



*Pathway to the Future*

## **Ladder Safety Program**

**Berryessa Union School District  
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Updated February 2017

# Ladder Safety Program

## Purpose and Scope

The Berryessa Union School District (BUSD) has developed this Ladder Safety Program with the intent to put forth the regulations regarding Ladder Safety procedures and training at BUSD. This program is in compliance with the Code of Federal Regulations (CFR) 1926, and Subpart X contains specific information on these rules. All BUSD employees who might be expected to use a ladder during the course of work should be familiar with this document. This standard operating procedure covers various types of ladders including; step ladders, extension ladders and fixed ladders. Ladder users must be able to recognize and avoid ladder hazards and be aware of safe practices in setting up, storing, moving and working from this equipment.

## Responsibility

1. It is the responsibility of all Supervisors, Department Managers, Faculty and Staff to assure that all staff at BUSD who may use a ladder read and understand this document.
2. It is the responsibility of Environmental Health and Safety to provide basic ladder training safety information to all departments in need of that training.
3. It is the responsibility of all Supervisors, Department Managers, Faculty and Staff to assure that all ladders being used at BUSD are free from defects and that all moving parts are working properly.
4. It is the responsibility of all Supervisors, Department Managers, Faculty and Staff to maintain records on departmental ladder training.
5. It is the responsibility of Environmental Health and Safety to maintain records of Environmental Health Ladder Safety training sessions when they occur.

## Ladder Category Types

1. Fixed Ladder- A ladder that can not be easily moved or carried, and may be an integral part of a structure.
2. Type 1AA- Special Duty, Rugged Use, 375lbs Load
3. Type 1A- Extra Heavy Duty, Industrial Use, 300lbs Load
4. Type 1- Heavy Duty, Industrial Use, 250lbs Load
5. Type II- Medium Duty, Commercial Use, 225lbs Load
6. Type III- Light Duty, Household Use, 200lbs Load

## Policy

1. All BUSD employees who use ladders should have Ladder Safety Training.
2. Ladder Safety Training will consist of recognition of possible hazards associated with ladder use, proper maintenance and safety precautions to be taken when using ladders.
3. All employees who use ladders at BUSD must inspect them for defects or possible hazards before the ladders are used. Ladders with loose parts or faulty rungs should be taken out of service immediately.

4. Ladders that are taken out of service should be tagged “Defective” and removed from the work area.
5. Whenever possible have someone within shouting distance while on a ladder.

#### **Fixed Ladder Safety**

1. Fixed ladders must be secured to the object they are attached to.
2. Fixed ladders over 20 feet must have a safety cage surrounding the ladder.
3. The Safety cage should have 15” clearance to all point from the center.
4. Defects in fixed ladders should be repaired as soon as possible.
5. When a defect is not repairable the ladder must be take out of service.

#### **Safe Ladder Setup**

1. All ladders must be placed on firm ground.
2. Do not set ladders on boxes, blocks or other objects that might move.
3. Do not lean or reach out while standing on ladders.
4. Secure ladders whenever a danger of slippage might occur.
5. Do not use ladders in high wind or during inclement weather conditions.
6. Never set up ladders in front of or around doors, unless the door is posted or locked.
7. Do not sit on ladders.
8. Use safety shoes or other rubber soles shoes when climbing a ladder

#### **Climbing and Standing on Ladders Safely**

1. Always face a ladder when climbing up or down.
2. Avoid carrying materials or tools when climbing a ladder. Climb a ladder first then pull up the materials with a rope.
3. Rung and steps should be clear of grease, oil, wet paint, snow and ice before climbing.
4. Do not climb onto a ladder from the side.
5. Do not slide down a ladder.
6. Climb or stand on a ladder with your feet in the center of the rung.
7. Do not stand on the top rung or step of a ladder

#### **Proper Use and Care of Ladders**

1. Never use metal ladders near expose electrical wires.
2. Place warning signs or setup barriers around a ladder before use.
3. Do not move a ladder while someone is on it.
4. Never use a ladder when under the influence of alcohol or prescription medications.
5. Do not leave tools or materials on top of ladders.
6. Only one person should be on a ladder at a time.
7. Do not use a ladder on a scaffold.
8. Do not try to rock a ladder to move it.
9. Store wood ladders where they will not be expose to the elements.

