

# WORKING AT HEIGHTS PROGRAM

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## 1.0 PURPOSE

Working at heights presents an increased risk of high severity injuries and death. This program aims to:

- Reduce the number of falls from heights and corresponding injuries/fatalities.
- Provide workers who use personal fall protection with sufficient knowledge about its purpose and use.
- Provide workers who may be exposed to the hazard of falling with adequate knowledge about fall hazards and general safety practices to work safely at heights.

## 2.0 SCOPE

This program applies to all University of Waterloo personnel (students & workers) and contractors (including sub-contractors) hired by the University to carry out work at heights. Working at heights includes:

- Working from portable ladders (does not include step stools)
- Working from scaffolds (rolling or fixed)
- Working within 2 meters of an unprotected edge that is 3 meters or higher
- Work on a ladder or platform near a guardrail when the platform or ladder raises you above the guardrail
- Working from elevated or aerial work platforms, including mobile or stationary platforms and powered or non-powered platforms

## 3.0 DEFINITIONS

### **Fall Protection**

Any system that serves to protect a worker from falling, or minimizes the travel distance in the event of a fall. This includes guardrails, coverings, travel restraint and fall arresting systems.

**Guardrail** An assembly that provides a barrier to prevent a worker from falling from an edge of a surface.

**Roof** This is the exterior surface on the top of a building.

**Unprotected edge** Any side or edge (except at entrances to points of access) of a walking or working surface (e.g., floor, ramp, or runway) where there is no wall or guardrail system.

## **4.0 ROLES AND RESPONSIBILITIES**

### **4.1 SAFETY OFFICE**

- Provide training on the use of portable ladders and fall arrest.
- Maintain records of training.
- Periodically review the Working at Heights Program.

### **4.2 SUPERVISOR/MANAGER**

- Ensure personnel receive appropriate training.
- Ensure personnel are using and wearing personal protective equipment.
- Ensure scaffolding is erected by a competent person.
- Identify situations where a fall hazard exists and perform a hazard analysis of the work to be performed.
- Ensure a rescue plan is in place before workers use fall arrest harnesses.
- Ensure that any permanent anchors to be used have been inspected and passed the inspection within the previous year.

### **4.3 WORKERS**

- Wear and use all required personal protective equipment.
- Inspect portable ladders prior to use.
- Inspect all life safety equipment prior to use.
- Inspect work area for hazards.
- Ensure temporary anchors are adequate.
- Report to their supervisor if any equipment fails inspection.

### **4.4 SUPERVISORS OF CONTRACTORS AND SUB-CONTRACTORS**

- Ensure contractors and sub-contractors have appropriate training.
- Ensure contractors and sub-contractors are complying with applicable legislation.
- Provide a copy of this Working at Heights Program to the contractor and sub-contractor.

## **5.0 PROCEDURES**

### **5.1 FOOTWEAR**

#### **5.1.1 ACCEPTABLE FOOTWEAR**

- Any person working at heights, on ladders, platforms, scaffolding or step stools must use footwear that:
  - Covers the entire foot, including toes and heel

- Is tight fitting and will not slip on or off easily
- Has non-slip soles with adequate tread
- Is clean and free of mud/dirt/oil/grease and other debris

### **5.1.2 PROHIBITED FOOTWEAR**

- The following types of footwear are prohibited when working at heights, on ladders, platforms, scaffolding or step stools:
  - Sandals
  - High heels

### **5.2 PORTABLE LADDERS (GENERAL)**

- Portable ladders must be inspected prior to use.
- Choose a portable ladder of the correct height.
- Do not use boxes, blocks, tables or any other thing to gain greater height.
- Erect barriers and signage around the work area as directed by supervisor.
- If the work to be performed is in an area where visibility is an issue (in stairwells, near corners, behind doors, etc), use barriers and/or signs to warn pedestrian traffic of work zones (additional personnel may be required).
- When working from a ladder in a traffic area and effective barriers cannot be used additional personnel are required to brace the ladder and act as a safety spotter.
- Use fall protections when working from ladders above 3 meters .
- Keep shoulders between vertical rails at all times – do not reach.
- Only reposition the ladder from the ground.
- Maintain three-point contact when climbing the ladder.
- Use extra care when working from a ladder on a mezzanine or balcony.
  - Fall arrest harnesses are required when working near guardrails.
- Ladders must have labeling indicating the maximum working load.

