

Guide to Workplace Safety for Construction Sites





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Introduction

The construction sector represents a significant percentage of the work force in the province of Prince Edward Island. Safe work practices play an important part in reducing injuries and deaths.

This guide is for workers, employers, Joint Occupational Safety and Health (JOSH) Committees and Safety Representatives within the construction sector.

It is intended to bring together the most common pieces of legislation that apply to construction workplaces on Prince Edward Island to help ensure employers in the construction industry are in compliance and workers are protected from hazards on the job.

Occupational Health and Safety Law

The *Occupational Health and Safety Act (OHS Act)* and *Regulations* set the minimum standards for occupational health and safety in the workplace and define the general safety principles for provincially regulated workplaces in Prince Edward Island. The *OHS Act* and *Regulations* are available on the Workers Compensation Board (WCB) website at wcb.pe.ca.

Enforcement

Health and safety law is enforced by Occupational Health and Safety (OHS) Officers from the Workers Compensation Board. The laws enforced by the OHS Officers include:

- -Occupational Health and Safety Act
- -Occupational Health and Safety General Regulations
- -Fall Protection Regulations
- -Scaffolding Regulations
- -Workplace Hazardous Materials Information Systems (WHMIS) Reaulations
- -Smoke-Free Places Act
- -Youth Employment Act

OHS Officers have the legal right to enter any workplace, at any reasonable time, without giving notice.

During a routine inspection, an Officer will look at the workplace, the activities, and the overall management of health and safety to ensure the workplace is in compliance with the health and safety laws. The Officer may talk to workers and supervisors. The Officer will issue a report for each site inspection, and may issue orders to correct an unsafe situation or an order to stop work if there is immediate danger.

Education

The WCB's Occupational Health and Safety Division also has education staff that can help employers and workers understand their responsibilities under the law and how it applies to the workplace. Education services include telephone inquiries, access to a video library, on-site presentations, publications, posters, hazard alerts and other educational materials.

Health and Safety Responsibilities

The basis of the *OHS Act* is the **Internal Responsibility System.** This means that <u>every</u> individual in a workplace has a direct responsibility for creating a healthy and safe workplace. The responsibility is shared by owners/operators, management, and all workers.

The *OHS Act* clearly states the duties of employers, workers, and other persons in Sections 12 through 20. Below is a sample of OHS responsibilities for quick reference:

OHS Responsibilities

Under the *OHS Act*, employers must take all reasonable precautions to make sure workers are kept safe at the workplace. Employers must:

- Provide and maintain equipment, machines, and materials in a safe manner.
- Provide the training and supervision necessary to keep the workers safe.
- Make sure the workers, particularly supervisors, are familiar with workplace hazards and the procedures to minimize risks.
- Operate the business in a way that does not expose workers to health or safety hazards.
- Cooperate with the JOSH Committee or Health and Safety Representative, if any.

A constructor is a person who contracts work to be done on a project for an owner or who undertakes work on a project as an owner. A constructor must ensure that every reasonable precaution is taken to protect the occupational health and safety of everyone at the project. The constructor must:

- Co-ordinate the activities of the contractors and sub-contractors at the project.
- Ensure all necessary health and safety information (such as hazard information and control procedures) for the project is communicated

- between all parties at the site including the JOSH Committee or Health and Safety Representative(s).
- Ensure all workers, self-employed persons and employers performing work for the project are in compliance with the *OHS Act* and *Regulations*.

A contractor is a person or company that performs work on a contract basis. A contractor is often referred to as a sub-contractor. A contractor must also ensure that every reasonable precaution is taken to protect the occupational health and safety of persons at or near the workplace. The contractor must:

- Co-ordinate the activities of the contractors and sub-contractors at the workplace where the work is being performed.
- Ensure all necessary health and safety information (such as hazard information and control procedures) for the workplace is communicated between all parties at the site as well as the JOSH Committee or Health and Safety Representative(s).
- Ensure all workers, self-employed persons and employers at the workplace are in compliance with the *OHS Act* and *Regulations*.

The constructor and contractor responsibilities are very similar, except that the constructor's responsibilities reach across the entire project site, and the contractor's responsibilities are more limited to the work that is within their control.

For example, the constructor is responsible for ensuring hazard information is communicated to all workers/employers on site (such as asbestos removal is happening on a certain date, and only qualified workers can be present. However the asbestos-removal contractor is responsible for communicating with and controlling the asbestos-related hazards for his own workers and for communicating with the constructor.

