

Working at Heights - Training Program Standard



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comply with *The Workplace Safety and Health Act (Manitoba) and Regulations*, as may be amended from time to time.

1. Scope

The Working at Heights Training Program Standard outlines the requirements for working at heights training programs in Manitoba.

The training provider may customize the training format to address specific needs of different industries.

2. Purpose

The purpose of a Working at Heights training program is to provide workers with:

- knowledge of fall hazards
- general safety practices for working safely at heights
- knowledge of personal fall protection equipment

The training is intended for workers who are:

- exposed to the hazard of falling from heights
- using personal fall protection equipment

3. Design

Design of the training program must:

- with adult learning principles:
 - ensure learners know why they need to learn specific content and how it relates to their workplaces
 - relate training to learners' own experiences
 - challenge and engage learners using a variety of activities that allow for participation, feedback and interaction
 - recognize the limits of attention spans and apply techniques to address the various ways that adults learn
 - use real workplace activities and tools
- use language that is appropriate for all learners
- provide accurate and current content
- include references to legal and technical information
- use a variety of teaching aids, such as audio recordings, videos, visuals, manuals, equipment, safety devices and measuring/monitoring equipment
- provide materials that follow the principles of instructional writing and good graphic design
- be consistent with provincial and federal legal requirements

4. Delivery

The Working at Heights Basic Theory Module must be successfully completed before the Working at Heights Practical Module is taken.

Regardless of the delivery method, all Endorsed Training programs must meet the requirements of this standard, along with ***The Accessibility for Manitobans Act (AMA)***, and the delivery method must be reasonable and practicable to support the learner's ability to attain the applicable learning outcomes.

4.1 Face-to-Face Learning

Face-to-face learning includes in-class, trainer-led training. This learning method *should* be used for the Working at Heights Basic Theory Module and *must* be used for the Working at Heights Practical Module.

The following are the minimum hours for training:

1. Working at Heights Basic Theory Module - 3 hours
2. Working at Heights Practical Module - 3.5 hours

4.2 eLearning and Blended Learning

eLearning and blended learning includes online training and can be used for the Working at Heights Basic Theory Module. The eLearning content should be consistent with **Manitoba e-Learning Instructional Design Guidelines**.

4.3 Distance Learning

Distance learning includes training via a live video link and is acceptable for the Working at Heights Basic Theory Module.

5. Learning Outcomes

Employers will need to supplement any training program that meets the requirements of this training program standard with additional information, instruction and training in workplace-specific policies and procedures and workplace-specific hazards and equipment related to Working at Heights.

5.1 Working at Heights Basic Theory Module

5.1.1 Identification of Rights, Roles and Responsibilities

By the end of this session, learners will be able to:

- Identify the roles and responsibilities of the employer, constructor (if applicable), supplier, supervisor and worker regarding working safely at heights;
- Describe four worker rights regarding working at heights and how a worker would take steps to exercise them;
- Explain that all workers have a duty to report to their supervisor or employer all fall hazards or defects in fall prevention/protection equipment of which they are aware and which may endanger themselves or another worker;

- Explain that an employer can not threaten to fire or dismiss workers for exercising their health and safety rights regarding working safely at heights, or for asking their employer or supervisor to follow the Manitoba Workplace Safety and Health Act and Regulation;
- Explain that the Workplace Safety and Health Branch enforces the Manitoba Workplace Safety and Health Act and Regulation. Workplace Safety and Health Officers may issue improvement orders and/or stop work orders. They may also issue administrative penalties for non-compliance with the regulations for working safely at heights;
- Explain the resources available through SAFE Work Manitoba's website **safemanitoba.com**.

5.1.2 Identification of the Hazards of Working at Heights

By the end of this session, learners will be able to:

- Recognize the hazards of working at heights;
- Recognize other situations in which workers are exposed to the hazards of falling from heights (e.g., falling into water, machinery, electrical equipment, hazardous substances or objects);
- List typical accidents and injuries related to working at heights in the workplace;
- Identify the consequences of injuries and fatalities due to falling from heights (family, society, reputation, morale);
- Explain the importance of safe work plans and procedures when identifying the hazards of falling from heights.

5.1.3 Eliminating or Controlling the Hazards of Working at Heights

By the end of this session, learners will be able to:

- Define the hierarchy of controls as it relates to working at heights in the Manitoba Workplace Safety and Health Act and Regulation;
- Use realistic workplace scenarios (for barriers, access equipment, positioning equipment and personal protective equipment) and use the hierarchy of controls to choose the preferred method of working safely at heights;
- Explain personal protective equipment limitations.

5.1.4 Warning Methods and Physical Barriers

By the end of this session, learners will be able to:

- Describe the types of warning methods (signs and bump lines) and physical barriers (fencing, guardrails, protective coverings) and their appropriate use;
- Identify the characteristics and appropriate uses of permanent and temporary guardrails;
- Explain the precautions for relocating or removing guardrails.

