency = Training Plus Experience**

Many employer groups, vendors, apprenticeship programs, and labor organizations offer training on Subdivision 3/L scaffolding requirements. However, attending one of these programs does not necessarily make one competent (or a competent person). Competency should be demonstrated; it’s usually the result of many hours of in-class training and on-the-job experience.

**Qualified Person**

A qualified person has a recognized degree, certificate, or professional standing — or by extensive knowledge, training, and experience, has successfully demonstrated the ability to solve problems related to the subject, the work, or the project.

Scaffolds should be designed by a qualified person but not necessarily by an engineer.

**Exceptions:** Connections for mason’s adjustable multipoint suspension scaffolds, pole scaffolds more than 60 feet high, coupler and fabricated-frame scaffolds more than 125 feet high, and outrigger scaffolds should be designed by a registered professional engineer.

<table>
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<tr>
<th>5. What must a person have in order to be considered a qualified person?</th>
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| a. At least six months of scaffold erection experience  
| b. Verification of an OSHA 30-Hour card |
Qualified Person Duties

In General:

- Design and load scaffolds in accordance with that design.

For Training:

- Train employees working on the scaffolds to recognize the associated hazards and understand procedures to control or minimize those hazards.

For Suspension Scaffolds:

- Design the rigging for single-point adjustable suspension scaffolds.

- Design platforms on two-point adjustable suspension types that are less than 36 inches (0.9 m) wide to prevent instability.

- Make swaged attachments or spliced eyes on wire suspension ropes.

For Components and Design:

- Design scaffold components construction in accordance with the design.
6. Each of the following is an important scaffold qualified person duty EXCEPT _____.
   a. designing rigging and platforms
   b. conducting hazard awareness scaffold training
   c. assuming safety manager responsibilities
   d. ensuring scaffolds are loaded according to design

**Engineer Duties**

The standard requires a registered professional engineer to perform the following duties in the circumstances.

**For Suspension Scaffolds:**

- Design the direct connections of masons’ multi-point adjustable suspension scaffolds.

**For Design:**

- Design scaffolds that are to be moved when employees are on them.
- Design pole scaffolds more than 60 feet (18.3 meters) in height.
- Design tube and coupler scaffolds more than 125 feet (38 meters) in height.
- Design fabricated frame scaffolds more than 125 feet (38 meters) in height above their base plates.
- Design brackets on fabricated frame scaffolds used to support cantilevered loads in addition to workers.
- Design outrigger scaffolds and scaffold components.

7. In which of the following circumstance would a registered engineer NOT be required to design scaffolds?
   a. A pole scaffold that is 65 feet in height
   b. A fabricated scaffold that is 150 feet above base plates
   c. Any scaffold that will be moved when employees are on them
   d. A tube and coupler scaffold that is 90 feet in height
Qualifications for Inspecting Scaffolds

For some types of scaffolds, a competent person should supervise the erection, installation or relocation of scaffolds. If an employee meets the requirements for a competent person for those purposes, that employee would also be qualified to periodically inspect those scaffolds.

Scaffold Inspection Timeline

There are periodic inspection requirements for a number of different types of scaffolds. "Periodic" means frequently enough so, in light of these factors and the amount of time expected for their detrimental effects to occur, there is a good likelihood that problems will be found before they pose a hazard to employees.

For example, there are periodic inspection requirements for:

- welded frame scaffolds (910.28(d)(14))
- mason's adjustable multiple-point suspension scaffolds (1910.28(f)(11))
- two-point suspension scaffolds (1910.28(g)(8))

These standards do not specify how often a scaffold should be inspected to meet the "periodic" requirement. However, the company should have a clear policy regarding the frequency of periodic scaffold inspections. The frequency of periodic safety inspection should depend on factors such as:

- the type of scaffold
- site and weather conditions
- intensity of use
- age of the equipment
- how often sections or components are added, removed or changed

These factors will determine how quickly or slowly safety related faults, loose connections, degradation and other defects can be expected to develop.
8. According to OSHA standards, how often must the employer conduct periodic scaffold inspections?

- a. At least monthly inspection on the scaffold is installed
- b. Frequently to be found before they pose a hazard
- c. As often as the competent person determines appropriate
- d. Every other week after scaffold installation

Training for Scaffold Inspectors

For the employer to meet this obligation, the employee assigned to do the inspections should have sufficient knowledge to recognize unsafe scaffold conditions and to determine if the scaffold continues to meet the applicable scaffold standard requirements.

The employer may assign the periodic inspection task to one of its employees using the scaffold only if the employee has this level of knowledge. The employee should understand a cursory look at the scaffold prior to use would not constitute an inspection - an inspection requires a careful and critical examination.

Emergency Action Plan

In the company’s Emergency Action Plan (EAP) the employer should establish procedures to ensure a worker who falls from a scaffold receives immediate attention. Emergency procedures should be fully documented before workers begin work or use fall-arrest or restraint systems.