All workers have responsibilities under the *OHS Act*. A worker is defined as a person employed in a workplace and a person in a workplace for <u>any</u> purpose in connection therewith (this may include volunteers and family members). Workers must:

- Comply with company rules and procedures.
- Wear personal protective equipment as required.
- Use machinery, equipment, and materials only as authorized.
- Follow job procedures.
- Report hazards, unsafe conditions or actions to the supervisor.
- Report incidents.
- Report all injuries for first aid, no matter how minor.
- Cooperate with the JOSH committee or representative.

Workers also have the following rights:

- To know about existing and potential hazards.
- To participate in making the workplace safe and healthy by being a
 Health and Safety Representative, a member of the Joint Occupational
 Safety and Health (JOSH) Committee, or consulting with the employer,
 supervisor, JOSH Committee or Health and Safety Representative.
- · To refuse unsafe work.

JOSH Committees and Health and Safety Representatives:

The main function of a JOSH Committee or Health and Safety Representative is to contribute to the improvement of health and safety on the project. They do this through consultation and discussion with fellow workers and the employer. Whether a project site requires a full JOSH Committee or a Health and Safety Representative depends on the number of workers at the workplace:

- Where 20 or more persons are regularly employed by one or more constructors at a project that is expected to last three months or more, a JOSH Committee is required. Where there are fewer than 20 persons regularly employed, a JOSH Committee is not required, but may be ordered by an Officer if deemed necessary.
- Where there are 5-19 workers at a project, the constructor must have a
 designated Health and Safety Representative, who is chosen by the
 workers and does not perform managerial functions.

JOSH Committees:

- Hold monthly meetings; record and post minutes.
- Make recommendations on health and safety issues.
- Participate in inspections, investigations, and refer worker safety concerns to the appropriate person(s).
- Assist in developing the OHS program, policy, and safe work procedures.

Health and Safety Representative:

- Makes recommendations on health and safety issues.
- Takes worker health and safety concerns to management.

The OHS responsibilities should be clearly communicated so that they are understood by everyone, and they must be set out in a written OHS policy where one is required (see next section).

Due Diligence

Due diligence means that employers must take all reasonable precautions, under the particular circumstances, to prevent injuries or accidents in the workplace. To exercise due diligence on a construction site, an employer, constructor or contractor must implement a plan to identify possible workplace hazards and carry out the appropriate actions to prevent accidents or injuries arising from these hazards.

Written documentation is essential to show due diligence. Records, reports and documentation for the following activities can include:

- ✓ Worker orientation, education, and training
- ✓ Regular inspections, including corrective actions taken
- ✓ Accident/incident reports, including corrective actions taken
- ✓ Supervisor notes (eg., supervisor inspections, tailgate crew talks, safety meetings with contractors, etc.)
- ✓ Safety committee meeting minutes
- ✓ Equipment log books and maintenance records
- ✓ Emergency response drills and exercises
- ✓ Instructions or safe work procedures, including any changes
- ✓ Forms and checklists used when following safe work procedures (eg., confined space entry permits)
- ✓ Sampling and monitoring records from exposure testing
- ✓ Statistics about the frequency and severity of injuries, etc.
- ✓ Enforcement of health and safety rules and disciplinary meetings

Health and Safety Policy

A workplace with five or more regularly employed workers is required to have an Occupational Health and Safety (OHS) Policy.

The OHS Policy is a statement that defines the employer's commitment to a healthy and safe workplace. It must be communicated to all workers and updated every year for true impact.

For assistance with creating an OHS Policy, refer to the Guide to Workplace Health and Safety Policy which can be found on the WCB website at wcb.pe.ca.

Competency

The OHS Regulations require many tasks to be performed by a "competent person." A competent person is defined at s. 1.4(f) of the OHS Regulations as a person who: (i) is qualified because of the person's knowledge, training and experience to do the assigned work in a manner that will ensure the health and safety of persons in the workplace, and (ii) is knowledgeable about the provisions of the OHS Act and Regulations that apply to the assigned work,

and about the potential or actual danger to health and safety associated with the assigned work.

When an OHS Officer inspects a site where a worker is performing a task that is required to be completed by a competent person, the Officer must make a determination as to whether the worker's actions demonstrate his/her competence. The Officer may ask the employer or worker for documentation to confirm the worker's competency.

If a worker is performing a task that places him/her/others in immediate danger, is not in compliance with the *OHS Act* and *Regulations* and <u>cannot</u> produce valid training records, the OHS Officer will issue a stop work order for that task until the worker can be properly trained. Alternatively, the employer can have another worker with proper training perform the task instead.

In a circumstance where a worker demonstrates competency and <u>can</u> produce valid training records, but he/she is not in compliance with the *OHS Act* and *Regulations*, the OHS Officer may issue an order to correct the issue.

