Pathway to the Future

Ladder and Scaffolding Safety Plan

Berryessa Union School District

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LADDER AND SCAFFOLD SAFETY PLAN

This plan outlines the Berryessa Union School District's guidelines for the operation, maintenance, safety, and training for ladder and scaffolds.

Ladder & Scaffold Safety Falls can result in serious injury or death. Falls from a higher elevation account for approximately 10% of workplace fatalities and 5.2% of nonfatal workplace injuries

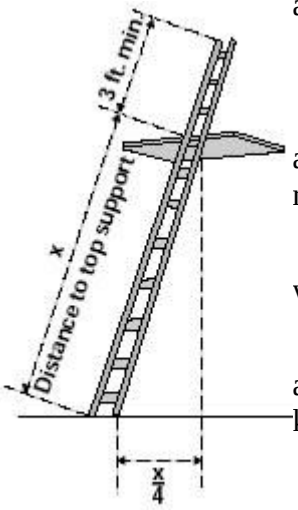
PORTABLE LADDER SAFETY

Falls from portable ladders (step, straight, combination and extension) are one of the leading causes of occupational fatalities and injuries.

- Read and follow all labels/markings on the ladder.
- Avoid electrical hazards! – Look for overhead power lines before handling a ladder. Avoid using a metal ladder near power lines or exposed energized electrical equipment.
- Always inspect the ladder prior to using it. If the ladder is damaged, it must be removed from service and tagged until repaired or discarded.
- Always maintain a 3-point (two hands and a foot, or two feet and a hand) contact on the ladder when climbing. Keep your body near the middle of the step and always face the ladder while climbing (see diagram).

- Only use ladders and appropriate accessories (ladder levelers, jacks or hooks) for their designed purposes.
- Ladders must be free of any slippery material on the rungs, steps or feet.
- Do not use a self-supporting ladder (e.g., step ladder) as a single ladder or in a partially closed position.
- Do not use the top step/rung of a ladder as a step/rung unless it was designed for that purpose.
- Use a ladder only on a stable and level surface, unless it has been secured (top or bottom) to prevent displacement.

- Do not place a ladder on boxes, barrels or other unstable bases to obtain additional height.
- Do not move or shift a ladder while a person or equipment is on the ladder.
- An extension or straight ladder used to access an elevated surface must extend at least 3 feet above the point of support (see diagram). Do not stand on the three top rungs of a straight, single or extension ladder.
- The proper angle for setting up a ladder is to place its base a quarter of the working length of the ladder from the wall or other vertical surface (see diagram).
- A ladder placed in any location where it can be displaced by other work activities must be secured to prevent displacement or a barricade must be erected to keep traffic away from the ladder.



- Be sure that all locks on an extension ladder are properly engaged.
- Do not exceed the maximum load rating of a ladder. Be aware of the ladder's load rating and of the weight it is supporting, including the weight of any tools or equipment.

Scaffold Safety Guidelines

DO NOT use a scaffold unless you are authorized and competent in the use of scaffolding!

Scaffolds must have firm footing or anchorage to support the intended load.

Use a competent or trained person to erect, move, dismantle or alter.

Standard guardrails are required at 4 and 6 feet.

Replace or repair any damaged parts immediately.

All planking should be scaffold grade and should be overlapped 12 inches and secured.

Do not allow materials to accumulate that could cause a trip or fall.

Do not work on scaffolds during high winds or storms.

Do not work on scaffolds in slippery conditions. Fall protection gear is designed to catch a worker in the case of a fall and prevent that worker from striking the ground or other objects. There are many different types of fall protection devices, which are designed for different jobs and situations. When doing elevated work, wearing fall protection gear and tying off can prevent a fall that could result in serious injury or death. Many of these devices are comfortable, inexpensive, and pose very little inconvenience to your work procedures. The time you take to wear the gear and tie off properly can save your life!

Guidelines: Scaffolding is an important facet of the construction industry. Knowledge and good judgment are imperative in the placement, selection, and grade of materials used in erecting scaffolding.

A. Types

1. Tubular welded frame
2. Form scaffolding
3. Mobile manually propelled

4. Two-point suspension

5. Ladder type platforms

6. Elevated work platforms

7. Self-propelled elevating work platforms

B. Handrail

All scaffolding shall include:

1. Rail at 42 inches of 2 x 4 lumber, 3/8 cable or metal equivalent.

2. Mid-rail, same strength requirements as above.

3. Top and mid-rail are to be capable of withstanding 200 pounds of applied force as though a body mass were propelled against them, and 25 pounds per foot of force in all directions against other rails and members.

4. Post support at minimum 8-foot centers of restricting rail. Deflection from specified loads shall not be more than 3 inches.