10. Make sure ladders are properly secured when transported.

### **Step Ladder Safety**

1. Never use a stepladder over 20 feet in length.
2. Always open a stepladder completely and make sure the spreader is locked before use.
3. Do not stand higher than the second step from the top of a stepladder.
4. Do not straddle a stepladder.

### **Extension Ladder Safety**

1. The sections of an extension ladder should overlap enough to retain the strength of the ladder.
  - a. Length of Ladder and required Overlap
    - i. Up to 36' requires a 3 Feet Overlap
    - ii. Over 36' to 48' requires a 4 Feet Overlap
    - iii. Over 48' to 60' requires a 5 Feet Overlap
2. Never Splice or tie two short ladders together
3. When using a ladder for access to a landing, it must extend 3 rungs or 3 feet above a landing.
4. The top of an extension ladder should rest against a flat, firm surface.
5. Elevate and extend these extension ladders at both the base and the top.

### **Extension Ladder Setup**

1. Lay a ladder on the ground when it is collapsed.
2. Have someone foot the ladder or make sure it is braced against something.
3. Pick up the ladder and walk it to an upright position, making sure trees or wires will not obstruct it.
4. Slide the bottom of the ladder outwards to the proper angle and set the feet correctly.
5. Then extend the ladder by pulling the extensions line.
6. Make sure the rungs on the upper half of the ladder are properly secured by the locking mechanism.
7. If possible, tie the ladder off or have someone steady the ladder as you climb it.

### **Additional References**

1. Attachment A- OSHA Fact Sheet- Reducing Falls in Construction: Safe use of Extension Ladders
2. Attachment B- OSHA Fact Sheet- Reducing Falls in Construction: Safe use of Stepladders

**Updated on 2/2017 and approved through BUSD Safety Committee on 3/2017**

## Reducing Falls in Construction: Safe Use of Stepladders

Workers who use ladders in construction risk permanent injury or death from falls and electrocutions. These hazards can be eliminated or substantially reduced by following good safety practices. This fact sheet examines some of the hazards workers may encounter while working on **stepladders** and explains what employers and workers can do to reduce injuries. OSHA's requirements for stepladders are in Subpart X—Stairways and Ladders of OSHA's Construction standards.

### What is a Stepladder?

A **stepladder** is a portable, self-supporting, A-frame ladder. It has two front side rails and two rear side rails. Generally, there are steps mounted between the front side rails and bracing between the rear side rails. (See Figure 1, below.)

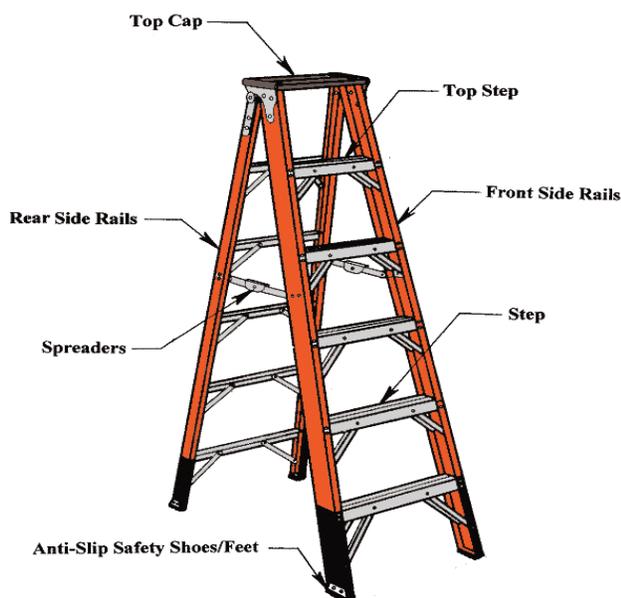


Figure 1: Stepladder

### PLAN Ahead to Get the Job Done Safely.

A competent person must visually inspect stepladders for visible defects on a periodic basis and after any occurrence that could affect their safe use. Defects include, but are not limited to:

- Structural damage, split/bent side rails, broken or missing rungs/steps/cleats and missing or damaged safety devices.

