1. Purpose

University of Alaska Anchorage (UAA) employees, student workers, faculty, staff, and outside contractors who use ladders during their work functions, risk falls which could result in serious injury. The hazards associated with falls from ladders can be substantially reduced by using the equipment properly and taking precautions. This program for Ladder Safety is intended to ensure workers are knowledgeable in the hazards when using ladders and the steps to be taken to protect themselves and others.

2. Objective

UAA, in its continuing effort to provide employees with safe, healthful working conditions, and to comply with the Occupational Safety and Health Act is implementing the following program for ladder safety to protect people working at the University, by helping employees, student workers, faculty, staff, and outside contractors better understand ladder safety and fall prevention.

3. Scope

This policy applies to UAA employees, student workers, faculty, staff, and outside contractors working on UAA equipment who work with or are around ladders.

4. Definitions

Extension ladder - A non-self-supporting portable ladder that is adjustable in length.

Fall Protection - Any equipment, device or system that prevents an employee from falling from an elevation or mitigates the effect of such a fall.

Ladder - A device with rungs, steps, or cleats used to gain access to a different elevation.

Maximum Intended Load - The total load (weight and force) of all employees, equipment, tools, materials, etc. that the employer reasonable anticipates will be applied at any one time.

Rung, Step, or Cleat - The crosspiece of a ladder on which an employee steps to climb up and down.

Scaffold - A temporary elevated or suspended platform and its supporting structure, including anchorage points, used to support employees, equipment, materials, and other items.

Stairway - Risers and treads that connect one level with another. This also includes any landings and platforms in between those levels. Stairways include standard, spiral, and alternating tread-type.

Stepladder - A self-supporting, portable ladder that has a fixed height, flat steps, and a hinged back.

Stepstool - A self-supporting, portable ladder that has flat steps and side rails. Includes ladders that have a fixed height, do not have a pail shelf, and do not exceed 32 inches in overall height. A step stool is designed so an employee can climb and stand on all of the steps and the top cap.

Tread - a horizontal member of a stair or stairway. Does not include landings or platforms.

5. Authority and Responsibilities

In addition to the roles and responsibilities outlined in the UAA Training Program, the following apply to the Ladder Safety Program.

EHS/RM

- Works with departments to determine proper ladder selection, stocking and safe-work practices unique to each department's work activities
- Create, track, and/or conduct inspections on fall protection equipment where applicable with this Program

Supervisor

- Ensure defective, damaged, or prohibited ladders are removed from service
- Conduct periodic inspections of ladders in their department to ensure integrity
- Assist in the determination of safe methods to work at heights when ladders are determined to be unsafe due to required work tasks
- Ensure employees are properly trained in this ladder safety program and the use of ladders in their work areas

Department Safety Coordinator

- Assist in the determination of defective, damaged, or prohibited ladders
- Conduct periodic inspections of ladders in their department to ensure integrity
- Assist in the determination of safe methods to work at heights when ladders are determined to be unsafe due to required work tasks

Employees

- Visually inspect ladders prior to every use for defects and damage
- Alert department supervisor when ladders need replacement
- Assess work to determine if fall protection should be worn and seeks alternative access methods instead of ladders
- Identify when a method such as scaffolding, aerial lift or bucket truck is a safer alternative

and communicate with Supervisor and Department Safety Coordinator

Outside Contractors

- Perform all work in compliance with their company's ladder safety program, which will be reviewed and approved by the EHS/RM department.
- If the company does not have a program, they must comply with this program

6. Hazards Associated with Working on Ladders

Common hazards and factors that affect the risk of injury while using a ladder include:

- Reaching or leaning too far (vs. moving the ladder)
- Placing ladders on boxes or pallets to extend ladders reach
- Carrying items while climbing a ladder
- Using the wrong type of ladder for a job (i.e. using a step ladder as a straight ladder)
- Standing on the very top step or rung of a step ladder
- Using worn or damaged ladders
- Placing extension or straight ladders at an incorrect angle
- Exceeding the weight limit of a ladder
- Using metal ladders in areas where contact with electrical wires could occur

The primary hazard is injury, including death, from improper ladder use leading to a fall. Other hazards can include injury, including death, from electrocution when working with ladders near electrical sources (i.e. electrical wires).

