

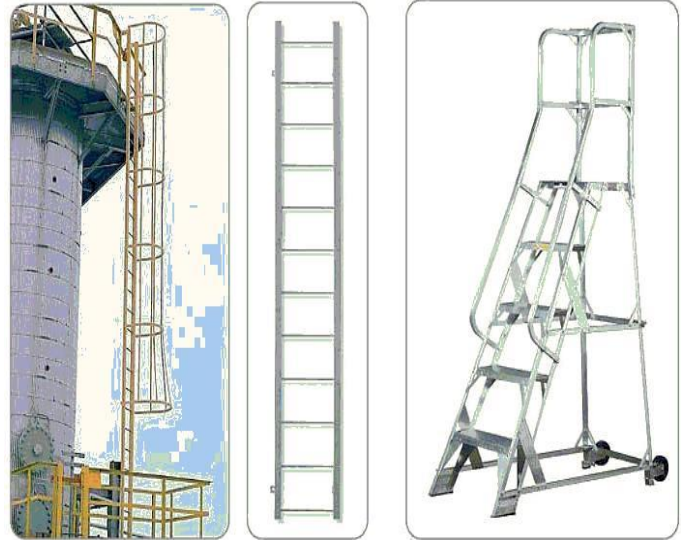
UC Riverside – Ladder Safety Program

Lead: Chidozie B. Nzom
EH&S/Safety Engineer
Phone: (951) 827-5118
E-mail: chidozie.nzom@ucr.edu

Team: EH&S/ General Safety

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Quick Start

Nationally, there were 123 work-related deaths in 2009 due to ladder accidents. Misuse of and falls from ladders consistently rank in the highest causal factors for work-place injuries. Cal OSHA has numerous ladder safety regulations that must be adhered to for assuring compliance and safe-work activities when using ladders. The University of California, Riverside (UCR) Environmental Health and Safety has developed this Ladder Safety Program to manage the safe [selection](#), [procurement](#), [use of and safe work practices](#), [inspection](#), [inventory tracking](#) and [record keeping](#) of all university owned ladders.

This [Ladder Safety Program](#) applies to any department on campus, at field stations, or on leased property where any type of ladder three (3) feet or more in length/height is used. [Roles and responsibilities for safe use of ladders by employees](#) (including temporary employees and graduate students performing research related activities in field stations and remote research facilities) are detailed. [Roles and responsibilities for “Owner Departments”](#) that purchase and maintain ladders are also detailed.

The department owning the ladders is responsible for the [proper selection of ladders](#) to be kept in their [ladder inventory](#) based upon an assessment of work tasks. In addition, Owner Departments are responsible for providing [training](#) to their personnel who use ladders, for [keeping the records](#) of training completed, for maintaining ladders in good working order, and for performing documented annual inspections and monthly visual inspections of all ladders under their ownership/control.

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Ladder users are required to follow [safe-work procedures](#), to alert Owner Department management whenever they discover a damaged ladder and to follow any specific safe work practices developed by their department concerning ladder use.

Please review the [Ladder Safety, Frequently Asked Questions/Fact Sheet](#) to become familiar with ladder hazards and safe work information about ladders.

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Purpose/Introduction

The use of ladders presents significant workplace hazards. The California Bureau of Labor Statistics states that in 2005, 12 people in California died from falls from ladders. Unsafe ladder use, such as using the wrong kind of ladder or upsetting the ladder's balance by leaning too far from its center of gravity, has resulted in injuries to University employees, as well as CalOSHA citations and fines assessed to UCR Departments.

The University of California, Riverside (UCR) Environmental Health & Safety developed this program to describe all aspects of ladder safety including a ladder safe-use policy, personnel accountability, hazard assessment and proper ladder selection, safe work practices, training requirements, and record keeping.

Applicability/Scope

This Program applies to any use of ladders three (3) feet in height/length or greater by employees of the University as part of their normal work activities. This includes temporary employees and graduate students performing research related activities in field stations and remote research facilities.

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Roles/Responsibilities

Ladder Users

Every ladder user:

- Is trained on and applies “Ladder User’s Safe-work Rules” for ladder use outlined in this program.
- Always selects and uses a ladder in a safe manner.
- Alerts Owner Department Management when ladders need repair/replacement.
- Assesses work to determine if fall protection should be worn and seeks alternative access methods instead of ladders if need be.
- Refuses to use a ladder if they think it is unsafe and instead uses a safer method such as a scaffold, lift pod or bucket truck.

Owner Department

The department owning the ladders must:

- Inspect annually and maintain all ladders in their control/ownership.
- Render unusable and then dispose of any ladders that are not repairable.
- Provide training to all personnel using their ladders as required by the “training” section of this Program.

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- Keep/maintain attendance records of all training.
- Assure ladder work-tasks are evaluated for hazards and that work tasks requiring fall protection to be worn are identified.
- Provide alternative access when a ladder user determines use of a ladder is unsafe due to required work tasks.

EH&S/General Safety

The EH&S Ladder Safety Program Manager:

- Works with UCR Risk Management Department, Procurement Department and the Owner Department to determine proper ladder selection, stocking and safe-work practices unique to the Owner Department's work activities.
- May provide training and periodic audits to assist Owner Departments in Ladder Safety Program compliance.
- Maintains and updates this program as need dictates, or compliance codes change.