- Grease, dirt or other contaminants that could cause slips or falls.
- Paint or stickers (except warning or safety labels) that could hide possible defects.

### PROVIDE the Right Stepladder for the Job with the Proper Load Capacity.

- Use a ladder that can sustain at least four times the maximum intended load, except that each extra-heavy duty type 1A metal or plastic ladder shall sustain at least 3.3 times the maximum intended load. Also acceptable are ladders that meet the requirements set forth in Appendix A of Subpart X. Follow the manufacturer's instructions and labels on the ladder. To determine the correct ladder, consider your weight plus the weight of your load. Do not exceed the load rating and always include the weight of all tools, materials and equipment.

Type	Duty Rating	Use	Load
1AA	Special Duty	Rugged	375 lbs.
1A	Extra Heavy Duty	Industrial	300 lbs.
1	Heavy Duty	Industrial	250 lbs.
II	Medium Duty	Commercial	225 lbs.
III	Light Duty	Household	200 lbs.

Source for Types 1A, I, II, III: Subpart X—Stairways and Ladders, Appendix A (American National Standards Institute (ANSI) 14.1, 14.2, 14.5 (1982)) of OSHA's Construction standards. Source for Type 1AA: ANSI 14.1, 14.2, 14.5 (2009), which are non-mandatory guidelines.

## TRAIN Workers to Use Stepladders Safely.

Employers must train each worker to recognize and minimize ladder-related hazards.



### PLAN. PROVIDE. TRAIN.

Three simple steps to prevent falls.

### Common Stepladder Hazards

- Damaged stepladder
- Ladders on slippery or unstable surface
- Unlocked ladder spreaders
- Standing on the top step or top cap
- Loading ladder beyond rated load
- Ladders in high-traffic location
- Reaching outside ladder side rails
- Ladders in close proximity to electrical wiring/equipment

### Safe Stepladder Use—DO:

Read and follow all the manufacturer's instructions and labels on the ladder.

- Look for overhead power lines before handling or climbing a ladder.
- Maintain a 3-point contact (two hands and a

foot, or two feet and a hand) when climbing/descending a ladder.

- Stay near the middle of the ladder and face the ladder while climbing up/down.
- Use a barricade to keep traffic away from the ladder.
- Keep ladders free of any slippery materials.
- Only put ladders on a stable and level surface that is not slippery.

### Safe Stepladder Use—DO NOT:

- Use ladders for a purpose other than that for which they were designed. For example, do not use a folded stepladder as a single ladder.
- Use a stepladder with spreaders unlocked.
- Use the top step or cap as a step.
- Place a ladder on boxes, barrels or other unstable bases.
- Move or shift a ladder with a person or equipment on the ladder.
- Use cross bracing on the rear of stepladders for climbing.
- Paint a ladder with opaque coatings.
- Use a damaged ladder.
- Leave tools/materials/equipment on stepladder.
- Use a stepladder horizontally like a platform.
- Use a metal stepladder near power lines or electrical equipment.