OHS Regulations which require a competent person to complete the task are:

- those that are testing and evaluating a confined space;
- operating hand tools and portable power tools;
- operating powered mobile equipment;
- operating a hoisting apparatus;
- inspecting and testing a hoisting apparatus
- · working on any energized electrical conductor;
- changing or charging batteries;
- asbestos abatement;
- those that are performing traffic control and signaling procedures;
- those that provide training in fall protection;
- those that carry out an inspection of fall arrest systems prior to each work shift;
- inspecting scaffolding prior to use each day;
- supervising the erection and dismantling of scaffold;
- operating a fork-lift platform;
- operating a power operated elevating work platform; and
- those who provide training on the safe operation of a power operated elevating work platform.

Although competency includes a training component, in the vast majority of situations, the *Regulations* do not specify a valid training certificate is required. An OHS Officer will use a combination of a valid training certificate and the worker's ability to demonstrate the worker's capability of doing the task correctly and safely as the best way to show competency. Valid training may be supplied by a third party trainer or it may be supplied in-house by

the employer. Either way, the employer has the responsibility of ensuring the workers can demonstrate comprehension of the training and the provisions of the *OHS Act* and *Regulations* that apply.

For a list of service providers who provide training in various areas with respect to health and safety, please visit wcb.pe.ca.

First Aid

To save precious seconds in an injury emergency, adequate first aid supplies and trained workers must be readily available.

Section 9 of the *OHS General Regulations* outlines an employer's requirements, depending on the number of workers present during any given shift. The table below summarizes the requirements.

Requirements at a Glance

Each employer (whether a contractor, sub-contractor, or a self-employed person) is required to have people trained in first aid. See table below for workplace-specific requirements:

Number of workers on site (per shift)	Number of first aid providers required (per shift)	Level of training required
Lone Workers*	At least 1	Emergency
1-19	At least 1	Emergency
20-99	At least 1	Standard
100+	At least 1	Advanced **

^{*}Workers are defined as "working alone" where he/she is the only worker at a site, in circumstances where assistance is not readily available to the worker in the event of injury, ill health or emergency.

First Aid Kits:

Employers also need to have a first aid kit available and make sure it is regularly checked and re-stocked as needed.

No. of Workers	First Aid Kit Type
1	Type #1**
2-19	Type #2
20+	Type #3

^{**}Type 1 kits are also required in all work vehicles that are used to transport workers to and from a workplace.

^{**}If there are 100 or more workers on any one shift, a first aid room is required.

One of the constructor's health and safety responsibilities is to coordinate the activities of the employers and self-employed persons on a project site. Therefore, with respect to first aid, it is common practice to ensure each employer/sub-contractor on site has someone trained in first aid so that there will always be a first aid provider available at the project site if needed.

Keeping Records

Record keeping may not be foremost in the mind of an employer or worker during an emergency situation, but it is important. Section 9.10 of the *OHS General Regulations* states that injuries must be recorded by the first aid provider as soon after the treatment as possible. Here are the details to be recorded:

- Date and time the injury/illness occurred and to whom it was reported
- Name of injured worker
- · Name of first aid provider
- Description of injury and the incident
- The cause of the injury/illness
- A brief description of the first aid given

Communication

It is critical that workers know where to go for first aid in case they suffer an injury or illness. Section 9.5 of the *OHS General Regulations* states that the location of first aid supplies and services must be posted. Workers should be made aware of the:

- Location of first aid kits (and first aid rooms, if any)
- Names and locations of certified first aid attendants
- Emergency procedures
- Emergency phone numbers

Post this information in a visible area, such as the site trailer, and follow up with verbal communication as often as is necessary.

In Summary

- 1. Ensure that an appropriate number of workers hold valid first aid certificates from recognized training agencies.
- 2. Keep a record of all first aid care given.
- 3. Ensure that first aid service is accessible to all workers during all working hours.
- 4. Ensure that transportation is available at all times to transport an injured worker.
- 5. Ensure that the appropriate type and number of first aid kits is on site and in the work vehicles.

6. Ensure the first aid kits contain the correct type and number of supplies (see Schedules "A" through "C" in the OHS General Regulations) and that they are re-stocked often.

Please refer to our website, wcb.pe.ca, for current First Aid legislation and regulations. Visit the OHS Act & Regulations page in the Safe Workplaces section.

Personal Protective Equipment

Personal Apparel

The employer will ensure that the personal wearing apparel of a worker shall be of a type and condition that will not expose the worker to any unnecessary and avoidable hazards.