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Definitions

“A” Frame ladder — Also known as a [“Step ladder”](#).

Articulating ladder — Also known as a [“Combination ladder”](#), [“Sectional ladder”](#) or [“Multi-position ladder”](#), this is a portable ladder capable of being used either as a [stepladder](#), a [single ladder](#) or an [extension ladder](#). It may also be capable of being used as a [trestle ladder](#) or a [stairwell ladder](#).

Cage — A cage is a guard that may be referred to as a cage or basket guard, which is an enclosure that is fastened to the side rails of the fixed ladder or to the structure to encircle the climbing space of the ladder for the safety of the person who must climb the ladder.

Cleats — Ladder crosspieces of rectangular cross section placed on edge upon which a person may step while ascending or descending. Also known as ladder “rungs”.

Combination ladder — Another name for [“Articulating Ladder”](#). See definition above.

Double Front or Twin Front ladder — A self-standing ladder that is designed to allow both sides of the ladder to be climbed safely.

Feet — The component of a ladder support that is in contact with the lower supporting surface.

Fixed ladder — A ladder that is permanently attached to a structure, building, or equipment.

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Grab Bars — Grab bars are individual handholds placed adjacent to or as an extension above ladders for the purpose of providing safe hand-hold above the ‘top’ of the ladder.

Individual-Rung Ladder — A fixed ladder, each rung of which is individually attached to a structure, building, or equipment.

Ladder Stand — A mobile fixed size self-supporting ladder consisting of a wide flat tread ladder in the form of stairs. The assembly may include handrails but does not include a platform.

Multi-position ladder — Another name for “[Articulating Ladder](#)”. See definition above.

Rungs — Ladder crosspieces upon which a person may step while ascending or descending. Rungs are usually ‘round’ in cross-section, while “cleats” usually are rectangular in cross-section. See definition of “Cleats” above.

Sectional ladder — Another name for “[Articulating Ladder](#)”. See definition above.

Sections (as related to a “Sectional ladder”)

- Bottom or base section. The lowest section of a non-self-supporting portable ladder.
- Top or fly section. The uppermost section of a non-self-supporting portable ladder.
- Middle or intermediate section. The section between the top (fly) and bottom (base) sections of a non-self-supporting portable ladder.

Single ladder — A non-self-supporting portable ladder, nonadjustable in length, consisting of one section.

Side rails — The side members joined at intervals by rungs, steps, cleats, or rear braces.

Step stool (ladder type) — A self-supporting, foldable, portable ladder, nonadjustable in length, 32 inches or less in size, with flat steps and without a pail shelf, designed so that the ladder top cap as well as all steps can be climbed on. The side rails may continue above the top cap.

Step ladder — A self-supporting portable ladder, nonadjustable in length, with flat steps and hinged base. Also known as an “A” Frame ladder.

Top Cap — The uppermost horizontal member of a portable stepladder or step stool.

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Types of Ladders, Selection and Duty Ratings

Selection/Procurement of Ladders

Ladders are designed and constructed to safely hold up to a specific amount of weight. Ladders come in five different Duty Ratings identified by their “Type”. The Duty Rating is defined as the maximum safe load capacity of the ladder. A person’s fully clothed weight plus the weight of any tools and materials that are carried onto the ladder must be less than the duty rating. UCR requires a minimum the strength of a “Type II” ladder for any work activities where ladders are used for elevated work projects where the user is not handling large or heavy objects during ladder use. All Maintenance/Trades are recommended to use “Type I” or stronger ladders for their work activities. Owner Departments that have maintenance/trades activities are required to purchase and use “Type I, Type IA or Type IAA” ladders based upon required strength for safe work by their workforce. Research and other Academic Departments not doing these types of activities may optionally inventory and use Type I or Type II ladders. Purchase and use of “Type III” ladders should be avoided as their duty rating is too light and they are likely to fail before their useful life expectancy, and with potentially injurious result for the ladder user.

Duty Ratings

Duty Ratings are described in terms of pounds, such as a “300 lb. Duty-Rated Type IA” ladder which is designed for extra heavy duty professional use where the total weight on the ladder does not exceed 300 pounds.

Ladders are also built to handle the demands of various applications. For example, a ladder used frequently on a construction site by larger/heavier workers should typically be stronger and have a corresponding higher Duty Rating than a ladder used by a lighter-weight person for infrequent ‘light’ overhead work.

The American National Standard Institute (ANSI) has an established the “Duty Rating” followed by Cal OSHA. This rating identifies which portable ladder is intended for the conditions under which the ladder can be safely used. The Duty Rating system is summarized below, and may be further researched at the following link: <http://www.cisco-eagle.com/catalog/t-Article-LadderSafe1.aspx>

Ladder Duty Rating or “Type”	Capable of Supporting	Rated Use
TYPE IAA	375 lbs.	Special Duty
TYPE IA	300 lbs.	Extra Heavy Duty Industrial
TYPE I	250 lbs.	Heavy Duty Industrial
TYPE II	225 lbs.	Medium Duty Commercial
TYPE III	200 lbs.	Light Duty Household

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Ladder Designs and their Selection for Use

Each of these designs is available in any Ladder [“Type”](#) or [“Duty Rating”](#).