Emergency procedures within the EAP should identify key rescue and medical personnel, equipment available for rescue, communications procedures, retrieval methods, and first-aid requirements. The following lists identify safe practice guidelines for developing emergency response planning procedures, responding to emergencies, and investigating accidents.

EAP Actions

Before on-site work begins

- Make the fire department or emergency responders aware of the job specifications at the site and any factors that may slow response time.

- Create one or more joint training sessions between key on-site personnel and emergency responders.

- Document the rescue plan and make sure it is posted at the worksite.
• Mark the job site with signs and note the easiest access routes into and out of the site.

As on-site work progresses

• Identify on-site equipment (examples: boomlifts, ladders, and forklifts) that can be used for rescue and retrieval.

• Maintain a current emergency equipment inventory at the site. Equipment may change frequently as the job progresses.

• Re-evaluate and update the emergency-response plan if on-site work tasks change.

9. Which of the following is an important EAP action to take AFTER on-site work begins?

   a. Mark the jobsite with signs showing access routes
   b. Maintain a current emergency equipment inventory
   c. Document the rescue plan
   d. Create one or more joint training sessions

Emergency-response actions

• Call 9-1-1 or other emergency numbers indicated on the emergency-response plan. Use 9-1-1 for ambulance service but remember that most 9-1-1 responders are not trained to rescue an injured worker suspended in a personal fall-arrest system. Rescue procedures should ensure prompt response to a suspended worker. The 9-1-1 number does not ensure prompt response. First responders should clear a path to the victim. Others should be sent to direct emergency personnel to the scene.

• Make sure only qualified personnel attempt a technical rescue.

• Prohibit all nonessential personnel from the rescue area.

• Talk to the victim; determine the victim’s condition, if possible.

• If the victim is accessible, comfort and check vital signs. If necessary, administer CPR and attempt to stop bleeding.

• Do not attempt a solo rescue if the victim is suspended. Wait for trained emergency responders.
Accident investigation guidelines

- Only trained and qualified persons should conduct accident investigations.
- Report fatalities and catastrophes to OSHA within eight hours.
- Report injuries requiring overnight hospitalization to OSHA within 24 hours.
- Identify all equipment associated with the accident and put it out of service until the accident investigation is complete.
- Document the scene, determine the sequence of events, and analyze the surface and root causes.
- Review the fall-protection plan; determine how the plan could be changed to prevent similar accidents; revise the plan accordingly.
- Have a qualified person examine equipment associated with the accident; if damaged, repair or replace it. If it contributed to the accident, determine how and why, then replace it.
- Do not disturb the scene of a fatality or catastrophe.

10. All the following are appropriate scaffold emergency-response actions EXCEPT _____.
   a. preventing solo rescues if the victim is suspended
   b. determining the victim's condition, if possible
   c. reporting injuries requiring overnight hospitalization to OSHA within 24 hours
   d. prohibiting non-essential personnel from the rescue area

A Word about “Common Sense”

This topic may be a little controversial, and you may not agree, but in a word, common sense is quite "uncommon." It's common to hear someone say, "he should have used common sense about that," but it's never really appropriate to make that assumption. Actually, everyone has either a unique "good sense" or "poor sense" about what is appropriate or safe. We each gain a certain sense about things be based on our unique personal genetics, previous personal experience, and training.
Using the "common sense" excuse for accidents makes it easy to prematurely blame the worker. It's also a way to quickly divert possible personal blame on oneself from being considered. Before making a judgment and blaming the worker, it is important for managers to first analyze the company's safety management system to rule out failures in planning, policies, programs, processes, procedures, and safe-practices that might have contributed to the accident. Only after system failures have been ruled out, should discipline for intentional non-compliance be considered. For more information check out the article Common Sense is Neither Common nor Sense, by Jim Taylor Ph.D.

**11. Which of the following is TRUE regarding "common sense?"**

a. Every individual has a unique good or poor sense about things  
b. Everyone has it because we're all basically the same  
c. Common sense is common to everyone working on the same project  
d. Common sense is determined by innate intelligence
Module 3: Scaffold Training Requirements

Introduction

Each employee who performs work while on a scaffold should be trained by a person qualified in the subject matter to recognize the hazards associated with the type of scaffold being used and to understand the procedures to control or minimize those hazards. The training should include the following areas, as applicable:

The training should also include the following areas, as applicable:

1. The nature of any electrical hazards, fall hazards and falling object hazards in the work area;
2. The correct procedures for dealing with electrical hazards and for erecting, maintaining, and disassembling the fall protection systems and falling object protection systems being used;
3. The proper use of the scaffold, and the proper handling of materials on the scaffold;
4. The maximum intended load and the load-carrying capacities of the scaffolds used; and
5. Other pertinent requirements of the standard.

