

Scaffolding Safety

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27.1 PURPOSE

To establish T.A. Woods Company requirements for scaffold erection and dismantling operations.

To establish a basic set of guidelines to be followed by employees who erect supported and suspended scaffolds and for employees working on scaffolding.

27.2 GENERAL

Remember: OSHA requirements for all types of scaffolding are the minimum requirements that must be followed when erecting any scaffold. The manufacturer of the scaffold, T.A. Woods Company, or the owners of the facility, the state and local codes in the work area may have scaffold requirements that are more detailed than those requirements established by OSHA. As with all safety standards, employees of T.A. Woods Company will follow the most stringent standards.

T.A. Woods Company employees are prohibited from using any type of scaffolding erected by persons other than T.A. Woods Company employees under the direct supervision of a Competent Person or scaffolding erected by a competent vendor with appropriate credentials. The exception being when TAW employees must use previously erected scaffolding on an intermittent and non-continuous basis such as inserting sleeves or boxes during masonry construction. In this instance, T.A. Woods employees will enter the scaffolding at the direction of their supervisor and only if the scaffolding has been inspected by a Competent Person who has appropriately tagged the equipment.

27.3 DEFINITIONS

- **Scaffold:** a temporary elevated platform (suspended or supported) and its supporting structure (including points of anchorage) used for supporting employees or materials or both.
- **Qualified Person:** One who by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, or experience, has demonstrated his/her ability to solve or resolve problems related to the subject matter, the work, or the project.
- **Competent Person:** One who is capable of identifying existing hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to the employee, who has the authorization to take prompt corrective measures to eliminate them, **and does**. **NOTE:** A Competent Person, in addition to having extensive experience and knowledge regarding scaffold erection and dismantling, must also possess knowledge of other job site conditions that may be hazardous to the employees under his or her direction.

27.4 T.A. Woods Company COMPETENT PERSON REQUIREMENTS FOR SCAFFOLDING

General:

- 1) Must be a T.A. Woods Company superintendent or foreman.
- 2) 3 years experience working with scaffolding.
- 3) Must receive approved scaffold training.

Specific:

- 4) Knowledge of - OSHA Subpart L requirements.
- 5) Knowledge of - T.A. Woods Company preferred methods to erect and dismantle specific types of scaffolds.
- 6) Knowledge of - Use of all T.A. Woods Company standard parts required to build a proper scaffold, including footings and foundations.
- 7) Knowledge of – Possible job site hazards associated with the type of scaffold and job site surroundings.
- 8) Must be proficient in the use of fall prevention methods and in the use of fall arrest equipment.
- 9) Must take the Competent Person training and receive a passing grade or possess other applicable certification or credentials.

Authority:

An employee who meets the above qualifications and requirements can be designated by the Safety as the Competent Person on a specific project.

Vendors holding appropriate credentials or certifications may substitute for the company's Competent Person.

27.5 ALL SCAFFOLDS

- 27.5.1 All scaffolds will be erected according to the scaffold manufacturer's specifications and in compliance with the OSHA standards for Scaffolds in 29 CFR 1926 Subpart L.
- 27.5.2 Each employee who is involved in erecting, disassembling, moving, operating, repairing, maintaining, or inspecting a scaffold must be trained by a **Competent Person** or equal to recognize any hazards associated with the work in question. This training must be in compliance with the OSHA standards in Subpart L 1926.454(b)
- 27.5.3 All scaffolds must be designed by a **Qualified Person** and will be constructed and loaded in accordance with that design.
- 27.5.4 Scaffolds can be erected, moved, dismantled, or altered only under the supervision of a **Competent Person**.
- 27.5.5 All scaffold components must be inspected prior to use for damage or defects. All materials used as scaffold platforms must be inspected prior to use for damage or defects. Any scaffold component or platform material found to be damaged or defective must immediately be removed from service and properly tagged "**DO NOT USE**".