Articulating, Combination, Multi Position, or Sectional Ladder

An articulating ladder is a non-self-supporting or self-supporting portable ladder, adjustable or non-adjustable in length. It consists of two or more sections of ladder that may be combined to function as a single ladder. The overall length of the assembled sections designates its size.

They can be used to access areas above uneven surfaces.



Extension Ladder




An extension ladder is a non-self-supporting portable ladder, adjustable in length. It consists of two or more sections that travel in guides or brackets, which are arranged to permit length adjustment. An extension ladder's size is designated by the sum of the lengths of the sections measured along the side rails. It cannot exceed 44 feet.

They can be used to access varying heights.




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<p>Extension Trestle Ladder</p> <p>A stepladder that is a self-supporting portable ladder with an extension. They are available in “twin front” or “double front” design so they can be climbed from both sides.</p> <p>They can be used for operations in theater and stage work or to get to equipment above drop ceilings</p>	
<p>Fixed Ladder</p> <p>A fixed ladder is a ladder permanently attached to a structure, building, or equipment.</p> <p>The type of ladder shown is used to access the top of facilities for maintenance.</p>	
<p>Individual Rung Fixed Ladders</p> <p>A type of fixed ladder that does not have side rails. Each rung is permanently attached to the surface of a wall, machine, or piece of equipment.</p> <p>These ladders are used to access and egress facilities like manholes and crawl spaces.</p> <p>Go to Quick Start Go to Table of Contents Go to FAQ Fact Sheet</p>	

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<p>Platform Step Ladder, Single entry work platform</p> <p>A step ladder with small horizontal platform at the top.</p> <p>These can be used to work safely at elevated locations using both hands.</p>	
<p>Single Ladder</p> <p>A single ladder is a non-self-supporting portable ladder, similar to an extension ladder, non-adjustable in length, which consists of only one section. Its size is designated by the overall length of the side rail and cannot exceed 30 feet.</p> <p>These can be used to access heights within the limit of their height.</p>	
<p>Specialty Ladders</p> <p>Any type of ladder that is constructed for specific use on unique devices used for research or any other purpose</p> <p>Example uses of this Ladder include: The ladder shown is a shelf ladder that is attached to or used to access shelves. Another type of 'specialty ladder' is a rolling "Library Ladder" set on rails attached to shelving, etc.....</p> <p>Go to Quick Start Go to Table of Contents Go to FAQ Fact Sheet</p>	

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<p>Step Ladder</p> <p>A stepladder (also known as an “A” frame ladder) is a self-supporting portable ladder, nonadjustable in length, having flat steps and a hinged back. It is measured along the front edge of the side rails. They are available in “twin front” or “double front” design so they can be climbed from both sides.</p> <p>These can be used to access heights within the limit of their height.</p>	
<p>Step-to-Straight Ladder</p> <p>Ladder can convert quickly from a stepladder to a push-up extension ladder. They are equipped with rung lock, utility-style safety shoes, and a standard pole grip.</p> <p>They can be used as either a self-supporting or non-self-supporting ladder.</p> <p>Go to Quick Start Go to Table of Contents Go to FAQ Fact Sheet</p>	

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Tripod Industrial Ladder

Tripod Step Ladders are designed to be used in construction and maintenance activities where a 4-leg step ladder would have limited access or require the ladder user to work off to one-side of the ladder.

These should be purchased/used for maintenance and construction work where a single pole leg can be placed amongst equipment or other obstructions and allow a safe-work access for the ladder user to face the work area not having to work off to one side.



Tripod Orchard Ladder

Tripod orchard ladders are designed to be used on soft and uneven terrain therefore they lack spreaders, locking devices, steel points, and safety shoes.




These should only be purchased and/or used for outdoor work in pruning and accessing tree canopies.







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Ladder Accessories and Their Uses

<p>Cable hook and V-ring assembly</p> <p>Used to secure the top of a single ladder or extension ladder to a pole, pipe or other 'rounded' vertical support structure.</p>	
<p>Cage (Fixed Ladder Cage)</p> <p>Ladder cages provide fall protection and are required by code on fixed ladders over 20 feet high. The base of the cage must be at 7' above the base surface.</p> <p>Go to Quick Start Go to Table of Contents Go to FAQ Fact Sheet</p>	
<p>Caster Brackets</p> <p>Weight sensitive brackets with casters that allow a ladder to be rolled on a floor when there is no load on the ladder</p>	




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<p>Cinch (Ladder Cinch or Ladder Tie)</p> <p>Used as a quick tie down for use on poles or similar structures.</p>	
<p>Jacks (Ladder Jack)</p> <p>Attaches to rungs of non-self supporting ladders to allow the use of ladders as supports for scaffold planks. Fall protection is required.</p>	
<p>Ladder Jacks and Guardrail Systems</p> <p>Below is a link to a video that describes one manufacturer's setup and use of guardrails and tool hangers for use with ladder jacks, ladder planks and working on roofs.</p> <p>http://www.safetyinnovationsllc.com/video.htm</p>	
<p>Levelers (Ladder leveler)</p> <p>Two base attachments that are used to level the ladder on a sloped support surface.</p> <p>Go to Quick Start Go to Table of Contents Go to FAQ Fact Sheet</p>	

