

## INTRODUCTION

This program applies to Eastern Washington University (EWU) personnel who use ladders in performance of their job duties. Incorrect use of a ladder may pose a threat to human health if no used properly and employees have the right to know and understand the correct way to use a ladder. It is the intent of EWU that ladders are provided to employees and used correctly.

The Environmental Health and Safety (EH&S) Department assists departments on campus with training on the safe use of ladders that are used during department operations.

This procedure is supported by information provided in the Fall Protection and Restraint Program, and Scaffolding SOP,

## PURPOSE

This procedure is intended to provide standard operating procedures regarding the use of ladders by employees and to comply with the requirements of Washington Administrative Code (WAC) 296-876 (Ladders, portable and fixed). It is the responsibility of supervisors whose employees use ladders to read and understand the WAC. It is the responsibility of EWU departments and shops to select the appropriate type of ladder for the appropriate type of job and for ensuring that ladders are used in accordance with the manufacturer's instructions and specifications.

## SELECTION

There are several factors to consider when choosing the right ladder. These include duty rating, maximum load, ladder type, and ladder material.

DUTY RATING, MAXIMUM LOAD, LADDER TYPE		
<p><b>LIGHT DUTY</b> HOUSEHOLD USE</p> <p><b>200 lbs.</b> LOAD CAPACITY</p> <p>TYPE III DUTY RATING</p> <p>Combined weight of user and materials</p>	<p><b>SPECIAL DUTY</b> PROFESSIONAL USE</p> <p><b>375 lbs.</b> LOAD CAPACITY</p> <p>TYPE IAA DUTY RATING</p> <p>Combined weight of user and materials</p>	<p><b>MEDIUM DUTY</b> COMMERCIAL USE</p> <p><b>225 lbs.</b> LOAD CAPACITY</p> <p>TYPE II DUTY RATING</p> <p>Combined weight of user and materials</p>
<p><b>HEAVY DUTY</b> INDUSTRIAL USE</p> <p><b>250 lbs.</b> LOAD CAPACITY</p> <p>TYPE I DUTY RATING</p> <p>Combined weight of user and materials</p>		<p><b>EXTRA HEAVY DUTY</b> EXTRA HEAVY PROFESSIONAL USE</p> <p><b>300 lbs.</b> LOAD CAPACITY</p> <p>TYPE IA DUTY RATING</p> <p>Combined weight of user and materials</p>

NOTE: Maximum intended load is the total load of all persons, equipment, tools and materials.

## Choosing the Correct Ladder for the Job

There are three materials that ladders are generally made from. The following table provides information on the type of ladder materials available:

Fiberglass:	Electrically non-conductive, great value, strong, preferred ladder material
Aluminum	Strong, lightweight, corrosion resistant
Wood	Economical, electrically non-conductive when clean and dry, overall heavy

Portable ladders manufactured on or after January 1, 2006, must meet the design and construction requirements of the American National Standards Institute (ANSI). Portable ladders made before January 1, 2006, must meet the design and construction requirements and specifications of the appropriate ANSI standard in effect on the date of manufacture, WAC 296-876-2005.

## Ladder Use

General Rules: Departments are to ensure that employees and students comply with the following general rules:

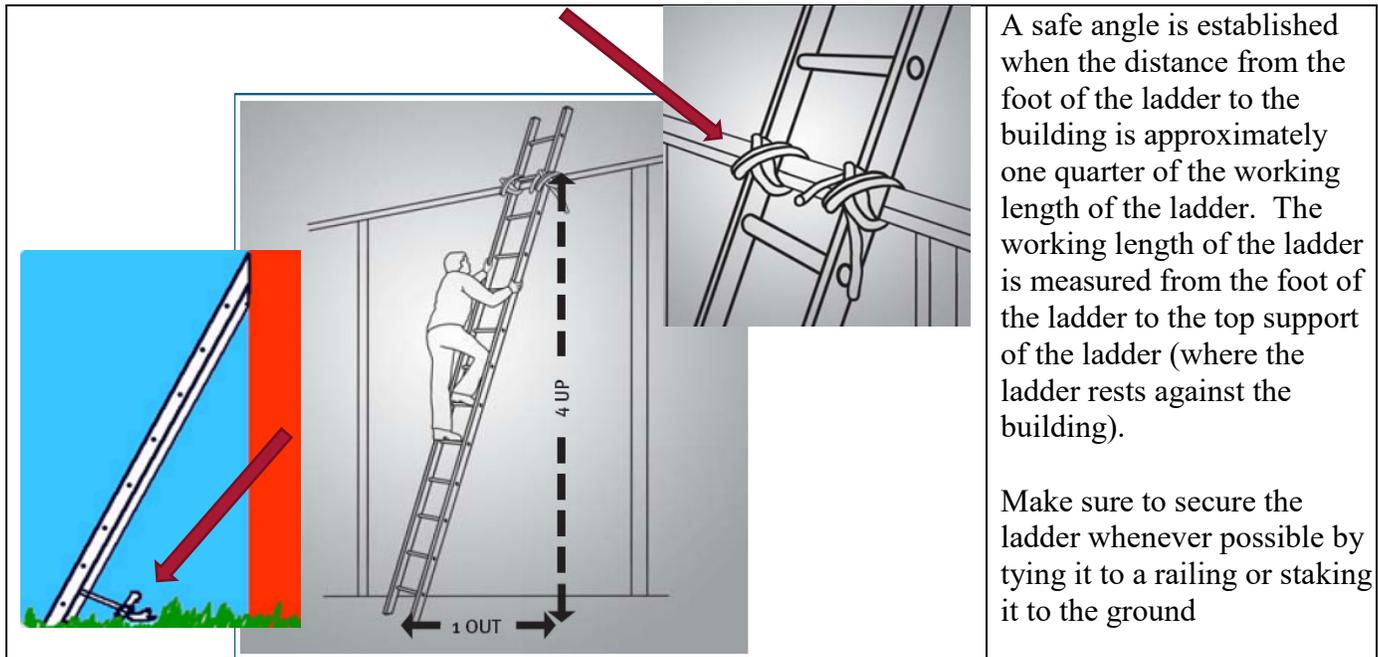
- Keep your body centered on the middle of the ladder.
- Do not lean to reach items while standing on the ladder.
- Always wear proper footwear with good tread when climbing.
- Always maintain at least three points of contact with the ladder (2 feet and 1 hand, or 2 hands and 1 foot should be in contact with the ladder at all times), unless using fall protection.
- Do not move, shift, or extend the ladder while you are standing on it.
- Never walk a ladder.
- Face the ladder with both hands free to hold the rails and/or rungs when climbing and descending ladders.
- Keep ladders free of oil, grease or other slippery materials.
- Keep area around top and bottom of ladder clear.
- If your ladder is next to a drop-off, fall protection is necessary when you could fall more than 10 feet. You must include the drop-off distance as well as the height you climb.