Potential hazards to exposed skin of employees working outdoors on construction projects include abrasions, cuts, exposure to chemical irritants, hot tar, and excessive exposure to the sun and other sources of ultraviolet radiation.

In some circumstances, adequate body covering for work outdoors includes a loose fitting, long-sleeve, light-coloured shirt and long pants. This requirement would not only apply to work being carried out on construction sites but to other types of work as well. Where the only potential hazard to employees is overexposure to the sun, short-sleeve or sleeveless shirts and short pants may be allowed provided that:

- 1. The employer carries out a site hazard assessment to identify possible hazards which could limit the use of the above mentioned clothing.
- 2. Employer develops a written policy to deal with this issue (ie identify the required clothing and sunscreen requirement for the different tasks).
- 3. The employer ensures that sunscreen is worn by the employees and that they use the sunscreen as directed by the manufacturer. It is recommended that the sunscreen has a Sun Protection Factor (SPF) of at least 15 which provides protection from both UVA and UVB ultraviolet radiation.

Examples of common tasks on construction sites requiring long sleeve shirts and long pants could include:

- Applying foundation water-proofing materials.
- Concrete form work.

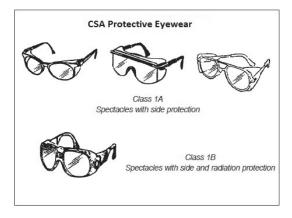
- Tasks where protruding nails and splinters are present.
- Welding operations (the welder is required to wear adequate fire retardant work clothing).

Head Protection

- Workers must wear Type 1 CSA-approved hard hats when overhead, falling, or side impact hazards exist or when the risk of electrical shock is present.
- Inspect hard hats routinely for dents, cracks, or deterioration.
- If a hard hat has taken a heavy blow or electrical shock, it must be replaced even when there is no visible damage.
- Maintain hard hats in good condition. Do not: drill, clean with strong detergents or solvents, paint, or store them in extreme temperatures.
- The replacement of headgear every five years, and headgear suspension annually, is a recommended safe practice.

Eye and Face Protection

- Workers must wear CSA approved safety glasses, goggles or face shields for welding, cutting, nailing (including pneumatic), or when working with concrete and/or harmful chemicals.
- Eye and face protectors are designed for certain hazards so be sure to select the type to match the hazard.
- Replace poorly fitting or damaged safety glasses.



Hand Protection

- High-quality gloves can prevent injury.
- Gloves should fit snugly.
- Workers should always wear the right gloves for the job (for example, heavy-duty rubber for concrete work, welding gloves for welding).

Foot Protection

Construction workers must wear CSA-approved footwear on a construction site. The type of protection provided by the footwear must match the hazards.

CSA-approved footwear symbols and meanings

For example:

- Toe protection is required to prevent crushing wounds.
- Puncture-resistant soles are required to prevent puncture wounds.
- Electric shockresistant soles are required to prevent electric shock
- Ankle support protects from rolling over the ankle while walking on uneven surfaces or rough terrain.

R	Green triangle indicates sole puncture protection with a Grade 1 protective toecap. Yellow triangle indicates sole puncture protection with a Grade 2 protective toecap.
R	Yellow triangle indicates sole puncture protection
R	
®	
R	
R	with a Grade 2 protective toecap.
R	
	Blue rectangle indicates a Grade 1 protective toecap
R	with no puncture-resistant sole.
<u></u>	
	Grey rectangle indicates a Grade 2 protective toecap
R	with no puncture-resistant sole.
	White rectangle with orange Greek letter omega
(2R)	indicates electric-shock protective footwear.
	Yellow rectangle with black SD letters indicates
SD®	static-dissipative footwear.
AB ()	Yellow rectangle indicates sole puncture protection
SE+R	with a Grade 2 protective toecap. (super-static
	dissipative footwear)
0.6	Red rectangle with white C letter indicates electrically
CR	conductive footwear.
	Dark grey rectangle with M letter indicates metatarsa
	protection. Note: Toe protection is required for all
	metatarsal protective footwear.
A 6	White label with green fir tree symbol footwear
A R	provides protection when using chainsaws.

Hearing Conservation

According to the World Health Organization, noise-induced hearing loss is the most common irreversible (and preventable) occupational hazard worldwide. Additionally, noise creates other safety concerns. It interferes with communication, can mask the sound of alarms (e.g., back-up alarms, smoke alarms), and can increase fatigue and decrease mental alertness especially during prolonged exposure.

The *OHS General Regulations* for Prince Edward Island require employers to do the following:

• Determine if workers are exposed to excess levels of noise, as described in the regulations.