A competent person must train each employee who is involved in erecting, disassembling, moving, operating, repairing, maintaining, or inspecting a scaffold to obtain adequate KSAs to:

1. recognize hazards associated with the work in question;
2. perform the correct procedures for erecting, disassembling, moving, operating, repairing, inspecting, and maintaining the type of scaffold in question;
3. know the design criteria, maximum intended load-carrying capacity and intended use of the scaffold;
4. understand other pertinent requirements of the standard.
1. Each employee performing work associated with scaffolds must be trained so that they _____.
   a. have at least 10 hours of training from a competent person
   b. have a good understanding of scaffold safety principles
   c. have adequate knowledge, skills, and abilities (KSAs)
   d. can become a competent and qualified person

Competent Person

It's vitally important that scaffold competent persons have more extensive knowledge of scaffolds, skills related to scaffolds, and abilities gained through on-the-job experience. They should also receive instruction and training in how to conduct scaffold training, inspections, and evaluations.

A competent person is defined as one who:

- Is capable of identifying existing and predictable hazards.
- Has authorization to take prompt corrective measures to eliminate such hazards.

The competent person(s) should receive additional training regarding:

- the selection of scaffolds;
- recognition of site conditions;
- scaffold hazard recognition;
- scaffold inspection and evaluation procedures;
- authority to take corrective actions;
- conducting scaffold training;
- protection of exposed personnel and the public;
- repair and replacement options; and
- requirements of standards including appendices.
2. In addition to general training for all scaffold workers, a competent person should receive additional training in _____.

- a. trench and excavation hazard recognition
- b. scaffold inspection and evaluation procedures
- c. scaffold hazard recognition and minimization
- d. recognition of different types of scaffolds

Training Requirements

Summary of training requirements for scaffold users

<table>
<thead>
<tr>
<th>Critical scaffold issues</th>
<th>Those who work from scaffolds</th>
<th>Those who erect and dismantle scaffolds</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• falling objects</td>
<td>• scaffold design criteria</td>
</tr>
<tr>
<td></td>
<td>• fall protection</td>
<td>• scaffold erecting, disassembling, moving, and maintenance procedures</td>
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<td></td>
<td>• material handling on scaffolds</td>
<td>• scaffold erecting, disassembling, and moving hazards</td>
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<td>• scaffold load capacities</td>
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<tr>
<td>What they need to know</td>
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<td>--------------------------------------------------------------------------------------</td>
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<tr>
<td>• how to use appropriate fall-protection systems</td>
<td>• any person who has training and experience in the critical scaffold issues (above) and who can teach the issues to scaffold users</td>
<td>• before they begin a new job</td>
</tr>
<tr>
<td>• how to control scaffold hazards</td>
<td>• subdivision 3/L refers to a person with these skills as a qualified person (See Page 10 in this guide for more information on the qualified person)</td>
<td>• whenever changes at the worksite present new hazards</td>
</tr>
<tr>
<td>• how to use scaffold walkways, platform components, and access areas</td>
<td>• any person who has training and experience in the critical scaffold issues (above), who can teach the issues to erectors/dismantlers, and who has authority to control scaffold hazards</td>
<td>• whenever they fail to demonstrate skills related to any of the critical scaffold issues</td>
</tr>
<tr>
<td>• maximum-intended and load-carrying capacities of scaffolds</td>
<td>• subdivision 3/L refers to a person with these skills as a competent person (See Page 12 in this guide for more information on the competent person)</td>
<td>• whenever they fail to demonstrate skills related to any of the critical scaffold issues</td>
</tr>
<tr>
<td>• subdivision 3/L requirements</td>
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<td></td>
</tr>
</tbody>
</table>
3. Each of the following is a critical issue that should be taught in scaffold training EXCEPT _____.
   a. falling objects
   b. progressive discipline rules
   c. material handling on scaffolds
   d. scaffold load capacities

Developing a Scaffold Training Plan

Effective training programs don't just happen. They require careful planning, specific learning/training goals and objectives, dedicated instructors, and motivated students. It doesn't matter whether the activity is athletics, academics, or occupational safety and health: the underlying training concepts are the same:

1. Design and develop a training plan
2. Conduct training
3. Evaluate training effectiveness
4. Improve training through feedback

In the next several sections, we'll take a closer look at these training concepts.

4. What do effective training programs require?
   a. Spontaneity
   b. Careful planning
   c. General goals
   d. Third-party trainers

1. Design a Training Program

**Determine if training is needed.** Determine whether a worksite problem can be solved by training. Will training solve the problem or are hazards or engineering problems causing injuries?

Training is most effective when it focuses on what workers need to know to do their jobs safely. Training is especially helpful for inexperienced workers, new workers, and workers unfamiliar with special processes and equipment.
**Identify training needs.** Establish what the worker is expected to do and identify hazardous tasks. Analyze each task to determine what the worker should learn to do a job safely.

**Design learning activities.** Learning activities enable workers to demonstrate acquired desired skills and knowledge. The activities should simulate actual job tasks as closely as possible. Learning activities can be group-oriented, with lectures, role playing, and demonstrations. They can also be designed as self-paced activities for individual workers.

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5. **Scaffold training is most effective when it focuses on _____**.
   
   a. what workers must know to do their jobs safely
   b. accident scenarios and special topics
   c. what management believes workers need to know
   d. how to do something rather than why it's important

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2. **Conduct the Training**

**Plan the training structure and format.** Consider the number, frequency, and length of sessions. Determine instructional techniques and who will do the training.

