

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
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January 2021	Doug Dye	<ul style="list-style-type: none"> • No changes 	Working at Heights Program v.1.1 JAN2021
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