- If the employer finds workers are exposed to excessive levels of noise, the employer must:
 - ✓ Advise exposed workers of the health risks of the exposure.
 - ✓ Explore options to reduce noise levels to safe limits through engineering controls, eliminating the source altogether if possible.
 - ✓ Provide annual hearing tests for workers found to be exposed to noise levels that exceed safe limits.
 - ✓ Provide hearing protection.

If the employer has determined workers are exposed to excessive noise levels that cannot be eliminated or reduced to safe limits, the employer must:

- Post signs to warn workers of the noise risks.
- Have a hearing conservation program.
- Determine and provide the appropriate personal protective equipment (PPE) for workers.
- Train workers on proper use and care of PPE and appropriately supervise workers to ensure PPE is being properly used.



The hearing conservation program must consider:

- How noise levels will be measured
- How workers will be educated and trained in the program and safe work procedures
- What types of engineering controls are considered and/or used
- What areas in the workplace are at risk and require warning signs
- Annual hearing tests for workers at risk; how they will be administered and by whom
- An annual review of the program for changes/updates

What Workers Can Expect

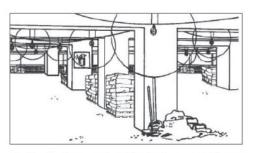
- Workers have the right to know about the hazards in their workplace. If they may be exposed to excess noise levels at work, they need to be informed.
- When the employer determines a worker is required to wear hearing protection, the worker is legally required to wear it.

• Also, workers who are exposed to excessive noise are required to have their hearing tested annually.

The Guide to Audiometric Testing is available on the Workers Compensation Board website at wcb.pe.ca.

Housekeeping and Access at Site

- Keep all walkways and stairways clear of trash/debris and other materials, such as tools and supplies, to prevent tripping.
- Keep boxes, scrap lumber and other materials picked up. Put them in a dumpster or trash/debris area to prevent fire and tripping hazards.
- If working on a multi-level worksite, trash and debris shall be lowered to the ground level in suitable containers or chutes
- Chutes must be well constructed, securely fastened to the building, enclosed on all sides if the chute angle is more than 45 degrees, and the opening well marked with warning signs.
- Objects larger than rubbish or debris shall be lowered by cranes, hoists or other mechanical means.
- Provide enough light for workers to see and to prevent accidents.

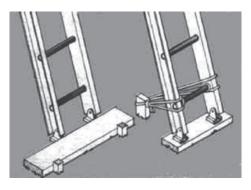


Good housekeeping means clear traffic and work areas, out-of-the-way storage, adequate illumination, and cleanup of debris.

Stairways and Ladders

- Install permanent or temporary guardrails on stairs and landings before stairs are constructed between levels to prevent someone from falling or stepping off edges.
- Do not store materials on stairways that are used for general access between levels.
- Keep hazardous projections such as protruding nails, large splinters, etc. out of the stairs, treads or handrails.

- Correct any slippery conditions on stairways, such as applying anti-slip stair nosing.
- Keep ladders in good condition and free of defects.
- Inspect ladders before use for broken rungs or other defects. Discard or repair defective ladders.
- Place ladders at the proper angle (1 ft out from the base for every 4 ft of vertical rise).



The drawing above shows two ways to secure the base of a ladder to ensure proper footing.

- Secure ladders near the top or at the bottom to prevent them from slipping and causing falls.
- Extend ladders at least 3 ft above the landing to provide a handhold or for balance when getting on and off the ladder from other surfaces.
- Do not set up a ladder near passageways or high traffic areas where it could be knocked over.
- Use ladders only for what they were made and not as a work platform, runway, or as scaffold planks.
- Always face the ladder and maintain 3 points of contact when climbing and descending a ladder.

Scaffolds and Other Work Platforms

Scaffolds are common on constructions sites because they give workers safe access to elevated areas. Scaffolds can, however, pose a hazard to workers especially when erected improperly, or when missing key safety measures or workers are not using it correctly.

It is important to have a competent person erecting, inspecting, and dismantling the scaffolds. A "competent person" is someone who is (1) qualified because of that person's knowledge, training, and experience to do the assigned work in a manner that will ensure the health and safety of persons in the workplace, and (2) is knowledgeable about the provisions of the Occupational Health and Safety Act and the Regulations that apply to the assigned work, and about potential or actual danger to health or safety associated with the assigned work.