7. Engineering Controls

Engineering controls are design plans or changes to the working environment to prevent or reduce employee exposure to potential fall hazards. The following example of engineering controls should be considered in area design to reduce the risk of falls.

- Relocation of equipment requiring access to a new location where workers can reach them without the use of ladders
- Installation of stairways and work platforms in areas where tasks require frequent use of ladders to reach a location
- Include accessibility of frequently used maintenance items in engineering design and review of new installations

8. Administrative Controls

Administrative controls are safe work practices and procedures designed to reduce the risks associated with working with ladders. Examples of administrative controls include the following:

- Train employees who work with ladders
- Routine inspections of ladders to ensure they are in safe working condition
- Immediate removal of any ladders that are found to be damaged or defective
- Provide employees with the proper ladders for their job tasks
- Prevent the use of wooden ladders at UAA sites
- Proper storage and labeling of ladders to restrict use to trained personnel

9. Procedures

The following procedures will be followed when working with ladders.

Ladder Inspections

Prior to each use, ladders shall be inspected for:

- Rungs/steps free of oil, grease, dirt, etc.
- Fittings are tight
- Spreaders or other locking devices are in place
- Non-skid safety feet are in place
- No structural defects, support braces intact
- Ladders shall also be inspected by a competent person for visible defects on a periodic basis and after any occurrence that could affect their safe use.

Broken Ladders

At UAA if ladders are found to be broken or defective upon inspection the ladder must be taken out of service immediately. The following steps should be used to ensure that broken or defective ladders are not used:

- Ladder must be tagged “Do Not Use”
- Ladder must be removed from work area for immediate disposal
- Ladders taken out of service should never be allowed to be taken off site for secondary use
- Most ladders cannot be repaired to manufacturer specification

Storage

Ladders must be stored properly so they do not incur damage, or weathering while not in use. Ladders should also be stored in a manner that they do not pose a hazard of falling on people or equipment nor cause a trip hazard.

- Ladders must be stored to prevent warping or sagging
- Do not hang anything on ladders that are in a stored condition

Ratings and Limits

Ladders are designated with a duty rating which correlates to the ladders maximum safe load capacity. Duty ratings are described in terms of total pounds, including a person and any tools or materials they are carrying. The ratings must be placed on a sticker or nameplate on the side of every ladder. Never exceed the weight limit of the ladder, and always include the total weight of tools, materials, and equipment.

Ladder weight ratings:

- I_AA 375 pounds (special duty)
- I-A 300 pounds (extra heavy duty)
- I 250 pounds (heavy duty)
- II 225 pounds (medium duty)
- III 200 pounds (light duty)

Setup

The following procedures must be followed when using a ladder to prevent ladder related injuries:

- Look for overhead power lines before handling or climbing a ladder.
- Place ladder on a clean, slip-free level surface.
- Extend the ladder to have about 4 feet above the top support or work area.
- It is recommended to anchor the top or bottom of extension ladder when means to do so are available.
- Place the ladder base ¼ the height of the ladder from the wall when using and extension ladder.
- Keep ladders free of any slippery materials.
- Never allow more than one person on a ladder at a time unless the ladder is specifically designed for such a purpose.

- Secure tools and other objects when using ladders by using carriers and tool belts to carry objects up a ladder.
- Stay near the middle of the ladder, face the ladder, and maintain three points of contact while climbing up/down.
- Do not lean out from the ladder in any direction.
- If you have a fear of heights – don't climb a ladder.
- Do not allow others to work under a ladder in use.

Fall Protection While Using Ladders

Depending on the task being performed, fall protection will be required in the following circumstances:

- Fall protection, including a harness and lanyard is advisable, if feasible, if the working elevation is 4 feet or above (as measured from the bottom of the feet), and the worker cannot maintain three points of contact while performing the task, i.e. worker must use both hands to perform the job or must hold an item with one hand while performing work with another.
- Care should be taken not to place the climbing side of a portable ladder within 10 feet of a handrail since a backwards or sideways slip could result in the climber falling a significant distance over the handrail. Where this is not possible and the potential fall hazard over the handrail is 4 feet or more, fall protection must be worn by the user of the ladder regardless of the working height.

10. Inspections

To ensure ladders at UAA are maintained in a safe condition and workers to not use defective equipment the following inspections are required:

Prior to every use workers will visually inspect their ladders to ensure they are in proper working condition. There must be no missing or worn parts, fasteners, feet, or rungs. Spreaders, hinges, and platforms if applicable are all in place and in working condition. All labels and the ladder weight rating must be present and legible.