**Make sure the training is well-organized and has clearly defined objectives.** Give workers an overview of what they’ll learn. Relate training materials to tasks and jobs.

To make sure workers gain the necessary skills to work safely, OSHA expects you to include hands-on practice during the training. Reinforce learning by summarizing objectives and key concepts. Be sure to let workers participate in discussions and ask questions. Finally, administer written exams to best test individual knowledge of the topics being taught.

Click here to download a scaffold safety sample lesson plan.

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6. **Which of the following is an OSHA expectation for scaffold training?**
   
   a. No more than 10 students in a class
   b. At least 10 hours of training
   c. A 20-question final exam
   d. An opportunity for hands-on practice
3. Evaluate Training Effectiveness

How do you know training is accomplishing your objectives? Develop a plan to objectively evaluate training effectiveness. To do that, focus on what workers and supervisors "think" about the training, not how they "feel" because feelings are subjective. Examples of questions to ask and statistics to analyze to objectively determine the effectiveness of training include:

- asking workers what they've learned through training;
- asking supervisors how effectively their workers are accomplishing training goals;
- analyzing trends in hazard, near-miss, and accident reporting; and
- examining injury and illness statistics.

4. Improve Training through Feedback

Collect and evaluate feedback from workers, supervisors, and others affected by the training. When you’re sifting through what people had to say about the training, consider these questions:

- Did the training focus on critical elements of the job?
- Were major gaps in workers’ knowledge or skills covered?
- Were the training objectives presented clearly?
- Did the objectives state the performance levels expected of workers?
- Did learning activities simulate actual work tasks?
- Were the learning activities appropriate for the knowledge and skills the jobs required?
- Were the training materials organized and presented clearly?
- Were workers motivated to learn?
- Were workers encouraged to participate and to ask questions? Adjust the training program if the feedback warrants a change.
7. All of the following are ways to objectively evaluate the effectiveness of scaffold training EXCEPT _____.

- a. asking workers what they thought about the training
- b. asking supervisors how they feel about the training
- c. analyzing trends in hazard, near-miss, and accident reports
- d. asking supervisors how worker skills have improved

Retraining

Site management personnel should also be familiar with correct scaffolding procedures, so they can better determine needs and identify deficiencies.

If the employer has reason to believe an employee lacks the skill or understanding needed for safe work involving the erection, use or dismantling of scaffolds, the employer should retrain each the employee so that the required proficiency is regained.

Retraining is required in at least the following situations:

- changes at the worksite present a hazard about which an employee has not been previously trained
- changes in the types of scaffolds, fall protection, falling object protection, or other equipment present a hazard about which an employee has not been previously trained
- inadequacies in an affected employee's work involving scaffolds indicate that the employee has not retained the requisite proficiency

8. When may discipline be the most appropriate response when employees violate safety rules, practices, or procedures?

- a. When worksite changes present new hazards on which employees haven't been trained
- b. When changes in the equipment present hazards on which employees haven't been trained
- c. When employees lack the KSAs to be proficient
- d. When employees with adequate KSAs intentionally violate safety rules
Module 4: Fall Protection on Scaffolds

According to OSHA, falls are among the most common causes of serious work-related injuries and deaths in the construction industry. Employers should set up the workplace to prevent employees from falling off of overhead platforms, elevated workstations or into holes in the floor and walls.

Fall protection is more than the equipment you use. Fall protection is what you do to eliminate fall hazards, to prevent falls, and to ensure that workers who do fall don’t die. To do that:

- Ensure everyone has a role to play in preventing falls.
- Identify and evaluate fall hazards.
- Eliminate fall hazards, if possible.
- Train workers to recognize fall hazards.
- Use appropriate systems and methods to prevent falls and to protect workers if they do fall.
- Inspect and maintain fall-protection equipment before and after using it.
- Become familiar with the employer’s fall protection program.

Personal Protective Equipment (PPE)

Workers on scaffolds should wear hard hats when falling objects are a hazard, which is the case in most scaffold work. Unless company policy otherwise directs, there is no requirement to wear a hard hat if there is no hazard from falling objects.

1. When should fall protection equipment be inspected?
   a. After using it
   b. Before and after using it
   c. Daily prior to work
   d. At least weekly
Guardrails

Guardrails should be installed on all scaffold platforms in accordance with required standards if more than 10 feet above the ground or floor. Guardrails should at least consist of top rails, midrails and toeboards.

Guardrail height - The height of the toprail for scaffolds manufactured and placed in service after January 1, 2000 must be between 38 inches (0.9 meters) and 45 inches (1.2 meters). The height of the toprail for scaffolds manufactured and placed in service before January 1, 2000 can be between 36 inches (0.9 meters) and 45 inches (1.2 meters).

Crossbracing - When the crosspoint of crossbracing is used as a toprail, it must be between 38 inches (0.97 m) and 48 inches (1.3 meters) above the work platform.