General

- Erect and dismantle scaffolds as per manufacturer's specifications only under the supervision of a competent person.
- Erect scaffolds on firm and level foundations.
- Ensure finished floors are capable of supporting the load for a scaffold or work platform and that they provide a stable base.
- Place scaffold legs on firm footing and secure from movement or tipping, especially surfaces on dirt or similar surfaces.
- Use manufactured base plates, screw jacks and mud sills made of # 1 spruce or equivalent to level or stabilize the footings. Don't use blocks, bricks, or pieces of lumber.
- Ensure a competent person inspects scaffolds before each use (see earlier section on "Competency").
- Ensure scaffold design specifications are available on site at all times



Scaffolding stabilized with mud sills

- Ensure completed scaffolds have all required lateral and horizontal bracing in place.
- Provide safe access to get on and off scaffolds and work platforms.
- Ensure workers work within the framework of the scaffolds. Never step on planks outside of the work area.
- Keep scaffolds and work platforms free of debris. Keep tools and materials as neat as possible to help prevent materials from falling and workers from tripping.

Planking

- Fully plank the scaffold to provide a full work platform or use manufactured decking. The platform decking and/or scaffold planks must be scaffold grade and must not have any visible defects.
- Extend planks or decking material at least 6 inches over the edges and cleat them to prevent movement. The work platform or planks must not extend more than 12 inches beyond the end supports to prevent tipping.
- Be sure that manufactured scaffold decking is the proper size and that the end hooks are attached to the scaffold frame.

Safe Scaffold Use

- **DO NOT** use on-site-constructed carpenter's scaffold.
- **DO NOT** use damaged parts that affect the strength of the scaffold.
- **DO NOT** allow employees to work on scaffolds when they are feeling weak, sick, or dizzy.
- **DO NOT** work from any part of the scaffold other than the platform.
- **DO NOT** alter the scaffold from the manufacturer's specifications.
- **DO NOT** move a scaffold horizontally while workers are on it, unless it is a power elevated work platform.
- **DO NOT** allow employees to work on scaffolds covered with snow, ice, or other slippery materials.
- **DO NOT** erect, use, alter, or move scaffolds within 12 feet of overhead power lines.
- **DO NOT** work on scaffolds in bad weather or high winds.
- **DO NOT** use ladders, boxes, barrels, or other makeshift materials to raise your work height while on a platform.
- **DO NOT** let extra material build up on the platforms.
- **DO NOT** put more weight on a scaffold than it is designed to hold.

Scaffold Guardrails

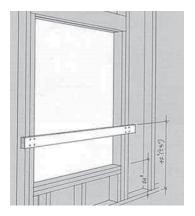
- Guard scaffold platforms that are more than 9.84 ft (3 m) above the ground orfloorsurface with a standard guardrail.
- Place the top rail approximately 39 to 42 inches above the work platform or planking with a midrail about half that high at 19 to 21 inches.
- Install toe boards at work platform/plank level to ensure tools or materials do not fall from scaffolding.

Power Operated Elevating Work Platforms (Man Lifts)

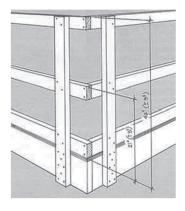
- Ensure the lift is inspected as required by the manufacturer's specifications.
- Ensure the operators are trained in the safe operation of the lift by a competent person.
- Ensure the operator uses fall arrest equipment at all times using the anchor points within the lift (not by using the railings as an anchor point).

Floor and Wall Openings

- Install guardrails around openings in floors and across openings in walls.
- Be sure the top rails can withstand a 200-lb load (see diagram below, left).
- Construct guardrails with a top rail approximately 39 to 42 inches high with a midrail about half that high at 19 to 21 inches (see diagram below, right).
- Install toe boards when other workers are to be below the work area.



This window opening has a guard rail because the bottom sill height is less than 39 in.



This diagram shows the correct height for floor opening guardrails and midrails: top rail 39 to 42 in. and mid rail 19 to 21 in. high respectively.

Fall Protection

According to Section 2 of PEI's Fall Protection Regulations, an employer must provide a type of fall protection for workers who are exposed to a hazard of falling from a work area that is:

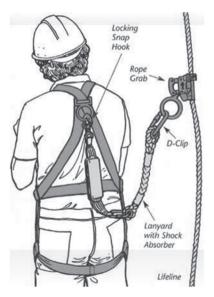
- a) 9.84 ft (3 m) or more above the nearest safe surface or water;
- b) above a surface or thing that could cause injury to the worker if the worker fell on the surface or thing; or
- c) above an open tank, pit or vat containing hazardous material.

This guide provides a brief summary of the requirements for fall protection. For greater detail on the requirements, please refer to the Guide to Fall Protection Regulations on the WCB website at wcb.pe.ca.

