



SCAFFOLDS

Meets California OSHA Requirements
Integrated Water Services, Inc.
(the Company)



Purpose

The purpose of this program is to prevent injuries due to falls from elevated work areas and ensure employees and contractors are able to inspect scaffolding materials and erected scaffolds when working in California in accordance with CCR 1637.

Scope

This program is applicable at every California work area where scaffolding is erected. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers Company employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

Key Responsibilities

Managers and Supervisors

- Responsible for ensuring that scaffolds are erected by a qualified person, that set up inspections are performed, and all daily inspections are performed before work starts for the day.
- Responsible for ensuring that all employees, and/or contractors have been trained in the use and inspection methods for scaffolds.
- Responsible for ensuring that all employees and contractors are aware that if an inspection discovers a defect, the scaffold cannot be used until repairs are made.
- All manufacturer procedures applicable to the operational function of equipment must be complied with. Manufactured scaffolds shall be used in accordance with the manufacturer's recommendations.

Employees

- Responsible for following this program by inspecting the scaffolds daily and report any damages or repairs that may be needed to their supervisor.

General Requirements

When scaffoldings is to be used: Scaffolds shall be provided for all work that cannot be done safely by employees standing on permanent or solid construction at least 20 inches wide, except where such work can be safely done from ladders.

Duties of the qualified person: A qualified person shall determine the maximum intended working loads for scaffolds that are neither manufactured nor engineered. The erection and dismantling of scaffolds or falsework shall be performed under the supervision and direction of a qualified person.

Allowable design and construction of scaffolds to be used: Each scaffold shall be designed and constructed using a dead load safety factor that will ensure the scaffold supports, without failure, its own weight and 4 times the maximum intended working (live) load applied or transmitted to it.

Materials that are allowed in construction of scaffolds: Scaffolds shall be constructed of wood or other suitable materials such as steel or aluminum members of known strength characteristics. Where materials other than wood are used, or where scaffold designs differ from those specified in these Orders of T8 CCR 1637, the scaffold



and its parts must provide a degree of strength, rigidity and safety equivalent to that provided by the described scaffold it replaces.

Platform Height Requirements: The platform height shall not exceed 3 times the smallest dimension of the base. The maximum work level height shall not exceed 3 times the least base dimension below the platform. Where the basic mobile unit does not meet this requirement, outrigger frames shall be employed to achieve this least base dimension, or provisions shall be made to guy or brace the unit against tipping.

Load ratings and define requirement of each (Light, Medium, Heavy): The design load of all scaffolds shall be calculated on the basis of Light - designed and constructed to carry a working load of 25 pounds per square foot; Medium - designed and constructed to carry a working load of 50 pounds per square foot and Heavy - designed and constructed to carry a working load of 75 pounds per square foot.

The Company requires the maximum loading for any given scaffold be posted or given to each supervisory employee and made readily available at each jobsite. The maximum intended working load for each scaffold shall be posted at a conspicuous location at each jobsite or be provided to each supervisory employee who shall have it readily available at the jobsite.

Toe board requirements for all scaffolds meeting or exceeding work levels of 6 feet - All scaffold work levels 6 feet or higher above the ground or floor shall have a toe board at locations where persons are required to work or pass under the scaffold. (See Section 3210.)

Guardrail requirements for all scaffolds meeting or exceeding work levels of 30 inches - All scaffold work levels 30 inches or higher above the ground or floor shall have guardrail protection that meets the requirements of Section 3209 and 3210.

All planking or platforms shall be overlapped (minimum 12 inches) or secured from movement.

Scaffold wheels or casters must be properly designed for strength and dimensions and shall be provided with a positive locking device - Wheels or casters shall be properly designed for strength and dimensions to support 4 times the design working load. All scaffold wheels, casters and swivels shall be provided with a positive locking device or other effective means to prevent movement of the scaffold.

Anchorage and bracing guidelines: Anchorage and bracing shall be such that scaffolds and falsework will be prevented from swaying, tipping, or collapsing.

Leveling of the Work Platform - Where leveling of the elevated work platform is required, screw jacks or other similar means for adjusting the height shall be provided in the base section of each mobile unit. The screw jack shall extend into its leg tube at least 1/3 its length but in no case shall the exposed portion of the screw jack exceed 12 inches.

Requirements for "select" grade lumber to be used in the construction of a scaffold (except in planks): Scaffold lumber, except for planks, used on suspended or ladder-jack scaffolds, shall be the equivalent of "selected lumber," free from damage that affects its strength.

Guidelines for extension planking:



- Extension planking of the finger type shall be made with at least 5 fingers on each side. These fingers shall be at least 1-inch by 2 1/8-inch selected straight-grained Douglas fir or material of equal strength. All metal fittings shall be adequate to maintain the structural qualities of the device.
- The length of the extended planking shall not exceed 12 feet 6 inches, and the actual mechanical overlap between the 2 halves shall be not less than 1/8 of the length of the extended planking. A substantial stop shall be provided to maintain this overlap.
- Not more than one employee shall be permitted at one time on any extension planking that is more than 3 feet in height.
- Extension planking shall not be used as a platform on ladder-jack, suspended, or other unstable scaffolds.