27.6 SUPPORTED SCAFFOLDS

- 27.6.1 All supported scaffold poles, legs, posts, frames, and uprights will bear on base plates and mudsills or on base plates and other adequate firm foundation.
- 27.6.2 Supported scaffold poles, legs, posts, frames, and uprights must be plumb and braced to prevent swaying and displacement.
- 27.6.3 All scaffolds must be properly braced, guyed and or tied according to the manufacturer's requirements and in accordance the OSHA standards in Subpart L 1926.451(c).
- 27.6.4 Any scaffold that must be installed in the vicinity of any power lines must be erected in accordance with the OSHA standards in Subpart L 1926.451(f)(6).
- 27.6.5 Scaffolds that are to be enclosed with any type of weather protection or screening are to be designed by a **Qualified Person**. The reason for this is due to the added wind forces placed on the scaffold by the enclosure.

- 27.6.6** All scaffold platforms must be fully planked between the uprights and the platforms must be secured from movement and uplift.
- 27.6.7** Guardrails must be installed on open sides and ends of the platform. Guardrails must meet the height and strength requirements of the OSHA standards in Subpart L 1926.451(g).
- 27.6.8** Toe boards are to be installed along the edge of the platform for a distance sufficient to protect employees below. Toeboards, where used on scaffolds must be in compliance with the OSHA standards in Subpart L 1926.451(h)(4).
- 27.6.9** Safe access to the scaffold must be provided to the erector during the construction phase as well as to the user once the scaffold is complete.
- 27.6.10** All supported scaffolds and scaffold components must be capable of supporting, without failure, its own weight and at least four times the maximum intended load applied or transmitted to it.
- 27.6.11** On each job site where there is a scaffold that is erected taller than six feet in height, there must be a Supported Scaffolding Erection and Dismantling Fall Protection Plan.
- 27.6.12** On each job site where there is a scaffold that is erected taller than ten feet in height, there must be “Supported Scaffolding Erection and Dismantling Fall Protection Evaluation Form completed in addition to the Supported Scaffolding Erection and Dismantling Fall Protection Plan.
- 27.6.13** A registered professional engineer must design any scaffold that requires a special design format or special loading requirements.
- 27.6.14** A registered professional engineer must design any scaffold exceeding one hundred and twenty-five feet (125’) in height.
- 27.6.15** Tying off to a scaffold by the erector is permitted when the erector is using his tie-off point as a means of a positioning device only and when the scaffold is properly secured to the structure or otherwise restrained from tipping over.
- 27.6.16** When using the above tie-off procedure, the scaffold must also meet the requirements of the OSHA standards in Subpart M, 1926.502(e).
- 27.6.17** Tying off to the scaffold by the erector to use as a part of his personal fall arrest system is permitted provided the scaffold is designed for that purpose and the scaffold erection process has been completed at the point

of tie-off. To use a scaffold as an anchor point for attachment of your personal fall arrest system, the scaffold must be designed by a qualified person.

- 27.6.18** When using the above tie-off procedure, the scaffold must also meet the requirements of the OSHA standards in Subpart M, 1926.502(d).
- 27.6.19** All scaffolds under construction must be **red** tagged, "DO NOT USE". Scaffolds not passing daily inspection should be **red** tagged. All completed scaffolds with no existing hazards may be **green** tagged. Place tags at lawful points of access such as ladderways or ramps from adjoining structures.