Midrails - Midrails must be installed approximately halfway between the toprail and the platform surface. When a crosspoint of crossbracing is used as a midrail, it must be between 20 inches (0.5 meters) and 30 inches (0.8 m) above the work platform.

Release - To ensure adequate protection, install guardrails along all open sides and ends before releasing the scaffold for use by employees, other than the erection and dismantling crews.

Exceptions - Guardrails are not required, however, in the scenarios below.

- when the front end of all platforms are less than 14 inches (36 cm) from the face of the work
- when outrigger scaffolds are 3 inches (8 cm) or less from the front edge
- when employees are plastering and lathing 18 inches (46 cm) or less from the front edge

Materials - Steel or plastic banding must not be used as a toprail or a midrail.

2. At what height are guardrails are required for scaffolds?
   a. above 4 feet
   b. 6 feet higher
   c. at least 8 feet
   d. more than 10 feet
Protection from Falling Objects

According to the Bureau of Labor Statistics, there are more than 42,400 workers are struck by falling objects and injured in the United States. When an employee is exposed to falling objects, the employer must ensure that each employee wears head protection. In addition, the employer must protect employees from objects that could fall from scaffold platforms, holes, openings to a lower level.

**Engineering controls.** Lower-level or ground-level workers and pedestrians can be protected using engineering controls such as mesh, toeboards, canopy structures, floor hole covers, nets, screens, intermediate vertical members or solid panels can be used to safeguard employees and the public at lower levels.

**Administrative controls.** Ground-level safety can also be provided by using administrative controls such as policies prohibiting entry into the fall hazard areas, barricades and signs, and by the proper placement of materials, tools and equipment on scaffolding.

3. Which of the following is an example of an administrative control used to protect workers and pedestrians at ground level?
   a. Canopy structure
   b. Mesh screen
   c. Solid panel
   d. Warning sign

Personal Fall-Arrest Systems

Workers on suspended scaffolds should use a fall arrest system as protection against the failure of the scaffold or its components. This system will usually consist of a full body harness, lanyard, rope grab, independent vertical lifeline and an independent lifeline anchorage.

**Harness:** The full body harness is a belt system designed to distribute the impact energy of a fall over the shoulders, thighs and buttocks. A properly designed harness will permit prolonged worker suspension after a fall without restricting blood flow, which may cause internal injuries. Rescue is also aided because of the upright positioning of the worker.

**Lanyards.** Personal fall-arrest systems used on scaffolds should be attached by a lanyard to a vertical lifeline, horizontal lifeline, or structural member that will hold at least 5,000 pounds. A lanyard connects the safety harness to the rope grab on the lifeline. Materials should be made of 5/8-inch nylon rope or nylon webbing. Lanyards should be kept as short as possible to limit
fall distance or rigged such that an employee can never free fall more than 6 feet. A competent person should decide the most appropriate connection.

**Rope Grabs.** Rope grabs contain a cam device that locks onto a lifeline when there is a hard tug or pull on the lanyard. Care should be taken to ensure that rope grabs are properly connected to lifelines so the cam will work correctly. Rope grabs should be placed at the highest point on the lifeline to reduce the fall distance and unintentional disengagement.

**Lifelines.** Retractable lifelines (single or dual) are wound on reels and automatically extend or retract to take up slack in the line as the worker moves about. A sudden extension in the line activates a locking mechanism that typically includes a deceleration device. Some self-retracting lanyards can be set to restrict the distance traveled and so can also function as part of a properly designed fall restraint system.

**Double Self Retracting Lanyards/Lifelines.** Commonly known as 100% tie-off, "Y" type, twin leg, or double lanyards; these energy absorbing lanyards can be used to provide continuous fall protection while ascending, descending, or moving laterally. With one lanyard leg attached, the worker can move to a new location, attach unused lanyard leg, and disconnect attached leg. This procedure is repeated until a new location is reached. (DBI SALA)