**OSHA standard: 29 CFR 1926 Subpart X—Stairways and Ladders**

**American National Standards Institute standard: ANSI A14.1, A14.2, A14.5—Ladder Safety Requirements**  
(Not an OSHA standard, included to be used as guidance to meet OSHA's requirements)

*Employers using stepladders must follow the ladder requirements set forth in 29 CFR 1926 Subpart X. Per Appendix A to Subpart X of Part 1926—Ladders, ladders designed in accordance with the following ANSI standards will be considered in accordance with 29 CFR 1926.1053(a)(1): ANSI A14.1-1982—American National Standard for Ladders-Portable Wood-Safety Requirements, ANSI A14.2-1982—American National Standard for Ladders—Portable Metal—Safety Requirements, and ANSI A14.5-1982—American National Standard for Ladders—Portable Reinforced Plastic—Safety Requirements.*

*State plan guidance: States with OSHA-approved state plans may have additional requirements for avoiding falls from ladders. For more information on these requirements, please visit: [www.osha.gov/dcspp/osp/statesstandards.html](http://www.osha.gov/dcspp/osp/statesstandards.html).*

*Most OSHA offices have compliance assistance specialists to help employers and workers comply with OSHA standards. For details call 1-800-321-OSHA (6742) or visit: [www.osha.gov/htm/RAmap.html](http://www.osha.gov/htm/RAmap.html).*

This is one in a series of informational fact sheets highlighting OSHA programs, policies or standards. It does not impose any new compliance requirements. For a comprehensive list of compliance requirements of OSHA standards or regulations, refer to Title 29 of the Code of Federal Regulations. This information will be made available to sensory-impaired individuals upon request. The voice phone is (202) 693-1999; teletypewriter (TTY) number: (877) 889-5627.

For assistance, contact us. We can help. It's confidential.



U.S. Department of Labor  
[www.osha.gov](http://www.osha.gov) (800) 321-OSHA (6742)

## Reducing Falls in Construction: Safe Use of Extension Ladders

Workers who use extension ladders risk permanent injury or death from falls and electrocutions. These hazards can be eliminated or substantially reduced by following good safety practices. This fact sheet examines some of the hazards workers may encounter while working on **extension ladders** and explains what employers and workers can do to reduce injuries. OSHA's requirements for extension ladders are in Subpart X—Stairways and Ladders of OSHA's Construction standards.

### What is an Extension Ladder?

Also known as "portable ladders," extension ladders usually have two sections that operate in brackets or guides allowing for adjustable lengths. (See Figure 1, below.) Because extension ladders are not self-supporting they require a stable structure that can withstand the intended load.