Types of Fall Protection Required

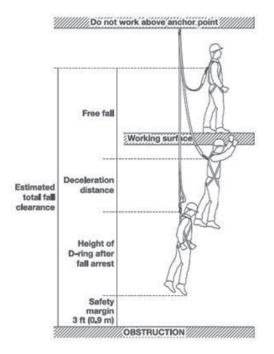
The type of fall protection required by the employer will vary depending on the task. One or more of the following systems may be used:

- 1. A <u>fall arrest system</u> is a system of physical components attached to a worker to stop a worker during a fall. The system includes a full body harness, lanyard, lifeline (for freedom of movement), and anchor point (see diagram below). The rule of thumb is one lifeline, one lanyard, one worker. Do not allow more than one worker to use the same lifeline or lanyard.
- A fall arrest system must be adequately secured to an anchor point. A lifeline, rope grab or static line may be used as well, as long as they meet requirements.
- A lanyard must prevent a free fall greater than 4 ft (1.22 m) if it is not equipped with a shock absorber.
- The lanyard, or lifeline if one is used, must be attached to a full body harness on the worker.
- All components must comply with CSA standards.



This worker is wearing a fall arrest system, complete with body harness, lanyard with a shock absorber, attached to a lifeline using a rope grab.

Please see the *Fall Protection Regulations* and the *Guide to Fall Protection Regulations* at **wcb.pe.ca** to determine the full requirements for fall protection.



This figure illustrates the fall distances and clearances to take into consideration when using a fall arrest system. In this case, the worker's lanyard is directly attached to the anchor point. The system should be designed so that the free fall is not greater than 4 ft. (1.22 m).

- 2. A <u>travel restraint system</u> may also be used. In this system, a worker's movement is limited so he/she is unable to reach the edge of the roof or other location where there is a risk of falling. The system may contain a body belt or full harness, lifeline and/or lanyard of a fixed length, and an anchor point. Belts are never an acceptable part of a fall arrest system.
- 3. A <u>guardrail</u> around doorways, windows, and roofs may suffice. Section 4 of the *Fall Protection Regulations* defines the requirements for guardrail dimensions.
- 4. A <u>personnel safety net may</u> be installed. Section 6 of the *Fall Protection Regulations* defines the requirements for installation, maintenance and inspection.
- 5. When workers are working around roof or floor openings, the employer must install <u>temporary flooring</u> to remove the fall hazard associated with those openings. See Section 9 of the *Fall Protection Regulations* for installation and load bearing requirements.

**Please note: The use of a fall protection system is not determined by the slope of a roof, but rather by the distance of the worker from the nearest safe surface.

Fall Protection Plan and Rescue Plan

An employer is required to have a **written** fall protection plan before construction begins. The plan must be on site, available to workers, and it must be followed. See Section 3(11) of the *Fall Protection Regulations* for specifications.

It is not sufficient to have the written fall protection plan stand alone. The employer **must also include a rescue plan** in the event a worker falls and is suspended by a fall arrest system. It is important to note that relying solely on 911 Emergency Services or Fire Department is insufficient for a rescue plan!

Training Required

A worker must **never** use a fall protection system unless he/she meets the definition of "competent person" in the *Fall Protection Regulations*. Competency means the worker is qualified to use the fall protection system because of his/her knowledge, training, and experience to do the assigned work in a manner that will ensure the health and safety of persons in the workplace. Competency also considers the worker's knowledge in regular inspection and maintenance of equipment (see earlier section on Competency).

When Working on Roofs

- Inspect for and remove frost and other slipping hazards before getting onto roof surfaces.
- Stop roofing operations when storms, high winds, or other adverse conditions create an unsafe working environment.
- Remove or properly guard any impalement hazards.
- Wear footwear with slip-resistant soles.

Excavations and Trenching

General

- Find the location of all underground utilities by contacting the local utility service before digging.
- Maintain a 10 foot distance between utility poles and excavation
- Keep workers away from digging equipment and never allow workers in an excavation or trench when equipment is in use.
- Keep workers from getting between equipment in use and other obstacles and machinery that can cause crushing hazards.

• Keep equipment and the excavated dirt (spoils pile) back (2 ft) from the edge of the excavation.



The dotted line shows the profile of this excavation, as it was sloped at 1 to 1. The spoils pile is at least 2 ft back from the edge of the excavation.