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<p>Pail Shelf</p> <p>A pail shelf attaches to an existing shelf to provide relatively stable locations for tools and pails or buckets.</p> <p>Go to Quick Start Go to Table of Contents Go to FAQ Fact Sheet</p>	
<p>Paint can hangers (for extension ladders)</p> <p>Are designed to be easily attached and removed from a ladder in order to hang a bucket. There are load limits, as determined by the manufacturer, for both the ladder rail and the hanger. They can be used to temporarily hang other supplies or tools as long as they are within the load limits of the ladder and hanging bracket.</p>	
<p>Platform (Ladder Platform)</p> <p>Kicks out of the way easily for climbing and is used as a platform to stand on.</p>	

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<p>Stabilizer</p> <p>Attaches to the ladder rungs or rails to stand the ladder off from a surface or stabilize the ladder around an obstruction such as a pipe, a gutter or a window.</p> <p>Go to Quick Start Go to Table of Contents Go to FAQ Fact Sheet</p>	
<p>Tray – Multipurpose Use</p> <p>Made for straight or stepladders. The texture is intended to provide a place to put small parts such as bolts, nuts, wire-nuts and small tools in addition to pails.</p>	
<p>Tool Belt</p> <p>Worn by ladder users to hold tools and project materials securely attached to their waste so that they may ascend and descend ladders using both hands.</p> <p>Go to Quick Start Go to Table of Contents Go to FAQ Fact Sheet</p>	

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Tool Lasso

Secures awkward tools to a belt to allow safe ladder climbing with needed tools.

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Program Requirements/Procedures

Owner Department Requirements:

The Department owning ladders designates the “**Ladder Program Administrator(s)**” responsible for the following actions:

- Assures that ladders purchased/used in the department are code-compliant and appropriate for the needed safe-work tasks.
- Consults with the EH&S Ladder Safety Program Manager as needed to assess proper ladder use and procurement specifications.
- Coordinates with EH&S to provide ladder safety training, or provides ladder training themselves (by JSA or other presentation), to all department personnel who use ladders. In either case, training must detail the contents of this program including ladder user’s safe-work rules, inspections, etc.
- Periodically audits departmental compliance with the Program.
- Conducts ladder inspections as part of the annual “shop safety inspection” process.
- Implements the following ladder inspection/tracking requirements:
 1. Develops ladder-identification system and uniquely numbers each ladder owned by the department for inventory/tracking purposes. (See [Attachment 1](#) for recommended numbering system.)
 2. Inspects ladders for damage and documents inspections annually per inspection form/criteria ([Attachment 3](#)) in program.
 3. Locks or tags damaged ladders to insure they will not be used until repaired.
 4. Renders damaged ladders that cannot be repaired unusable by cutting them into pieces or other destructive means, and then assures proper disposal of them.
 5. Assures that any wooden ladders in use are not painted with any color other than clear wood sealer to allow detailed inspection of wood grain and quality. Wood ladders that are painted or not clear-finished with the wood grain visible for inspection must be destroyed.
 6. If not already done so by the manufacturer, mark portable metal ladders with the words:

CAUTION
DO NOT USE AROUND ELECTRICAL EQUIPMENT

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Ladder User's Procedures

Ladder User's Safe-Work Practices

- Select a ladder that is the proper length and “duty rating” for the intended work.
***Note:** A leaning-ladder must extend at least 36” above the edge of a roof/mezzanine when properly installed. A step ladder must be tall enough so that you don’t have to stand on the top or top two rungs of the ladder to access your work.*
- Do not use electrically conductive (e.g. aluminum) ladders for electrical work or near live electrical parts.
- Inspect the ladder for broken or defective parts **prior to each use**.
- Remove damaged or defective ladders from use and notify department management of the problem ladder.
- Do not place ladders where they can be accidentally struck or displaced.
- If the ladder is used in an area where anyone could walk under it, the area must be cordoned off with a visual barrier such as yellow caution tape to alert pedestrians to the hazard of something falling from the ladder.
- Ladders must not be placed in passageways, doorways, driveways, or any location where they may be displaced by activities being conducted on any other work, unless protected by barricades or guards.
- For leaning or extension ladders, tie, block, or otherwise secure while in use.
- Do not splice ladders together.
- Always face the ladder while ascending and descending.
- Do not stand on the top two rungs of a single ladder or an extension ladder;
- Do not stand on the top cap and top two steps of a step ladder.
- Do not stand on the top three rungs of ladders unless there are members of an adjacent structure that provide a firm handhold, or the ladder user is protected by a personal fall protection system (e.g., positioning device or fall restraint system) tied off to a Cal OSHA certified fall protection anchor.
- If working outside of the ladder’s footprint, or when standing on the upper-most parts of the ladder as noted above, use an appropriate fall protection system as described in the EH&S Fact Sheet “Fall Protection Equipment and Inspection”.
- Do not place planks on the top cap or any other part of a ladder.
- Do not use the X-bracing or other structures on the rear section of a stepladder for climbing unless the ladder is designed to be climbed from both sides. (See [Extension Trestle Ladders](#) and similar.)
- Make sure that a stepladder is properly set up and that the spreader is locked in place before use.
- Do not use the stepladder as a lean-to ladder.
- Always use a tool belt and other ‘hands-free’ carrying devices when ascending and descending a ladder.
- When working aloft, secure tools and supplies so they cannot fall from the ladder.