5.1.5 Ladders and Similar Equipment

By the end of this session, learners will be able to:

- Identify at least three types of portable ladders and similar equipment and explain their limitations;
- Explain the advantages and disadvantages of ladders and similar equipment for working at heights;
- Identify that there are different regulatory requirements for ladders in various sectors and that these requirements may restrict the type of work that may be performed when working at heights from a ladder;
- Identify and assess situations where ladders may be used safely for working at heights and when alternative means of access would be more appropriate;
- Explain how to inspect and care for ladders and similar equipment;
- Describe how to position and use ladders;
- Identify when more information, instruction or training is needed when using ladders or similar equipment.

5.1.6 Personal Fall Protection Equipment

By the end of this session, learners will be able to:

- Explain when you would need a travel restraint system, fall restricting system or fall arrest system, and the essential parts of each system;

- Identify when more extensive training is needed to safely use a travel restraint system, fall restricting system or fall arrest system.

5.2 Working at Heights Practical Module

5.2.1 Barriers and Other Fixed Equipment

By the end of this session, learners will be able to:

- identify when you would need bump lines, barriers, guardrails or safety nets
- identify the regulatory requirements (if any) for bump lines, barriers, guardrails and safety nets
- identify the limitations of bump lines, barriers, guardrails and safety nets
- identify the strength and design requirements of temporary guardrails

5.2.2 Personal Fall Protection Equipment

By the end of this session, learners will be able to:

- Discuss how to use travel restraint, fall restricting & arrest systems, and their limitations;
- Identify the fall protection regulatory requirements (where applicable) for travel restraint, fall restricting and fall arrest systems;
- Discuss the components of travel restraint, fall restricting and fall arrest systems;
- Determine the fall distance to prevent a worker from striking the ground or an object below;
- Discuss the force required to deploy a shock absorber;
- Define and explain how "bottoming out," the pendulum effect and suspension trauma effects the human body;
- Describe the steps required for the proper setup, use, maintenance and storage of travel restraint and fall arrest equipment (harness, lanyard, lifeline, rope grab, snap and grab hooks, carabiners);

- Demonstrate how to inspect and identify deficiencies in industry-standard personal fall arrest equipment;
- Demonstrate how to “don” and “doff” (i.e., put on and take off) industry-standard personal fall arrest equipment, including a harness and lanyard;
- Describe how to protect horizontal and vertical lifelines while in use;
- Describe how to set up and use a rope grab for personal fall arrest systems and ladder use;
- Explain the ways to maintain tie-off to an anchor point when changing anchor point;
- Describe when you may need additional workplace-specific information, instruction or training regarding fall protection equipment.

5.2.3 Anchor Points

By the end of this session, learners will be able to:

- explain what an anchor point is
- discuss the location and use of anchor points
- give examples of correct and incorrect anchor points
- identify the dangers of using incorrect items as anchor points
- show the differences between permanent anchors, temporary fixed supports and existing structural features as anchor points
- know the importance of following the manufacturer's recommendations when installing new anchor points and, where necessary, approval of anchor points by a professional engineer
- explain the importance of asking for information before using new anchor points

5.2.4 Work Access Equipment and Platforms

By the end of this session, learners will be able to:

- use the hierarchy of controls to identify the different types of equipment for working at heights, including aerial devices, self-elevating work platforms, scaffolds, ladders, suspended access equipment and boatswain's chairs
- identify regulatory restrictions and criteria for the use and positioning of ladders
- give examples of the types of personal fall protection equipment required to work safely at heights on work access equipment and platforms
- explain that if you are asked to use work access equipment, platforms or similar equipment in your workplace, you may need additional workplace-specific and/or equipment-specific information, instruction or training

5.2.5 Rescue Planning

By the end of this session, learners will be able to:

- explain the need of a working-at-heights fall rescue plan
- identify key components of a fall rescue plan
- discuss the roles and responsibilities of employers, supervisors and workers regarding a fall rescue plan and emergency procedures
- explain that each project where workers rely on fall protection equipment (such as personal protective equipment and safety nets) must have a site-specific rescue plan, including training and information

6. Resource Material

The date and version number must be on all resource materials, including:

- terms and definitions
- job aids, evaluation tools and templates
- copies of the applicable provincial or federal safety legislation
- manufacturers' equipment instructions
- participants' manual
- trainer's manual and lesson plan

7. Equipment

7.1 Equipment for Demonstrating Learning Outcomes

The equipment listed below may be used for the delivery of the Working at Heights Practical Module:

- type A harnesses with tongue buckles (variety of sizes)
- type A harnesses with mating buckles (variety of sizes)
- single leg lanyards (with energy absorber)
- lifelines with snap hooks adequate for learning purposes
- rope grabs
- carabiners
- D-bolt anchors

7.2 Other Equipment

The equipment listed below may be used in the Working at Heights Practical Module, so that learners know the look and function of this equipment:

- non-type A harnesses (ADELP harness and cross-over harness)
- various lanyards (no energy absorbers, various levels of energy absorbers, Y lanyard, tie-back lanyard, type 1 self-retracting lanyard)
- various rope grabs
- various lifelines (carabiner and thimble)
- leg stirrups
- various hooks (snap hook with swivel, rebar hook)
- various anchors (cross-arm anchor connector, one-time use roof anchor, disposable concrete anchor)

7.3 Damaged Equipment

The equipment listed below may be used in the Working at Heights Practical Module so that learners can inspect the equipment and identify damage:

- type A harness (with tongue and mating buckles)
- single leg lanyards (with and without energy absorbers)

8. Evaluation

The training program must include a plan for learner evaluation that meets the requirements below. There must be a variety of evaluation methods available to the trainer and/or evaluator.