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4. Lanyards should be kept as short as possible to limit fall distance or rigged such that an employee can never _____.
   a. fall more than 2 feet
   b. free fall more than 4 feet
   c. free fall more than 6 feet
   d. fall more than 10 feet
```

**Fall Restraint Systems**

Fall restraint systems prevent the user from falling any distance. To determine the force needed to restrain a worker, consider the force that would be generated by the worker walking, leaning, or sliding down the working surface. The system consists of a body belt or harness, an anchorage, connectors, lanyards, lifelines, and other devices.

For a restraint system to work, the anchorage must be strong enough to prevent the worker from moving past the point where the system is fully extended, including an appropriate safety factor.

OSHA has no specific standards for restraint systems, however, in a 1995 letter of interpretation, OSHA suggested that, at a minimum, fall restraint systems should have the
capacity to withstand at least 3,000 pounds of force or twice the maximum expected force that is needed to restrain the worker from exposure to the fall hazard.

**Positioning Systems**

OSHA defines a positioning device system as a body belt or body harness system rigged to allow a worker to be supported on an elevated vertical surface, such as a wall, and work with both hands free while leaning.

- Body belt or body harness systems are to be set up so that a worker can free fall no farther than 2 feet. 29 CFR 1926.502(e)(1).
- Body belts or harnesses must be secured to an anchorage capable of supporting at least twice the potential impact load of a worker’s fall or 3,000 pounds, whichever is greater. 29 CFR 1926.502(e)(2).

**Scenario**

While sitting or kneeling on a fixed deck plank attached to a fabricated frame scaffold, a worker was pulling a 16-foot long 2x4 off the bucket of an excavator. There were no guardrails at the working level. When the other end of the 2x4 slipped off the bucket, the employee did not let go of his end, and was pulled off the deck. He fell 16 feet to the ground, sustaining facial fractures and other injuries.

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5. Fall restraint systems should have the capacity to withstand _____ of force or twice the maximum expected force.

   a. at least 3,000 pounds
   b. at least 4,000 pounds
   c. at least 5,000 pounds
   d. at least 6,000 pounds
Glossary

**Adjustable suspension scaffold**: A suspension scaffold with a hoist (or hoists) operated by workers on the scaffold.

**Aerial Device**: Any vehicle mounted, telescoping or articulating, or both, used to position personnel (workers).

**Aerial Ladder**: An aerial device consisting of a single or multiple-section extensible ladder.

**Articulating Boom Platform**: An aerial device with two or more hinged boom sections.

**Anchorage**: A secure point of attachment for lifelines, lanyard, deceleration devices or tiebacks.

**Base Plate**: A device used to distribute vertical load.

**Bearer**: A horizontal transverse scaffold member (which may be supported by ledgers or runners) upon which the scaffold platform rests and joins scaffold uprights, posts, poles and similar members.

**Boatswains' Chair**: A suspended seat designed to accommodate one worker in a sitting position.

**Body Harness, Full**: Straps that are secured about an employee in a manner that distributes the arresting forces over at least the thighs, shoulders and pelvis with provisions for attaching a lanyard, lifeline or deceleration device.

**Brace**: A tie that holds one scaffold member in a fixed position with respect to another member. Brace also means a rigid type of connection holding a scaffold to a building or structure.

**Bricklayer’s square scaffold**: A supported scaffold made of framed squares that supports a platform.

**Carpenter’s bracket scaffold**: A supported scaffold consisting of a platform supported by brackets attached to a building or structural walls.

**Catenary scaffold**: A suspension scaffold consisting of a platform supported by two horizontal and parallel ropes attached to structural members of a building or other structure.

**Chimney hoist**: A multipoint adjustable suspension scaffold that provides access for working inside chimneys. See “Multipoint adjustable suspension scaffold.”
**Cleat:** A structural member used at the ends of platform units to prevent the units from slipping off their supports. Cleats are also used to provide footing on sloped surfaces such as crawling boards.

**Come-along:** A hand operated ratchet lever winch used to wind a rope or cable, while a ratchet is a mechanical brake that keeps the line from unwinding.

**Competent Person:** One who is capable of identifying existing and predictable hazards in the surroundings or working conditions that are unsanitary, hazardous or dangerous to employees, and who has the authority to take prompt corrective measures to eliminate such hazards.

**Continuous-run scaffold (run scaffold):** A two-point or multipoint adjustable suspension scaffold made from braced scaffold members or supporting structures that form a continuous scaffold.

**Coupler:** A device for locking together the component tubes of a tube and coupler scaffold.

**Crawling board (chicken ladder):** A supported scaffold consisting of a plank with cleats spaced and secured to provide footing.

**Crossbraces:** Two diagonal scaffold members joined at their center to form an “X.” Used between frames or uprights or both.

**Deceleration device:** Any mechanism that dissipates energy during a fall arrest or limits the energy imposed on a worker during fall arrest.

**Design Load:** The maximum intended load; that is, the total of all loads including the worker(s), material and the equipment placed on the unit.

**Double-pole (independent pole) scaffold:** A supported scaffold consisting of a platform resting on bearers supported by ledgers and a double row of uprights not supported (except with ties, guys, braces) by any other structure.

**Electrical Ground:** A conducting connection between an electrical circuit or equipment and the area, or some conducting body that serves in place of the earth.

**Equivalent:** An alternative design, material or method that the employer can demonstrate will provide an equal or greater degree of safety for employees than the method or item specified in the standard.

**Extensible Boom Platform:** An aerial device (except ladders) with a telescopic or extensible boom. Telescopic derricks with personnel platform attachments are considered to be extensible boom platforms when used with a personnel platform.

**Eye or eye splice:** A loop with or without a thimble at the end of a wire rope.
Fabricated decking and planking: Manufactured platforms made of wood (including laminated wood and sawn-wood planks), metal, or other materials.