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Housekeeping

- Clear debris and equipment that could cause a slip, trip, or fall from working areas around the ladder.
- Prevent equipment and supplies from falling on other people.
- Set up ground cloths if needed.
- Cordon off work areas using yellow caution tape to keep casual passersby out of your work area.

Fall Protection – When must it be used?

Ladders may be used **WITHOUT** the user wearing a personal harness tied off to a Cal OSHA certified fall protection anchor, when a leaning or extension ladder can be tied-off and stabilized to a permanent structure, or a step ladder is used on a level firm surface, and then work is done within the following specific activities:

1. When using the ladder to gain access from one level to another without carrying anything in your hands.
2. When using a ladder for access to a work area where work is conducted while standing on the ladder, provided the user can ascend and descend using both their hands during the entire up/down movement on the ladder.
3. When working aloft on the ladder provided both of the user's feet are stationary on one rung and the work area requiring two-handed work is within the ladder's 'foot print' (i.e. no reaching beyond the base legs of the ladder with both hands).
4. When the user can use three-point contact (both their feet plus one hand) for stability when reaching and working outside the ladder's 'foot print' using only one 'free' hand.
5. When the ladder user's feet are below the top two rungs of a leaning single/extension-ladder, or are below the top two steps and top cap of a step ladder.
6. When doing elevated 'fine two-handed work' within the 'foot print' of the ladder, where a user is using both hands to conduct light-weight work without the use of power tools. (Example: Twisting a wire nut on two to three 12-gage or smaller wires, hammering a nail into wood, or unscrewing a light bulb and installing a replacement light bulb.)
7. When using a small cordless power tool such as a ¼" bit (or smaller) hand-drill that is not likely to cause imbalance should the power tool bind during use.
8. When using a corded power tool within the 'foot print' of the ladder using only one hand to control the tool, and otherwise having 3-point contact on the ladder.

Fall protection must be used in all other ladder-use situations unless the Owner Department can demonstrate that the planned work activities are equivalently safe to the above noted requirements. Alternatives to using fall protection include temporary scaffolding with appropriate railings, the use of a "Lift Pod", the use of Genie lifts or bucket trucks, etc., and should be considered before using ladders in such situations.

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If alternatives are unavailable or not feasible, the employee must use fall protection devices as described in the EH&S Fact Sheet, “Fall Protection Equipment and Inspection.” To use fall protection equipment, training is required. Contact EH&S to schedule fall protection training if needed.

Training Requirements

The Department owning the ladders has the option of providing ladder user training from:

- A training provider outside the University,
- Providing training from within the department, or
- Ladder Use and Fall Protection Training provided by EH&S. Contact EH&S/General Safety at 951-827-5118 or EH&S/Training at 951-827-2609 to be directed to the EH&S training provider.

Irrespective of the source, the contents of and safe-work procedures outlined in this program are part of any ladder safety training. Training is documented and kept in a readily accessible location by the department designee for access reference as needed by Department management, EH&S, or regulatory agency (e.g. Cal OSHA).

Owner Department’s Ladder Program Administrator Training

Program Administrators are trained on their roles and responsibilities in the management/maintenance of the requirements and ladder inspections outlined in this program.

Ladder Users Training

As part of their work activities, ladder users receive documented training once on the contents of this program and the general safe-work procedures it contains. In addition, site-specific or task-specific safe-work orientation/tail-gate may be needed in the use of ladders for unusual operations. Annual review of the general requirements and safe-work rules of this program is appropriate for tailgate or periodically scheduled safety meetings.

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Record Keeping Requirements

Department Requirements

Training Records

Ladder User and Ladder Program Administrator — Retain records for ten years after the person has retired or left University employment.

Equipment Inspections

Annual and Monthly inspections — Keep inspection reports for past three years. May be included as part of the Annual Shop Inspection process.

EH&S Requirements

EH&S retains indefinitely the following:

- Records of annual shop inspections that include ladders
- Records of training provided by EH&S and other entities
- Historical documents and revisions of the Ladder Safety Program

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References

Cal OSHA : <http://www.dir.ca.gov/title8/1629.html> — Stairways and Ladders
<http://www.dir.ca.gov/title8/1675.html> — Ladders, General
<http://www.dir.ca.gov/title8/1678.html> — Extension Ladders
<http://www.dir.ca.gov/title8/3276.html> — Use of Ladders
<http://www.dir.ca.gov/title8/3277.html> — Fixed ladders
<http://www.dir.ca.gov/title8/3278.html> — Portable Wood Ladders
<http://www.dir.ca.gov/title8/3279.html> — Portable Metal Ladders
<http://www.dir.ca.gov/title8/3280.html> — Portable Reinforced Plastic Ladders
<http://www.dir.ca.gov/title8/3287.html> — Window Cleaning

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Resources

American Ladder Institute – www.laddersafety.org

Issued By and Next Review Date

Issued by: Chidozie B. Nzom, Safety Engineer
EH&S/ General Safety
Publish Date: January 1, 2017
Review Date: Three years from publish date

Attachments

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UC Riverside – Ladder Safety Program

Attachment 1 - Ladder Identification Numbering System

A ladder identification number must be permanently attached to or marked on the ladder. EH&S can provide and install brass tags with the number marking or the owner department may otherwise label the ladder with a permanent identifying number. In either case, the structure of the ladder cannot be modified in any way to affix the identifying number to the ladder. Allowed identification methods include attaching a permanent tag to a part of the ladder where it will not interfere with its safe use; using a permanent marker on the under-side of the first step of a step ladder to write the identifying number on the ladder; affixing a permanent label to the under-side of the first step, a top cap, a side rail, etc. where it would not interfere with the safe use of the ladder, or impede visual inspection of the ladder, etc.

