	Big Ox Energy - Siouxland, LLC Safety Management System		SSC.SAFE.POL.140-025.Scaffold	
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Purpose

The purpose of this program is to provide guidelines to Big Ox Energy - Siouxland LLC employees in the safe use of scaffolding, and to reduce the risk of injury to themselves and others while using scaffolding.

Scope

To define the procedures, responsibilities and safety of Big Ox Energy - Siouxland LLC personnel who work with or around scaffolding.

ENGINEERING CONTROLS/WORK PRACTICES

Scaffolds are a source of accidents when not used properly. Research data suggests that fatal falls occur as a result of defective scaffold equipment, improper installation of equipment, improper training of workers, or failure to use appropriate personal fall protection equipment.


The standard requires fall protection at a 6-foot height above a lower level for employees, or at heights lower if there is a risk of falls. Scaffolds shall not be erected, moved, dismantled, or altered except under the supervision of a competent person. The footing or anchorage for scaffolds must be sound, rigid, and capable of carrying the maximum intended load without settling or moving. Unstable objects such as barrels, boxes, loose brick, or concrete blocks must not be used to support scaffolds or planks. An access ladder or equivalent safe access must be provided. Scaffolds four to ten feet high, having a minimum horizontal dimension in either direction of less than 45 inches, must have standard guardrails installed on all open sides and ends of the platform. Scaffolding more than 10 feet above the ground or floor must have guardrails installed at all open sides and ends. Toeboards are required for all scaffolds above 6 feet on platforms where work will take place. Toe boards may not be needed on scaffold access walkways. The competent person shall determine when toe boards are required.

Guardrails:

- Must be made of not less than 2 x 4 lumber or other material providing equal protection. Guardrails must be approximately 42 inches high.
- Must have a mid-rail of at least 1 x 6 or 2 x 4 lumber or other material giving equal protection.
- The height of the top rail for scaffolds manufactured and placed in service before January 1, 2000 can be between 36 inches and 45 inches. The height of the top rail for scaffolds manufactured and placed in service after January 1, 2000 must be between 38 inches and 45 inches.

Toe-boards and Planking:

- Toe boards must be a minimum of four inches in height.
- Where persons are required to work or pass under a scaffold, a wire mesh screen may be installed between the toe board and the guardrail.
- Extend scaffold planks over their end supports a minimum of six to twelve inches. Planks shall be of OSHA rating (real dimension wood vs. nominal, and of scaffolding grade).

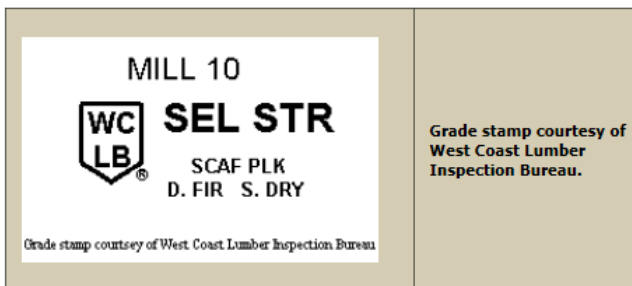
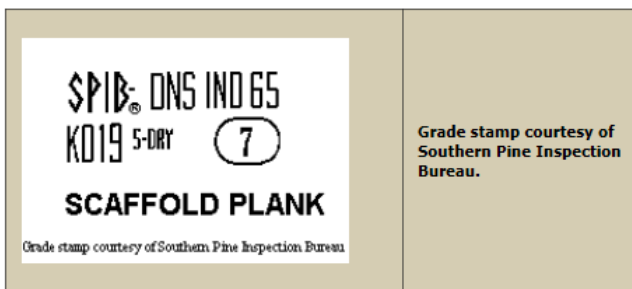
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Scaffold-grade lumber is meant to withstand forces not imposed on ordinary, construction-grade wood (which is only two-thirds the capacity of scaffold-grade). Using construction-grade lumber on a scaffold platform not only violates OSHA standards, but is also an unsafe practice and an invitation to a deadly accident.

The quality of scaffold-grade lumber is measured by:


- the number of **rings per inch** (6 or more),
- the **slope of the grain** (1 inch to the side for every 16 inches along the length of the board for Douglas Fir, 1/14 for Southern Pine), and
- the number of **defects**, such as knots and notches.

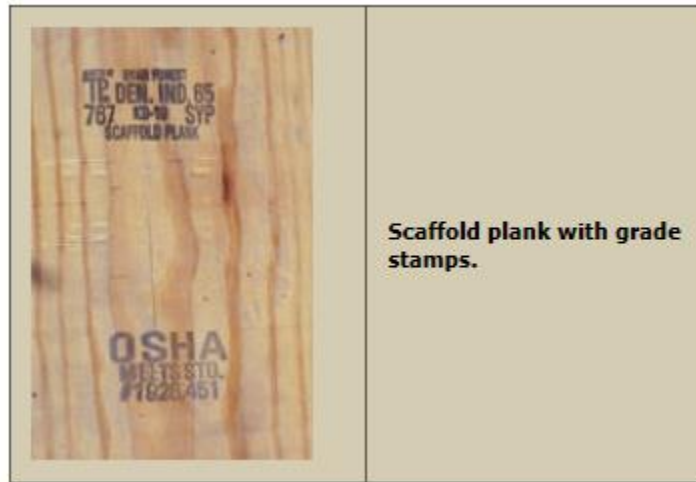
Solid sawn wood used for scaffold planks should follow the grading rules of a recognized **lumber grading association** or an **independent lumber inspection agency**, and be identified by that agency or association's grade stamp (see examples below).