5. Toe boards to prevent material, tools, or other items from falling from the scaffold will be a minimum of 3/4 x 4 inches. They are considered an integral part of the handrail system, and are included in the general term handrail unless specifically omitted by a notation.

C. Braces

1. Must be x type. Standard parts of tubular scaffold assembly must be in place on both sides of each section; exceptions are the top inside of mason's scaffold until the sources are at the level of the top deck.

2. Diagonal wood braces will be fastened to each post at the top and bottom.

3. Diagonal spreader braces must be in place at each third section of height as tubular metal scaffold assembly progresses.

D. Scaffold planks

1. District standards for scaffold planks are two-inch x 10-inch scaffold-grade 1,500 pounds f.s. (fiber stress grade) or laminated material. Lengths are eight-foot, ten-foot and sixteen-foot.

2. Scaffold plank support will not exceed eight-foot centers.

3. Scaffold planks must be secured or fastened to supports on all types (except metal scaffold frame units, if used). Planks must overlap 12 inches in continuing runs. All planks must overhang the bearing by at least 6 inches and not more than 12 inches. Maximum loading on each eight-

E. All other scaffolds are to have a four to one safety factor of the intended load.

F. Sills are required on soft ground, grating, or other similar base surface.

G. Base plates are available for scaffold legs on solid ground.

H. Screw-type levelers are used for irregular base surface and increment height adjustment.

I. Scaffold erection will be directed by a competent person familiar with and trained in scaffold erection, who shall be responsible for safety and compliance of the procedures herein and with OSHA 29 CFR 1926.451 subpart l.

J. Scaffold erection must start level and a plumb condition shall be maintained.

K. Metal scaffold legs shall be pinned at each joint as scaffold erection progresses.

L. Scaffold assemblies or towers must be secured to the adjacent structure or by a guy cable at minimum of 30 feet horizontally and 26 feet vertically.

M. Electrical power source proximity.

1. All scaffolds will be insulated from contact and ground potential from all power lines or other electrical current carriers.

N. Scaffolds and work decks above other work or travel areas will be screened or paneled between handrails and toe boards.

O. Scaffolds will have overhead protection from all work above, two-inch planks or equivalent materials must be used.

P. Scaffold decks will be fully planked.

Q. Ladders or other safe equivalent shall be provided for access from above or below, to scaffold work area.

R. Damaged planks, ladders or scaffold units will be repaired before use, or discarded if repairs cannot be done.

S. If conditions for installing standard handrail are impractical, the designated person may elect to use a catenary cable or individual lifelines. Workers will connect to these with the lanyard of their safety belt.

T. Tubular welded frame units.

1. All basic standards apply.

2. Do not mix "brands" of scaffolds.

U. Form scaffolds.

1. All basic standards apply.

2. Must be designed and engineered by a competent person and approved by the project engineer.

V. Mobile scaffolds - manually propelled.

Scissor lifts, including those with platforms that extend beyond the equipment's wheelbase, do not fall within the ANSI definition of aerial lifts. Therefore, scissor lifts are not considered to be a type of aerial lift. While there are no OSHA provisions that specifically address scissor lifts, they do meet the definition of a scaffold.

1. Maximum height shall be four times the narrowest base measurement. Outriggers may be added to increase the height. Casters must be designed for the scaffold and the load, and shall be locked when not in motion. Mechanical scissor-type units will be locked or blocked at each location of use.

2. Insure that all bracing, as required by standards, is on scaffolds.

3. Persons will not ride the unit unless:

a. The floor is within three degrees of level.

b. The floor is free of holes and obstructions.

c. Persons are secured, tools are lowered or laid on the deck.

d. Persons sit down on the deck.

e. Movement force is applied at the base of the unit.

4. Standard deck, handrails, mid-rail, and toe boards are required.

W. Mobile elevated work platforms

1. All persons designated to work on these units will be instructed in the operation of the controls by the site supervisor, manager or other designated person.

2. All units are load rated and will not be loaded with persons, tools, and equipment that will exceed the rated capacity.

3. All units are equipped with standard handrail and toe boards that are adequate protection for those on the platform. Personal tie-off is necessary only if a rail must be removed to accommodate a location.

4. Outriggers, if provided for stability, to prevent overturning at a raised position, must be used.

5. The unit will be blocked or braked, and if provided, the outriggers will be set, before raising or loading the unit.

Training – Maintenance, Operations and Transportation employees will be trained annually on ladder and scaffolding safety. Employees will be trained as needed on the scissor lift.

Employees should report concerns to the Director of Maintenance, Operations and Transportation, Dan Norris at 408-923-1893.

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