Recommended Identifying Numbering System (Separate each Digit Series in Identification Number by a “dash”.)					
<u>First Digit Series</u> First Letter of the Owner Department's Name (example below)	<u>Second Digit(s)</u> Location or Shop Identification where ladder is kept (examples below)	<u>Third Digit(s)</u> Duty Rating of the Ladder	<u>Fourth Digit(s)</u> The physical type of ladder	<u>Fifth Digit(s)</u> Length or maximum height in Feet	<u>Sixth Digit(s)</u> Identifying Number, Sequential Number (two digits)
A = Athletics C = Chemistry	MR148 = Mech. Room 148	1AA = Type 1AA Ladder	A = Articulating, Sectional or Multi-position Ladder	3	01
E = EERC @ RFS EHS	MS = Metal Shop CS = Carpentry Shop	1A = Type 1A Ladder	E = Extension Ladder F = Fixed Ladder	6	02
M = MCB P = PP-CS		1 = Type I Ladder	L= Leaning or Single or non-self-supporting	8	03
R = RSSP		2 = Type II Ladder	P = Platform Ladder SP = Specialty Ladder	10	04
			SS = Step to Straight Ladder	12	05
			ST = Step Ladder	14	06
			TE = Trestle-extension	16	07
			TI = Tripod Industrial Ladder	20	08
			TO = Tripod Orchard Ladder	Etc.	Etc.

UC Riverside – Ladder Safety Program

Examples of Unique Ladder Identification Numbers

- Example Identification Number for the fourth 16' Step Ladder with a duty rating of Type 1A kept in the Utility Shop at PP-CS:
P-U-1A-ST-16-04
- Example Identification Number for the third 12' Extension Ladder with a duty rating of Type I purchased and kept in the Machine Shop at Chemistry:
C-MS-1-E-12-03
- Example Identification Number for the first 8' Tripod Industrial Step Ladder with a duty rating of Type 1A purchased and kept in the Student Shop at College of Environmental Design:
CED –SS-1A-TI-8-01
- Example Identification Number for the ninth 6' step ladder with a duty rating of Type II kept in the Mechanical Shop at Unit 1 RSSP:
RU1-MS-2-ST-6-09
- Example Identification Number for the 11th 10' single ladder with a duty rating of Type 1A kept in the Mechanical Shop at Clark Kerr Campus by RSSP:
RCKC-MS-1A-L-10-11

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Attachment 2 - Inventory Sheet

Department _____ Inventory Date _____

Shop _____ Inventoried By: _____

Ladder Inventory by Duty Rating, Type and Length

Duty Rating of the Ladder (Use ID code Attach. 1)	Physical Type of the Ladder (Use ID code Attach. 1)	Length in Feet	Quantity

Accessory Type (Describe)	Quantity

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Attachment 3 – UCR Ladder Inspection Checklist

Inspected By:	Signature:
Date Inspected:	Department:

STEP LADDER




TYPE: <input type="checkbox"/> Fiberglass <input type="checkbox"/> Aluminum <input type="checkbox"/> Wood		Size	Ft.
<p>Circle Areas of Damage</p> 	Steps: <i>Loose, Cracked, Bent or Missing</i>	YES <input type="checkbox"/>	NO <input type="checkbox"/>
	Rails: <i>Cracked, Bent, Split or Frayed Rail Shields</i>	<input type="checkbox"/>	<input type="checkbox"/>
	Labels: <i>Missing or Not Readable</i>	<input type="checkbox"/>	<input type="checkbox"/>
	Pail Shelf: <i>Loose, Bent, Missing or Broken</i>	<input type="checkbox"/>	<input type="checkbox"/>
	Top: <i>Cracked, Loose or Missing</i>	<input type="checkbox"/>	<input type="checkbox"/>
	Spreader: <i>Loose, Bent or Broken</i>	<input type="checkbox"/>	<input type="checkbox"/>
	General: <i>Rust, Corrosion or Loose</i>	<input type="checkbox"/>	<input type="checkbox"/>
	Other: <i>Bracing, Shoe, Rivets</i>	<input type="checkbox"/>	<input type="checkbox"/>
<p>ACTIONS: <input type="checkbox"/> Ladder tagged as damaged & removed from use <input type="checkbox"/> Ladder is in good condition</p>			