A scaffold plank shall not overhang its support by more than 18 inches, unless secured. Except as specified in other Orders of T8 CCR 1637, a scaffold plank shall not overhang its support by more than 18 inches, unless access to this overhanging portion is prevented by a guardrail, or other barrier, or unless the other plank end is securely anchored.

Nailing procedures for scaffolds constructed of wood:

- All nailed joints in scaffolds and wooden falsework must contain enough properly placed nails of ample size to carry the loads they are intended to support.
- Nailed joints or connections shall not be used to support concrete hoppers with a capacity in excess of 1/2 cubic yard.
- Double-headed nails shall not be used for attaching railings or in other service where the projections might catch on the clothing of workers or create similar hazards.
- No nail smaller than 8-penny shall be used in the construction of scaffolding.
- All nails shall be driven full length or to the first head when double-headed nails are used.
- The minimum number of nails per connection shall be in accordance with the table Cal/OSHA T8 CCR 1637 (i)(6).
- Lubricated or wax-coated nails shall not be used in the construction of scaffolds, falsework, or other temporary installations.

Prohibited types of scaffolds: Lean-to or jack scaffolds, shore scaffolds, nailed brackets, loose tile, loose brick, loose blocks, stilts or other similar unstable objects shall not be used as working platforms, or for the support of such platforms.

Erection and Dismantling:

- The erection and dismantling of scaffolds or falsework shall be performed under the supervision and direction of a qualified person.
- Erection and dismantling of scaffolds shall be performed in accordance with good engineering practice. Where engineering design is required by these Orders of T8 CCR 1637, the engineering drawings shall be made available at the job site during erection or upon request by the Division of Occupational Safety and Health.
- All required ties to the structure shall be installed as soon as the scaffold has been completed to the tie-in area during erection.
- Ties shall only be removed during dismantling as the work progresses downward unless other methods are used to prevent the scaffold from falling over.



- No structural members shall be removed from scaffolds during dismantling operations below the level being dismantled.
- Where work platforms are proposed, guardrails shall be installed before other work not directly related to scaffold erection is permitted to begin.
- The requirements of Section 1637(k) (2) through (6), inclusive, of T8 CCR 1637 may be temporarily suspended for short durations, provided adequate risk control is recognized and maintained under immediate, competent supervision.

Erection and dismantling be done under the supervision of a competent person: The erection and dismantling of scaffolds or falsework shall be performed under the supervision and direction of a qualified person. In addition to persons meeting the requirements of "qualified persons" as defined in Section 1504 of T8 CCR 1637, person(s) possessing a certification of competence in scaffold erection, dismantling and use issued by trade associations, state approved apprenticeship or training programs or other similar training programs shall be considered a "qualified person(s)."

A safe means of access/egress shall be provided to all scaffold platforms: A safe and unobstructed means of access, such as a walkway, stair or ladder shall be provided to all scaffold platforms.

Slippery conditions are prohibited unless it is part of the necessary work: No worker shall be permitted to work on a scaffold platform where slippery conditions exist unless such conditions are a necessary part of the work.

The Company is responsible for providing protection for workers on scaffolds who are exposed to overhead hazards: Workers on scaffolds who are exposed to overhead hazards shall be provided with overhead protection or other means that will effectively eliminate the hazard.

Proper use of bolts in the construction of scaffolds: Bolts used in the construction of scaffolds shall be of a size and in sufficient numbers at each connection to develop the designed strength of the scaffold. See Plate B-31, Appendix of T8 CCR 1637.

The use of tag lines when materials are line-hoisted: Where materials are line hoisted onto a scaffold, a tag line shall be used where necessary to control the load.

Procedures for the use of platform planks at corners: When a scaffold changes its direction, the platform planks need to be laid in a manner to prevent tipping.

Unsafe weather conditions for work that involves scaffolds: Work on or from scaffolds is prohibited during storms or high winds unless a qualified person has determined that it is safe for employees to be on the scaffold and those employees are protected by a personal fall arrest system.

Wood platforms shall not be covered with opaque finishes: Wood platforms shall not be covered with opaque finishes, except that platform edges may be covered or marked for identification. Platforms may be coated periodically with wood preservatives, fire-retardant finishes and slip-resistant finishes; however, the coating may not obscure the top or bottom wood surfaces.

Training Requirements

The supervisor shall have each employee who performs work while on a scaffold 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 shall occur before use and include the following areas:

- Basic safety information.
- Hazards including fall protection, electrical safety, falling object protection.
- The proper use of the scaffold, and the proper handling of materials on the scaffold.
- 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.
- The maximum intended load capacity of the scaffolds used.

The supervisor shall have each employee who is involved in erecting, disassembling, moving, operating, repairing, maintaining, or inspecting a scaffold trained by a competent person to recognize any hazards associated with the work in question.

- The training shall include the following topics, as applicable:
- The nature of scaffold hazards.
- The correct procedures for erecting, disassembling, moving, operating, repairing, inspecting, and maintaining the type of scaffold in use.
- The design criteria, maximum intended load-carrying capacity and intended use of the scaffold.

When the employer has reason to believe that an employee lacks the skill or understanding needed for safe work involving the erection, use or dismantling of scaffolds, the employer shall retrain each employee so that the requisite proficiency is regained. Retraining is required in at least the following situations:

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