Special rules where ladder could be displaced by workplace activity or traffic: Departments are to ensure that employees and students comply with the following rules when working on ladders that could be displaced by workplace activities or traffic:

- Secure the ladder to prevent accidental displacement; or
- Use a barricade to keep the activities or traffic away from ladder.
- If ladder is set up in front of doors that open, then block the door open, lock the door, and/or guard the door to keep it from opening into the ladder, WAC 296-876-40010.

## Use of Extension Ladders:

- Place all ladders with secure footing on firm, level surfaces, and/or secure and protect the ladders to prevent accidental displacement.
- Do not place ladder on ice, snow or other slippery surfaces unless it is secured to prevent displacement (WAC 296-876-40015).
- Place extension ladders at a safe angle.



- Use an extension ladder with side rails which extend at least three feet above the landing surface when accessing an upper level, e.g., roof.
- Extension ladders should be 7 to 10 feet longer than the highest support or contact point, which may be the wall or roof line. This will allow enough length for proper setup, overlap of ladder sections, height restrictions of the highest standing level, and where appropriate, the extension of the ladder above the roof line. The highest standing level is four rungs down from the top.
- Secure the extension ladder at the top and bottom when working
- Use a safety belt and clip secured to the ladder (if the ladder is tied off) when doing work with both hands and working above 25 feet. Otherwise use a ladder platform, scaffolding or man lift.

### Use of Step Ladders:

- Make sure that the surface you are using your stepladder on is flat and solid. If the surface is soft or on a slant, your stepladder may tip and/or flex when you climb it. Although there are 4 points of contact to the ground on a stepladder, if one side of the ladder flexes due to soft ground or an uneven surface, the ladder could quickly become unstable.
- The highest permitted standing level on a stepladder is two steps down from the top. A person standing higher may lose their balance and fall. A person's maximum safe reaching height is approximately 4' higher than the height of the stepladder. For example, a typical person can safely reach an 8' ceiling on a 4' stepladder.
- Only use stepladders in a fully open position. Lock the side braces and cross braces before climbing.
- Use stepladders only for their intended purpose. Do not use a stepladder as a straight ladder in a folded and leaning position. Also do not use a stepladder as a brace, skid, lever, guy or gin pole, gangway, platform, scaffold plank, or material hoist unless specifically recommended by the manufacturer (WAC 296-876-40005).

## Inspection and Maintenance of Ladders

- Portable Ladders:

Department and Shop personnel must inspect ladders prior to each use and after damage caused by impact, tip-overs, and exposure to excessive heat. Consult WAC 296-876-30005 for inspection requirements.

Departments must affix defective and deficient ladders with **Do NOT Use** tags and remove such ladders from service. Department and shop personnel must make sure that any repairs restore the ladder to a condition meeting its original design criteria. Repairs to a defective side rail can only be performed by the manufacturer.

- Fixed Ladders:

Department and Shop personnel must inspect and maintain fixed ladders consistent with the provisions of WAC 296-876-700 through 70010. Fixed ladders must be designed and constructed consistent with WAC 296-876-500 through 60080.

## Storage of Ladders

Portable ladders should be stored on racks designed to protect them when not in use. Ladders need to be secured to prevent them from falling. Wooden ladders should not be stored near sources of heat, moisture or dampness. Materials should not be placed on ladders in storage.

## Transportation of Ladders

Ladders transported on vehicles must be properly supported, and positively secured in a fixed position that prevents chafing or abrasion.

## Training

Supervisors are responsible for training employees on the following:

- the requirements of this procedure;
- to recognize ladder hazards and the procedures to minimize the hazards;
- the proper construction, use, placement and care in handling ladders, the maximum intended load capacities of ladders that are used, the selection, inspection, and use of ladders.

Supervisors are also responsible to retrain employees as necessary to make sure they know and understand the content of the original training. Contact EH&S for training materials, resources and questions.

## Electricity

Always look up before raising a ladder to look for electrical lines. Keep all ladders at least 10 feet away from electrical lines unless trained to work near such lines. If trained to work near exposed electrical hazards, then use ladders that meet the requirements of WAC 296-876-40035.