### **5.3 STRAIGHT LADDERS**

- Rails must extend 1 meter beyond the contact point.
- Maintain safe working angle of 1 meter out for every 4 meters of height.
- Extension ladders must have at least a 3-rung overlap.
- The users hands must be empty.
- Ladders over 6 meters in length must be tied off at point of contact or braced by a helper at bottom of ladder.
- Erect ladders on a firm, level surface.

## **5.4 STEP LADDERS**

- A workers knees should not be above the top step of the ladder.
- The ladder should be fully extended and locked in place.
- The ladder should be set up to face the work whenever possible.

## **5.5 FIXED LADDERS**

- Fixed ladders must be constructed to applicable Ontario Building Code requirements.
- Fixed ladders shall:
  - Be vertical
  - Have rest platforms at not more than 9 metre intervals
  - Be offset at each rest platform
  - Where the lacer extends over 5 metres above grade, floor or landing, have a safety cage commencing not more than 2.2 metres above grade and continuing at least 90 centimetres above the top landing with openings to permit access by a worker to rest platforms or the top landing
  - Have side rails the extend 90 centimetres above the landing
  - Have rungs which are at least 15 centimetres from the wall and spaced at regular intervals
- The above requirements do not apply to a fixed ladder on a tower, tank chimney or similar structure which has a safety device which will provide protection should a worker using the ladder fall.
- Fixed ladders are to be inspected by a competent person at least yearly. Records of the inspection are to be kept for two years after the most recent inspection.

## **5.6 SCAFFOLDS**

- Only erect scaffolds on firm and level surfaces.
- Before using rolling scaffolds, ensure the brakes are tested and that they function correctly.
- To increase platform height, outriggers approved by the scaffold manufacturer may be used.
- Do not exceed the rated working load for the scaffold.

## **5.7 FLAT ROOFTOPS**

When no guardrails or walls less than 1.2 meters are present:

- Do not approach within 2 meters of the roof edge without wearing appropriate fall arrest or installing adequate temporary guardrails.

- Erect stanchions 2 meters from the edge and place “caution” tape or other highly visible rope/line/tape between stanchions as a visible reminder to stay clear of the edge.
- When working on a rooftop that is composed of loose stone, gravel or other material that may shift, appropriate materials must be used (18”x18” or larger patio stones, 1/2” or thicker laminated plywood, etc) to provide a stable, flat and level surface for portable ladders or scaffolding.

## **5.8 SLOPED ROOFTOPS**

- Install adequate temporary guardrails or wear appropriate fall arrest.

## **5.9 ELEVATED WORK PLATFORMS**

- Only trained and competent individuals may operate an elevated work platform.
- Do not exceed rated working load of platform.
- Operate platform according to manufacturer’s instructions.
- Competent operators may take a passenger for photographic and inspection purposes only after the passenger has received training in the use of fall arrest harnesses.

## **6.0 TRAINING**

- All personnel using portable ladders on campus must attend a ladder safety training session.
- All personnel using fall arrest or travel restraint systems must be trained in the proper use and inspection of the equipment.
- All personnel that supervise the erection, alteration or dismantling of a scaffold must be trained.
- All personnel operating an elevated work platform must be trained.
- University personnel conducting work at heights that fall under O. Reg. 213/91 Construction Projects must complete a Working at Heights training program by a Ministry of Labour approved training provider.

## 7.0 RECORD OF REVISIONS

Date	Author/Editor	Change	Version
January 2021	Doug Dye	<ul style="list-style-type: none"> <li>No changes</li> </ul>	Working at Heights Program_v.1.1_JAN2021
January 2020	Doug Dye	<ul style="list-style-type: none"> <li>Added requirements to section 5.5 Fixed Ladders</li> <li>Added requirements to section 5.7 Flat Rooftops</li> <li>Added section 7.0 Record of Revisions</li> </ul>	Working at Heights Program_v.1.1_JAN2020
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