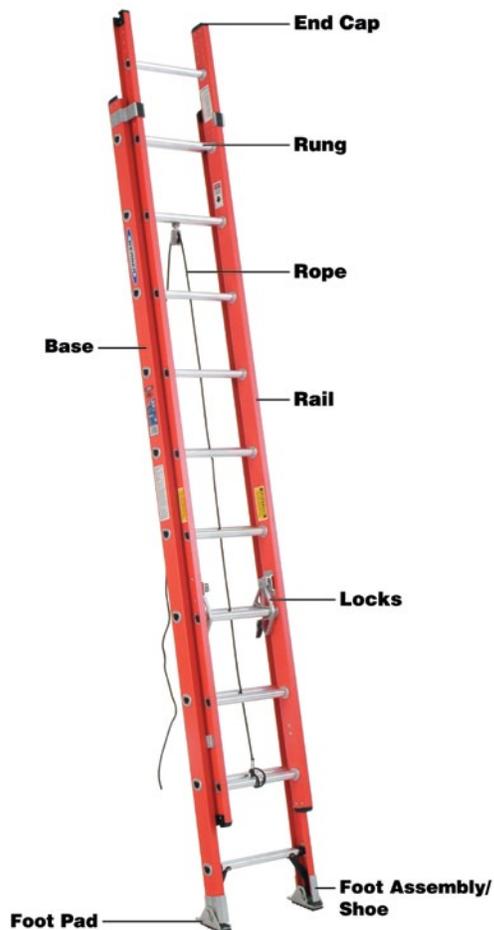


Figure 1: Extension Ladder

### PLAN Ahead to Get the Job Done Safely.

- Use a ladder that can sustain at least four times the maximum intended load, except that each extra-heavy duty type 1A metal or plastic ladder shall sustain at least 3.3 times the maximum intended load. Also acceptable are ladders that meet the requirements set forth in Appendix A of Subpart X. Follow the manufacturer's instructions and labels on the ladder. To determine the correct ladder, consider your weight plus the weight of your load. Do not exceed the load rating and always include the weight of all tools, materials and equipment.
- A competent person must visually inspect all extension ladders before use for any defects such as: missing rungs, bolts, cleats, screws and loose components. Where a ladder has these or other defects, it must be immediately marked as defective or tagged with "Do Not Use" or similar language.
- Allow sufficient room to step off the ladder safely. Keep the area around the bottom and the top of the ladder clear of equipment, materials and tools. If access is obstructed, secure the top of the ladder to a rigid support that will not deflect, and add a grasping device to allow workers safe access.
- Set the ladder at the proper angle. When a ladder is leaned against a wall, the bottom of the ladder should be one-quarter of the ladder's working length away from the wall. For access to an elevated work surface, extend the top of the ladder three feet above that surface or secure the ladder at its top.
- Before starting work, survey the area for potential hazards, such as energized overhead power lines. Ladders shall have

nonconductive side rails if they are used where the worker or the ladder could contact exposed energized electrical equipment. Keep all ladders and other tools at least 10 feet away from any power lines.

- Set the base of the ladder so that the bottom sits securely and so both side rails are evenly supported. The ladder rails should be square to the structure against which it is leaning with both footpads placed securely on a stable and level surface.
- Secure the ladder's dogs or pawls before climbing.
- When using a ladder in a high-activity area, secure it to prevent movement and use a barrier to redirect workers and equipment. If the ladder is placed in front of a door, always block off the door.



**Figure 2:** Ladder extending three feet above the landing area.

### **PROVIDE the Right Extension Ladder for the Job with the Proper Load Capacity.**

Select a ladder based on the expected load capacity (duty rating), the type of work to be done and the correct height. There are five categories of ladder duty ratings.

Type	Duty Rating	Use	Load
IAA*	Special Duty	Rugged	375 lbs.
IA	Extra Duty	Industrial	300 lbs.
I	Heavy Duty	Industrial	250 lbs.
II	Medium Duty	Commercial	225 lbs.
III	Light Duty	Household	200 lbs.

*Source for Types IA, I, II, III: Subpart X—Stairways and Ladders, Appendix A (American National Standards Institute (ANSI)) 14.1, 14.2, 14.5 (1982) of OSHA's Construction standards. Source for Type IAA: ANSI 14.1, 14.2, 14.5 (2009), which are non-mandatory guidelines.*

### **TRAIN Workers to Use Extension Ladders Safely.**

Employers must train each worker to recognize and minimize ladder-related hazards.



**PLAN.  
PROVIDE.  
TRAIN.**

Three simple steps to prevent falls.

#### **Safe Ladder Use—DO:**

- Maintain a 3-point contact (two hands and a foot, or two feet and a hand) when climbing/ descending a ladder.
- Face the ladder when climbing up or descending.
- Keep the body inside the side rails.
- Use extra care when getting on or off the ladder at the top or bottom. Avoid tipping the ladder over sideways or causing the ladder base to slide out.
- Carry tools in a tool belt or raise tools up using a hand line. Never carry tools in your hands while climbing up/down a ladder.
- Extend the top of the ladder three feet above the landing. (See Figure 2.)
- Keep ladders free of any slippery materials.

#### **Safe Ladder Use—DO NOT:**

- Place a ladder on boxes, barrels, or unstable bases.
- Use a ladder on soft ground or unstable footing.
- Exceed the ladder's maximum load rating.
- Tie two ladders together to make them longer.
- Ignore nearby overhead power lines.
- Move or shift a ladder with a person or equipment on the ladder.
- Lean out beyond the ladder's side rails.
- Use an extension ladder horizontally like a platform.

**OSHA standard: 29 CFR 1926 Subpart X—Stairways and Ladders**

**American National Standards Institute standard: ANSI A14.1, A14.2, A14.5—Ladder Safety Requirements**  
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