27.7 SUSPENDED SCAFFOLDS

- 27.7.1** All suspended scaffolds must be erected according to the scaffold manufacturer's specifications and in compliance with the OSHA standards for Scaffolds in 29 CFR 1926 Subpart L, including sections: 1926.451(a), 1926.451(d), 1926.451(f), 1926.452(o), 1926.452(p), 1926.452(q) and 1926.452(v).
- 27.7.2** Outrigger beams, parapet clamps, or roof hooks may be used to support the suspended scaffold. Be sure the building is capable of supporting the necessary loads. In addition, each of these devices must be attached to a structurally sound portion of the building with a suitable tieback to prevent accidental movement of the outrigger beam, parapet clamp, or roof hook.
- 27.7.3** Tiebacks must have the equivalent strength of the hoisting rope. Tiebacks will be installed without slack. Whenever possible, tiebacks must be installed at right angles to the face of the building. If tiebacks cannot be installed at right angles, two opposing angle tiebacks, without slack, will be used for each outrigger beam, parapet clamp and roof hook.
- 27.7.4** Parapet clamps and roof hooks must be installed only on structurally adequate parapets that can withstand the bending loads imposed on them by the parapet clamp or roof hook under maximum load conditions. As a practical matter, T.A. Woods Company will verify the structural integrity of parapets from the building owner, host employer, or controlling contractor.
- 27.7.5** The outrigger beams should rest on suitable wood bearing blocks which are perpendicular to the outrigger beams.
- 27.7.6** Overhang of outrigger beams must not exceed the maximum allowable dimension as shown in the appropriate instructions for the load being used.

- 27.7.7 Counterweights will provide a minimum safety factor of four to one against overturning. Each will be made of non-flowable material and permanently marked with its weight. All counterweights must be securely fastened to the outrigger beam or to some other securely attached structural member designed for that purpose.
- 27.7.8 All overhead rigging, counterweights, anchorages, and connections must be secured and adequately restrained from movement in any direction.
- 27.7.9 Any scaffold that must be installed in the vicinity of any power lines must be erected in accordance with the OSHA standards in Subpart L 1926.451(f)(6).
- 27.7.10 Never install scaffolds in the vicinity of exposed electrical circuits until it is assured that such exposed circuits cannot affect any part of the scaffold assembly.
- 27.7.11 Connection of the wire rope to the rigging must be made with proper fittings designed for that purpose.
- 27.7.12 All hoist motors must be in good operating condition and all built-in safety devices must be operational. See user's manual for routine inspection procedures.
- 27.7.13 Make sure all electrical connections on all electric hoists are secured from being disconnected. Make sure strain relief devices are in place.
- 27.7.14 Make sure all air hoses on all air-operated hoists are connected and secured from being disconnected.
- 27.7.15 If welding operations are going to take place from the suspended scaffold, the scaffold must also meet the requirements in the OSHA standards of Subpart L 1926.451(f) (17).

27.8 REQUIRED PAPERWORK FOR ERECTING AND DISMANTLING

The following paperwork is required to be completed for all job sites where E&D operations are taking place. This paperwork must be kept in a file on the work site until the job is complete. After the job is completed, this paperwork must be kept in the provided to the office to be filed with project documents.

- 1) Job Hazard Analysis Checklist (Exhibit 14A) and Job Hazard Analysis (Exhibit 14B)
- 2) Fall Protection Work Plan (Exhibit 13A)
- 3) DoD Competent Person Fall Protection (Exhibit 13C)

Documented Site Specific Safety training must covers the following topics:

- a. Job Site Hazards
 - b. Job Site Fall Hazards
 - c. Fall Protection Plan including Rescue
 - d. Emergency Action Plan
 - e. Required Employee PPE
 - f. Safe Work Practices
 - g. Access Permission, Tagging
 - h. Load maximum
 - i. Employee Responsibilities
 - j. Incident/Accident Reporting Procedures
 - k. The Type of Scaffold Used
 - l. Erection Procedures.
 - m. Any other pertinent information that may be required for that job site by T.A. Woods Company, the owner, host contractor, etc.
- 4) Daily 5X3 Safety/Production Huddle documentation on DSFR or 5X3 sheet
NOTE: Safety meeting sheets (site-specific and daily) must include documentation of topics covered, name and title of person giving meeting, and list of each employee in attendance of the meeting.
- 5) Documentation of any Facility Required Training given to employees working on that job site.
- 6) Documentation of any additional training conducted for employees on site, including but not limited to the following subjects: Confined Space, Hole Watch, Lock Out/Tag Out, Hazard Communication, Hearing Protection, Respiratory Protection, etc.