8.1. Written Tests and Alternative Evaluation Methods

1. There must be a written test either at the end of each module or at the end of the whole training program. The purpose of the written test is to verify that the key concepts are

understood by the learner. The learner must achieve a minimum grade of 75 per cent to successfully complete the training program. After a learner has successfully completed the test, the evaluator must review incorrect answers with the learner to successfully complete the training program;

2. Alternative evaluation methods to written tests may be used for learners with language, literacy or accommodation needs. These methods must be clearly outlined in the evaluation plan and the results must be documented by the evaluator.

8.2. Evaluation of Demonstration Learning Outcomes

1. Learning outcomes requiring demonstration (sections 5.2.2(h), 5.2.2(i) and 5.2.2 (l)) must be performed in order to successfully complete the Working at Heights Practical Module;
2. Alternative evaluation methods may be used for learners with language, literacy or accommodation needs. These methods must be clearly outlined in the evaluation plan and the results must be documented by the evaluator.

9. Validation/Refresher Requirements

Working at heights training remains valid for three years from the date of completion of the Working at Heights Basic Theory Module and the Working at Heights Practical Module.

A worker's training is re-validated for another three-years after the worker successfully completes the refresher training of the Working at Heights Practical Module.

Glossary

General Terms

Blended Learning

Describes the practice of using several training delivery mediums in a single training program and typically refers to the combination of classroom instruction and eLearning.

Distance Learning

An educational situation in which the trainer and students are separated by time, location or both. Education or training courses are delivered to remote locations via synchronous or asynchronous instruction (ASTD definition).

eLearning (Electronic Learning)

A term covering a wide set of applications and processes that includes web-based learning, computer-based learning, virtual classrooms and digital collaboration.

Face-to-Face Training

Usually refers to traditional classroom training, in which a trainer teaches a course to a room of training participants. The term is used synonymously with on-site training, classroom training and trainer-led training (slightly modified from ASTD definition).

Minimum Hours for Training Delivery

The timing for instruction of a training program that excludes breaks and lunch:

- 3.5 hours of instruction is equal to a half-day of delivery;
- 7 hours of instruction is equal to a full-day of delivery.

Module

A unit of instruction that can be measured, evaluated for change, assembled to form complete courses or bypassed as a whole, and that is usually intended to teach one or a group of skills or areas of knowledge (slightly modified from ASTD definition).

Evaluator

A person who evaluates learners.

Trainer

A person who delivers training programs.

Qualification

A skill, quality or attribute that makes somebody suitable for a job, activity or task.

Working at Heights Terms

Fall Arrest System

A fall protection system that is designed to stop a worker's fall before the worker hits the surface below.

Fall Restricting System

A type of fall arrest system that has been designed to limit a worker's fall to a specified distance.

Fixed Support

A permanent or temporary structure, or a component of such a structure, that can withstand all loads and forces that the structure or component is intended to support or resist; and that is sufficient to protect a worker's health and safety; and that includes equipment or devices that are securely fastened to the structure or component.

Full Body Harness

A device that can arrest an accidental vertical or near-vertical fall of a worker and that can guide and distribute the impact forces of the fall by means of leg and shoulder strap supports and an upper dorsal suspension assembly which, after the arrest, will not by itself permit the release or further lowering of the worker.

Guardrail System

An assembly of components joined together to provide a barrier to prevent a worker from falling from the edge of a surface.

Safety Factor

The ratio of the failure load to the specified load or rated load.

Safety Net

A safety net that complies and is used in accordance with ANSI 10.11 and Part 14.7(1)(a)(x) of *Manitoba Workplace Safety and Health Regulation 217/2006*, and that must be located and supported in such a way that it arrests the fall of a worker who may fall into it without endangering the worker.

Travel Restraint System

A fall protection system that is designed to prevent a worker from travelling to a location where there is a risk of falling.

Acknowledgements Statement

The Working at Heights Committee has developed a Working at Heights Training Program Standard that outlines the minimum requirements for program objectives, training requirements and learning outcomes that are designed to educate Manitoba workers on working in compliance.

Please note that while reasonable efforts have been made to ensure that the criteria of the Training Program Standard is met, the responsibility resides with the employers to ensure compliance with the training requirements under the *Manitoba Workplace Safety and Health Act and Regulations*. In determining what rights or obligations a party may have under the provinces' legislation, reference should always be made to the official version of the *Act and Regulation*.

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