EXTENSION LADDER

TYPE: <input type="checkbox"/> Fiberglass <input type="checkbox"/> Aluminum <input type="checkbox"/> Wood		Size	Ft.
<p>Circle Areas of Damage</p> 	Rungs: <i>Loose, Cracked, Bent or Missing</i>	YES <input type="checkbox"/>	NO <input type="checkbox"/>
	Rails: <i>Cracked, Bent, Split or Frayed Rail Shields</i>	<input type="checkbox"/>	<input type="checkbox"/>
	Labels: <i>Missing or Not Readable</i>	<input type="checkbox"/>	<input type="checkbox"/>
	Rung Locks: <i>Loose, Bent, Missing or Broken</i>	<input type="checkbox"/>	<input type="checkbox"/>
	Hardware: <i>Cracked, Loose or Missing</i>	<input type="checkbox"/>	<input type="checkbox"/>
	Shoes: <i>Loose, Bent or Broken</i>	<input type="checkbox"/>	<input type="checkbox"/>
	Rope/Pulley: <i>Loose, Bent or Broken</i>	<input type="checkbox"/>	<input type="checkbox"/>
	General: <i>Rust, Corrosion or Loose</i>	<input type="checkbox"/>	<input type="checkbox"/>

	Other: <i>Bracing, Shoe, Rivets</i>	<input type="checkbox"/>	<input type="checkbox"/>
ACTIONS: <input type="checkbox"/> <i>Ladder tagged as damaged & removed from use</i> <input type="checkbox"/> <i>Ladder is in good condition</i>			

SPECIALTY LADDER

TYPE:	<input type="checkbox"/> Fiberglass	<input type="checkbox"/> Aluminum	<input type="checkbox"/> Wood	Size	Ft.
<p><i>Circle Areas of Damage</i></p>   	Steps/Rungs:	<i>Loose, Cracked, Bent or Missing</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Rails:	<i>Cracked, Bent, Split or Frayed</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Labels:	<i>Missing or Not Readable</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Locks:	<i>Loose, Bent, Missing or Broken</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Hardware:	<i>Cracked, Loose or Missing</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Spreader:	<i>Cracked, Loose, or Missing</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Rivets:	<i>Rust, Corrosion, Loose or Missing</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	General:	<i>Rust, Corrosion or Loose</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Hinges:	<i>Bent, Loose or Missing</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Bracing:	<i>Loose, Bent, Broken or Missing (Front/Rear)</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Shoes:	<i>Worn, Broken or Missing</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Platform:	<i>Loose, Bent, Broken or Missing</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Rail Shield:	<i>Missing or Loose</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Shoulder Bolt:	<i>Rust, Corrosion or Loose</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Caster:	<i>Rust, Corrosion or Loose</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Outriggers:	<i>Missing, Rust, Corrosion or Loose (for scaffolding)</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Fasteners:	<i>Rust, Corrosion or Loose or Missing</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ACTIONS: <input type="checkbox"/> <i>Ladder tagged as damaged & removed from use</i> <input type="checkbox"/> <i>Ladder is in good condition</i>					

Attachment 4 – UCR Ladder User Safe Work Practices

Ladder User's Safe-Work Practices

- Select a ladder that is the proper length and “duty rating” for the intended work.
Note a leaning-ladder must extend at least 36” above the edge of a roof/mezzanine when properly installed. A step ladder must be tall enough so that you don't have to stand on the top or top two rungs of the ladder to access your work.
- Do not use electrically conductive (e.g. aluminum) ladders for electrical work or near live electrical parts.
- Inspect the ladder for broken or defective parts **prior to each use**. This may count as a visual monthly inspection, or may be documented using [Attachment 3](#) as part of the annual shop safety inspection.
- Remove damaged or defective ladders from use and notify department management of the problem ladder.
- Do not place ladders where they can be accidentally struck or displaced.
- If the ladder is used in an area where anyone could walk under it, the area must be cordoned off with a visual barrier such as yellow caution tape to alert pedestrians to the hazard of something falling from the ladder.
- Ladders must not be placed in passageways, doorways, driveways, or any location where they may be displaced by activities being conducted on any other work, unless protected by barricades or guards.
- For leaning or extension ladders, tie, block, or otherwise secure while in use.
- Do not splice ladders together.
- Always face the ladder while ascending and descending.
- Do not stand on the top two rungs of a single ladder or an extension ladder;
- Do not stand on the top cap and top two steps of a step ladder.
- Do not stand on the top three rungs of ladders unless there are members of an adjacent structure that provide a firm handhold, or the ladder user is protected by a personal fall protection system (e.g., positioning device or fall restraint system) tied off to a CalOSHA certified fall protection anchor.
- If working outside of the ladder's footprint, or when standing on the upper-most parts of the ladder as noted above, use an appropriate fall protection system as described in the EH&S Fact Sheet [“Fall Protection Equipment and Inspection”](#).
- Do not place planks on the top cap or any other part of a ladder.
- Do not use the X-bracing or other structures on the rear section of a stepladder for climbing unless the ladder is designed to be climbed from both sides. (See [Extension Trestle Ladders](#) and similar.)
- Make sure that a stepladder is properly set up and that the spreader is locked in place before use.
- Do not use the stepladder as a lean-to ladder.
- Always use a tool belt and other ‘hands-free’ carrying devices when ascending and descending a ladder.
- When working aloft, secure tools and supplies so they cannot fall from the ladder.