Fabricated-frame scaffold (welded tubular-frame scaffold): A scaffold consisting of a platform supported on fabricated end-frames with integral posts, horizontal bearers, and intermediate members.

Failure: Breakage or separation of component parts

Fall Protection: A system designed to prevent or arrest a person’s fall.

Float (ship) scaffold: A suspension scaffold consisting of a braced platform resting on two parallel bearers and hung from overhead supports by fixed-length ropes.

Form scaffold: A supported scaffold consisting of a platform supported by brackets attached to formwork.

Guardrail System: A rail system erected along the open sides and ends of platforms. The rail system consists of a top rail and midrail and their supports.

Guy: A rope, chain or cable used to stabilize a vertical object.

Harness: A design of straps that is secured about the employee in a manner to distribute the arresting forces over at least the thighs, shoulders and pelvis, with provisions for attaching a lanyard, lifeline or deceleration device.

Hoist: A mechanical device to raise or lower a suspended scaffold. It can be mechanically powered or manually operated.

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

Independent-pole scaffold: See “double-pole scaffold.”

Insulated Aerial Device: An aerial device designed for work on energized lines and apparatus.

Interior hung scaffold: A suspension scaffold consisting of a platform suspended from a ceiling or roof structure by fixed-length supports.

Joint: The location where vertical members of a scaffold are combined.

Ladder jack scaffold: A supported scaffold consisting of a platform resting on brackets attached to ladders.

Ladder Stand: A mobile, fixed-size, self-supporting ladder that appears as a wide flat tread ladder in the form of stairs.
Landing: A platform at the end of a flight of stairs.

Large area scaffold: A pole scaffold, tube-and-coupler scaffold, systems scaffold, or fabricated frame scaffold erected over an entire work area.

Lanyard: A flexible line to secure the wearer of a full body harness to a lifeline, trolley line or a fixed anchor.

Lean-to scaffold: A supported scaffold that is kept erect by tilting toward and resting against a building or structure.

Ledger: A horizontal scaffold member upon which bearers rest. It is the longitudinal member that joins scaffold uprights, posts, poles and similar members.

Lifeline: A flexible line that connects to an anchorage at one end and hangs vertically (vertical lifeline) or that connects to anchorages at both ends and stretches horizontally (horizontal lifeline); it connects other components of a personal fall-arrest system to the anchorage.

Lower levels: Areas below the working level. Examples: ground levels, floors, roofs, ramps, runways, excavations, pits, tanks, materials, water, and equipment.

Mason’s adjustable supported scaffold: See “Self-contained adjustable scaffold.”

Mason’s multipoint adjustable suspension scaffold: A continuous-run suspension scaffold designed and used for masonry work.

Maximum Intended Load: The total load of all employees, equipment, tools, materials, transmitted loads, wind loads, and other loads reasonably anticipated to be applied to a scaffold or scaffold component at any one time.

Mechanically Powered Hoist: A hoist that is powered by other than human energy.

Midrail: A rail approximately midway between the toprail and platform of a guardrail system.

Mobile scaffold: A portable caster or wheel-mounted supported scaffold.

Multilevel suspended scaffold: A two-point or multipoint adjustable suspension scaffold with platforms at various levels that rest on common stirrups.

Multipoint adjustable suspension scaffold: A suspension scaffold consisting of a platform suspended by more than two ropes from overhead supports that can be raised and lowered to desired work levels. Includes chimney hoists.

Needle-beam scaffold: A platform suspended from needle beams.
Open Sides and Ends: The edges of a platform that are more than 14 inches away from a sturdy, continuous, vertical surface (such as a building wall) or a sturdy, continuous, horizontal surface (such as a floor), or a point of access. Exception: For plastering and lathing operations, the horizontal distance is 18 inches.

Outrigger: The structural member of a supported scaffold used to increase the base width of a scaffold in order to provide greater stability for the scaffold.

Outrigger Beam (thrustout): The structural member of a suspension scaffold or outrigger scaffold that provides support for the scaffold by extending the scaffold point of attachment to a point out and away from the structure or building.

Outrigger scaffold: A supported scaffold consisting of a platform resting on outrigger beams projecting beyond the wall or face of a structure; the inboard ends are secured inside the structure.

Overhand bricklaying: Laying bricks and masonry units so that the surface of the wall to be jointed requires the mason to lean over the wall to complete the work.

Periodic: For scaffolds, “periodic means frequently enough so that, in light of these factors and the amount of time expected for their detrimental effects to occur, there is a good likelihood that problems will be found before they pose a hazard to employees.

Personal Fall Arrest System: A system used to arrest an employee in a fall from a working level. It consists of an anchorage, connectors, a body belt or body harness and may include a lanyard, deceleration device, lifeline or suitable combinations of these. The use of a body belt for fall arrest is prohibited.

Plank: A wood board and fabricated component that serves as a platform unit.

Plank (Metal): A metal platform united sized to support one or more workers or uniformly distributed loads. Metal planks would be similar dimensions as wood planks.