Such organizations and their grading rules must be certified by the Board of Review of the American Lumber Standard Committee, per the U.S. Department of Commerce.

OSHA does not inspect lumber; therefore, any scaffold planking stamped "OSHA Approved" is, at best, misleading, and should not be assumed to meet the standard on the basis of that stamp alone. An inspection agency *can* claim that its product meets OSHA requirements (see [example below](#)). However, because a scaffold plank may still be in service long after the grade stamp on it has faded, workers should pay attention to the **quality** and **condition** of the planking, whether it bears a stamp or not.

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- When the cross-point of cross bracing is used as a top rail, it must be between 38 inches and 48 inches above the work platform.
- Mid-rails must be installed approximately halfway between the top rail and the platform surface.
- When a cross point of cross bracing is used as a mid-rail, it must be between 20 inches and 30 inches above the work platform.
- Uprights shall be adequate to meet the regulatory requirements

Erecting and dismantling:


- When erecting and dismantling supported scaffolds, a competent person must determine the feasibility of providing a safe means of access and fall protection for these operations.

Inspections:

- Before each work shift, during the work shift and after any occurrence that could affect the structural integrity, a competent person must inspect the scaffold and scaffold components for visible defects.
- All defects must be tagged.
- The revised scaffold standard may require more than one competent person on each job site. Scaffold planking must be of scaffold grade or equivalent.
- The height of a stationary scaffold should not exceed four times its base, unless it is tied, guyed or otherwise.

Scaffold Support and Bracing

- Scaffold legs must be set on adjustable or plain bases placed on mud sills or other foundations adequate to support the maximum rated load.
- Properly brace scaffolds by cross bracing or using diagonal braces, or both, for securing vertical members

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together laterally. Cross braces must be long enough so they will automatically square and align vertical members. In this way, erected scaffolds will always be plumb, square, and rigid.

- All brace connections must be secure.

TRAINING

Big Ox Energy - Siouxland LLC may train applicable employees who may work on or with a scaffold on the hazards and the procedures to control the hazards.

Training shall include:

- The nature of fall hazards and falling object hazards in the work area.
- The correct procedures for dealing with fall hazards and for erecting, maintaining, and disassembling the fall protection systems and falling object protection systems being used.
- The proper use of the scaffold, and the proper handling of materials on the scaffold.
- The maximum intended load and the load-carrying capacities of the scaffolds used.
- Protect yourself and/or your employees from serious injuries and even death. Employers and employees should be familiar with key provisions of the scaffolding standard.
- A qualified person must provide safety training for each worker who uses a scaffold.
- A competent person must give safety training to any worker who assembles, takes apart, moves, operates, repairs, maintains, or inspects scaffolds.
- If the worksite changes or the type of scaffold or safety equipment changes, workers using scaffolds must be retrained.

Retraining is required in at least the following situations:


- Where changes at the worksite present a hazard about which an employee has not been previously trained; or
- Where 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; or
- Where inadequacies in an affected employee's work involving scaffolds indicate that the employee has not retained the requisite proficiency.

Ensure Employee Compliance

Supervisors are responsible to ensure that employees comply with safe work procedures. Procedures are written to provide information and guidance to anyone performing a hazardous task or work process. Employees must comply with safe work procedures by using equipment and/or tools provided in order to do the task safely. Non-compliance with safe work practices may result in disciplinary action of the employee. Working safely is a condition of employment.

OTHER REQUIREMENTS

Erectors/Dismantlers

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Erectors and dismantlers are workers whose principal activity involves assembling and disassembling scaffolding before other work can commence, and after that work, or a portion of it, has been completed.

Training and Competent Person Requirements

OSHA requires employers to provide training by a competent person to each employee who is involved in erecting and/or disassembling a scaffold. A competent person is defined as one who:

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

Requirements for Designing and Constructing Scaffolds

Scaffolds must be designed by a qualified person and be constructed and loaded in accordance with that design. OSHA defines a qualified person as one who:

- Possesses a recognized degree, certificate, or professional standing; or
- Has extensive knowledge, training and experience; and therefore,
- Can solve or resolve problems related to the work or the project.

A qualified person must do adequate preplanning to assure the safe erection and use of the scaffold. Preplanning includes:

- Determining the type of scaffold necessary for the job,
- Determining the maximum load of the scaffold,
- Assuring a good foundation, and
- Avoiding electrical hazards.

Common Hazards

- Access
- Collapse
- Electrical
- Falls
- Instability
- Struck-by

Other References

- [29 CFR 1926.454](#), Training requirements. OSHA Standard.