Annually, the competent person (as determined by the EHS/RM department) will complete a thorough inspection of each ladder using the UAA Ladder Inspection Checklist (Attachment A). After inspection a label stating the name of the inspector and the date of the inspection will be placed on the ladder so the user can verify inspection.

11. Training

UAA shall provide a training program for each employee using ladders as necessary. The training

program shall enable each employee to recognize hazards related to ladders and stairways. The training shall ensure each employee also understands the procedures to be followed to minimize these hazards.

The employer shall ensure that each employee has been trained by a competent person in the following areas, as applicable:

- The nature of fall hazards in the work area
- The correct procedures for erecting, maintaining, and disassembling the fall protection systems to be used
- The proper construction, use, placement, and care in handling of all stairways and ladders
- The maximum intended load-carrying capacities of ladders used

Retraining shall be provided for each employee as necessary if an accident occurs, new workplace hazards are identified, a near loss incident has occurred, or there is a change in the type of ladder used, so that the employee maintains the understanding and knowledge acquired through compliance with this section.

12. Program Evaluation

The Ladder Safety program shall be evaluated on an annual basis utilizing the protocols set forth by EHS/RM. The evaluation team will consist of a department safety coordinator and a designee from EHS/RM. EHS/RM will define the scope of the evaluation. The final report will be developed by the EHS/RM utilizing the information received during the evaluation. The deficiencies determined in the report will be documented and corrective action plans will be developed.

13. References

OSHA regulations that apply to Ladder safety are included below.

- 29 CFR 1910.23, 1910.25, 1910.26, and 1910.27
- 29 CFR 1926 Subpart X

14. Revision History

Revision Number	Date Revised	Description of Change	Revised By	Approved By
0	10/08/2018	Initial Issue		VC Shuford
1	05/17/2021	Format improvements	N VanGorder	
2				
3				

Attachment A

UAA Ladder Inspection Checklist

UNIVERSITY of ALASKA ANCHORAGE

UAA Ladder Inspection Checklist

Date Inspected: _____ Ladder Location: _____

Inspected by: _____ Ladder Number: _____

Type ❑ Stepladder ❑ Extension Ladder **Height** _____ ft.

Duty Rating (Found on the Label)

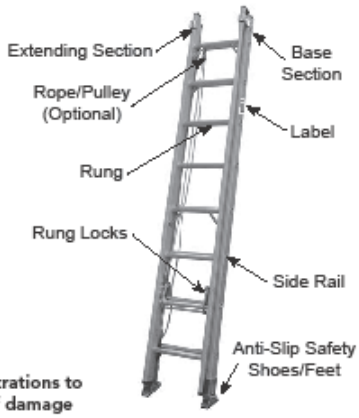
❑ Type IAA (Extra Heavy Duty) — 375 pounds ❑ Type IA (Extra Heavy Duty) — 300 pounds
❑ Type I (Heavy Duty) — 250 pounds ❑ Type II (Medium Duty) — 225 pounds
❑ Type III (Light Duty) — 200 pounds

Shoes/Feet:	Worn, Loose, Cracked or Missing	❑ Needs Repair	❑ Good
Rails/Uprights:	Sharp Edges, Cracked or Bent	❑ Needs Repair	❑ Good
Steps/Rungs:	Loose, Broken, Worn or Missing	❑ Needs Repair	❑ Good
Top Cap:	Cracked, Loose or Missing	❑ Needs Repair	❑ Good
Hardware:	Difficult to Operate	❑ Needs Repair	❑ Good
Cleanliness:	Grease, Oil or Slippery Materials	❑ Needs Repair	❑ Good
General:	Rust, Corrosion, Cracks, Loose or Missing Parts	❑ Needs Repair	❑ Good
Labels:	Missing or Not Legible	❑ Needs Repair	❑ Good
Rung Locks:	Loose, Broken or Missing	❑ Needs Repair	❑ Good
Rope/Pulley (optional):	Worn, Frayed Broken or Missing	❑ Needs Repair	❑ Good

Remove the ladder from service if any box is checked under the "Needs Repair" category and tag the ladder as "Damaged – Do Not Use." Dispose of the damaged ladder properly.

Stepladder

Extension Ladder



Use these illustrations to circle areas of damage