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Attachment 5 - Cal OSHA Training “etools” for Ladder Safety

<http://www.dir.ca.gov/dosh/etools/08-001/V08-00101.wmv> - Video, ladder use for construction

<http://www.dir.ca.gov/dosh/etools/08-001/P08-00103.pdf> - One page publication on safe ladder use on construction sites

<http://www.dir.ca.gov/dosh/etools/08-001/P08-00101.pdf> - Video, Use Ladders Safely

<http://www2.worksafefbc.com/Publications/Multimedia/Videos.asp?ReportID=34742> - Video, You're a Pro, Falls from Ladders

<http://www2.worksafefbc.com/Publications/Multimedia/Videos.asp?ReportID=34544> - Video, Ladder Safety

http://www.dir.ca.gov/dosh/etools/08-001/construction_safety_series.pdf - Ladder Safety, seven page pamphlet

<http://www.osha.gov/SLTC/etools/construction/falls/4ladders.html> - Federal OSHA Ladder Safety, specific requirements

<http://www.osha.gov/Publications/osha3124.pdf> - Federal OSHA booklet on ladders and stairs.
Note: some of the requirements in this pamphlet are less stringent than the CalOSHA standards.

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Attachment 6 – Ladder Safety Fact Sheet

EH&S FACT SHEET

Ladder Safety

Program



This fact sheet provides awareness level information of ladder use hazards and the controls of those hazards in the UCR Ladder Safety Program ([Go to TOC of program](#)). The program is designed for those using portable or fixed Ladders three (3) feet or greater in height/length as part of their work activities and the Department administrators responsible for their safe use.

Go to the beginning of the [UCR Ladder Safety Program](#)

{CLICK ON ANY ENTRY IN THE TABLE OF CONTENTS TO BE TAKEN TO THAT SECTION OF THE FACT SHEET.}

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Does this Ladder Safety Program apply to my department?

If any [type of ladder](#) three (3) foot in height/length or larger is being used by personnel in your department, the requirements of this program apply to your department.

What types of ladders does this Program apply to?

This Ladder Safety Program applies to the use of any [type of ladder](#) three (3) foot in length/height or larger that is used by someone employed by the University.

Who is responsible for running this Program in my department?

All persons using ladders are [responsible](#) for following [safe-work practices](#) outlined in this program. Implementation of this program is the responsibility of the Director or head of the [Owner Department](#). This may be delegated to a Principle Investigator for a specific research project, or someone designated by the head of the department or Principle Investigator as the "[Ladder Safety Program Administrator](#)" for the Project or Department.

Does this include ladders that are attached to a wall?

Yes, this includes all types of ladders. A ladder attached to a wall or other structure is called a "[fixed ladder](#)".

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I'm designated "Ladder Safety Program Administrator", what do I have to do?

Become familiar with the Ladder Safety Program by reading the program. [Understand the requirements](#) of the program including the individual identification of ladders, inspection of ladders, use of ladders, and training requirements of the program. Once you know what's required, contact EH&S to arrange for assistance in implementation and training.

Who's responsible for inspecting the ladders?

Discuss with your department management [who conducts ladder inspections](#) in your department. An [inspection checklist](#) is one of the attachments to this Program. Visual inspections are required monthly or prior to each and every use. Documented safety inspections are required annually. Departments must maintain their own inspection records and make them available to EH&S or regulatory agencies such as CalOSHA if they request them.

Are there "Safe Work Rules" for ladder users to follow?

Yes. The work rules are described in the program sections, "[Ladder User's Procedures](#)" and "[Attachment 4](#)" of the Ladder Program.

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Do we have to use fall Protection Equipment when working on ladders?

Ladders may be used **WITHOUT** the user wearing a personal harness tied off to a CalOSHA certified fall protection anchor, when a leaning or extension ladder can be tied-off and stabilized to a permanent structure, or a step ladder is used on a level firm surface, and then work is done

within [very specific activities](#). Otherwise, fall protection must be worn by ladder-users in all ladder-use situations unless:

1. The Owner Department can demonstrate that the planned work activities are equivalently safe to the program requirements, or
2. The use of fall protection would create additional/greater hazards for the ladder user.

Alternatives to using fall protection include temporary scaffolding with appropriate railings, the use of a “Lift Pod”, the use of Genie lifts, aerial lifts or bucket trucks, etc., and should be considered before using ladders in such situations. If alternatives are unavailable or not feasible, the ladder user must use fall protection devices. For further explanations of fall protection devices, see the EH&S Fact Sheet, [“Fall Protection Equipment and Inspection.”](#)

Who should be trained and how do we get training?

CalOSHA requires that the employer train all employees on the hazards associated with the use of ladders. [Training requirements](#) are detailed in the program and can be provided at no cost to the Owner Department by EH&S, or for cost by outside Vendor as long as the contents of this program are addressed by the vendor-trainer.

Who keeps the records of inspections, inventories and training?

[Owner Departments must keep records](#) concerning the Ladder Safety Program’s application to their work activities. It’s likely they will delegate this task to the [“Ladder Safety Program Administrator”](#) for the Department. Discuss with your department management who the Program Administrator is in your department. All records must be kept for certain periods of time as [outlined in the program](#) by the Department and must be made available to regulatory agencies such as CalOSHA and EH&S, if they request.

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