Plank (Wood, Laminated): A platform unit of glue-laminated wood whose method of manufacture and assigned design values contemplate flat use in a scaffolding application.

Plank (Wood, Sawn): A board of sawn lumber whose grading rules and assigned design values contemplate flat use in a scaffolding application.

Platform: The horizontal working surface of a scaffold.

Platform: Any personnel-carrying device (basket or bucket) that is a component of an aerial device.
Platform Unit: The individual wood planks, fabricated planks, fabricated decks and fabricated platforms that compose the platforms and walkways of a scaffold.

Pole scaffold: See “Single-pole scaffold” and “Double (independent) pole scaffold.”

Positioning Device System: A body belt or body harness system rigged to allow an employee to be supported on an elevated vertical surface, such as a wall, and work with both hands free while leaning.

Power-operated hoist: A hoist powered by other than human energy.

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

Qualified Person: One who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training or experience has successfully demonstrated the ability to solve or resolve problems related to the subject matter, the work or the project.

Rated Load: The manufacturer’s recommended maximum load.

Repair bracket scaffold: A supported scaffold consisting of a platform supported by brackets secured around the circumference or perimeter of a chimney, stack, tank, or other supporting structure.

Roof-bracket scaffold: A rooftop-supported scaffold consisting of a platform resting on angular-shaped supports.

Runner (ledger or ribbon): The lengthwise horizontal bracing or bearing member that supports bearers on tube and coupler scaffolds.

Safety Screen: A wire or plastic screening that protects the workers and passers-by below from dropped items.

Scaffold: Any temporary elevated or suspended platform and its supporting structure used for supporting employees or materials or both, except this term does not include crane or derrick suspended personnel platforms.

Scissor Lift: A self-propelled or manually propelled lifting personnel platform (within wheel base) capable of vertical movement with onboard controls as defined by ANSI/SIA A92.6-1990.

Self-contained adjustable scaffold: A combination supported and suspension scaffold consisting of an adjustable platform mounted on an independent supporting frame not a part of the object worked on. Examples: rolling roof rigs, rolling outrigger systems, and some mason’s adjustable supported scaffolds.
Shore scaffold: A supported scaffold placed against a structure and held in place with props.

Sill: A footing (usually wood) which distributes the vertical loads to the ground or slab below.

Shore scaffold: A supported scaffold placed against a structure and held in place with props.

Single-point adjustable suspension scaffold: A suspension scaffold consisting of a platform suspended by one rope from an overhead support and equipped to move the platform to desired work levels.

Single-pole scaffold: A supported scaffold consisting of a platform resting on bearers. The outside ends are supported on runners secured to a single row of posts or uprights and the inner ends are supported by a structure.

Stair tower (scaffold stairway/tower): A tower that contains internal stairways and rest platforms. Used to provide access to scaffold platforms and other elevated points such as floors and roofs.

Stall load: The load at which a power-operated hoist stalls or the power is automatically disconnected.

Step, platform, and trestle ladder scaffold: A platform resting directly on the rungs of stepladders or trestle ladders.

Stilts: A pair of poles or supports with raised footrests, used to walk above the ground or working surface.

Stonesetter’s multipoint adjustable suspension scaffold: A continuous-run suspension scaffold designed and used for stonesetter’s work.

Supported scaffold: One or more platforms supported by outrigger beams, brackets, poles, legs, uprights, posts, frames, or similar rigid support.

Suspension scaffold: One or more platforms suspended by ropes or other nonrigid means from an overhead structure(s).

System scaffold: A scaffold consisting of posts with fixed connection points that accept runners, bearers, and diagonals interconnected at predetermined levels.

Tank builder’s scaffold: A supported scaffold consisting of a platform resting on brackets directly attached to a cylindrical tank or attached to devices that are attached to a tank.

Tie: A device used between scaffold component and the building or structure to enhance lateral stability.
**Toeboard:** A barrier secured along the sides and the ends of a platform unit to guard against the falling of material, tools and other loose objects.

**Top-plate bracket scaffold:** A scaffold supported by brackets that hook over or are attached to the top of a wall. Similar to carpenter’s bracket scaffolds and form scaffolds and used in residential construction for setting trusses.

**Toprail:** The uppermost horizontal rail of a guardrail system.

**Tube-and-coupler scaffold:** A supported or suspended scaffold consisting of a platform or platforms supported by tubing, erected with coupling devices connecting uprights, braces, bearers, and runners.

**Tubular welded-frame scaffold:** See “Fabricated frame scaffold.”

**Two-point suspension scaffold (swing stage):** A suspension scaffold consisting of a platform supported by hangers (stirrups) suspended by two ropes from overhead supports and equipped to raise and lower the platform to desired work levels.

**Unstable objects:** Objects that could become dislocated, shift, and not support the loads imposed on them. Unstable objects do not constitute a safe base support for scaffolds, platforms, or workers. Examples: barrels, boxes, loose brick, and concrete blocks.

**Uplift:** Uplift is the separation of a scaffold frame from the frame below it.

**Vertical Pickup:** A rope used to support the horizontal rope in catenary scaffolds.

**Walkway:** A portion of a scaffold platform used only for access and is not a work level.

**Window jack scaffold:** A platform resting on a bracket or jack that projects through a window opening.

**Work Level:** An elevated platform used for supporting employees and their materials where work activities are performed.

**Working Load:** Load imposed by persons, materials and equipment.
Endnotes