- Have a competent person conduct daily inspections and correct any hazards before workers enter a trench or excavation.
- Provide workers a way to get into and out of a trench or excavation such as ladders and ramps.
- For excavations and utility trenches over 4 ft deep, use shoring, trench boxes, or slope back the sides. The earth's slope must start above the 4 ft depth and must be maintained thereafter at a 45-degree angle. This means that for every 1 ft of vertical trench (above 4 ft), the slope must be cleared back by at least 1 ft horizontal (see above diagram).
- Keep water out of trenches with a pump or drainage system, and inspect the area for soil movement and potential cave-ins.
- Keep drivers in the cab and workers away from dump trucks when dirt and other debris are being loaded into them.
- Don't allow workers under any load and ensure they are trained to stay clear of the backs of vehicles.

Foundations

After the foundation walls are constructed, take special precautions to prevent injury from cave-ins between the excavation wall and the foundation wall.

- The depth of the foundation/basement trench cannot exceed the 4 ft depth unless you have the required trench sloping 1 ft horizontal to 1 ft vertical in place.
- Make sure no work activity vibrates the soil while workers are in the trench.
- Plan the foundation trench work to minimize the number of workers in the trench and the length of time they spend there.
- Inspect the trench regularly for changes in the stability of the earth (water, cracks, vibrations, spoils pile).
- Stop work if any potential for cave-in develops and fix the problem before work starts again.

Tools and Equipment

- Maintain all hand tools and equipment in safe condition and check them regularly for defects. Remove broken or damaged tools and equipment from the jobsite.
- Follow the manufacturer's requirements for safe use of all tools.
- Use double insulated tools, or ensure the tools are grounded.
- Equip all power saws (circular, skill, table, etc.) with blade guards.
- Make sure guards are in place before using power saws. Don't use power saws with the guard tied or wedged open.
- Turn off saws before leaving them unattended.
- Raise or lower tools by their handles, not by their cords.
- Don't use wrenches when the jaws are sprung to the point of slippage. Replace them.
- Don't use impact tools with mushroomed heads. Replace them.
- Keep wooden handles free of splinters or cracks and be sure the handles stay tight in the tool.
- Workers using powder-actuated tools must receive proper training prior to using the tools.
- Always be sure that hose connections are secure when using pneumatic tools.
- Never leave cartridges for pneumatic or powder-actuated tools unattended.
- Keep equipment in a safe place, according to the manufacturer's instructions.
- Require proper eye protection for workers.

Vehicles and Mobile Equipment

- Ensure workers are trained to stay clear of backing and turning vehicles and equipment with rotating cabs.
- Be sure that all off-road equipment used on site is equipped with rollover protective structures (ROPS).
- · Maintain back-up alarms for equipment.
- Be sure that all vehicles have fully operational braking systems and brake lights.
- Use seat belts when transporting workers in motor and construction vehicles.
- Maintain a safe distance from overhead power lines when operating equipment. The following minimum approach distances apply:

Voltage of Live Power Line	Minimum Distance
 Up to 750 volts 	3 ft
 Up to 100,000 volts 	12 ft
 Up to 250,000 volts 	17 ft
 Up to 345,000 volts 	20 ft

• Contact the electrical utility for assistance if the minimum approach distances are not possible for the work being carried out



- Block up the raised bed when inspecting or repairing dump trucks.
- Know the rated capacity of the crane and use accordingly.
- Ensure the stability of the crane.
- Use a tag line to control materials moved by a crane.
- Verify experience or provide training to crane and heavy equipment operators.

Electrical

- Prohibit work on new and existing energized (hot) electrical circuits until all power is shut off and a positive Lockout/Tag out system is in place.
- Don't use frayed or worn electrical cords or cables.

- Use only 3-wire type extension cords designed for hard service. Look for any of the following letters imprinted on the casing: SJTO, SJTW, and SJTWO.
- Maintain all electrical tools and equipment in safe condition and check regularly for defects.
- Remove broken or damaged tools and equipment from the jobsite.
- Protect all temporary power (including extension cords) with ground fault circuit interrupters (GFCIs). Plug into a GFCI-protected temporary power pole, a GFCI protected generator, or use a GFCI extension cord to protect against shocks.
- Don't bypass any protective system or device designed to protect employees from contact with electrical current.
- Locate and identify overhead electrical power lines. Make sure that ladders, scaffolds, equipment or materials never come within the minimum approach distance (see above section) of electrical power lines as noted in the previous section.

Fire Prevention

- Provide fire extinguishers near all welding, soldering, or other sources of ignition.
- Keep fire extinguishers visible and accessible in case of an emergency.
- Keep fire extinguishers inspected, maintained and recharged on a regular basis to ensure they will be operational in an emergency.
- Fire extinguishers must be provided on each construction or renovation site, located on each level.
- Do not store flammable or combustible materials in areas used for stairways or exits.
- Avoid spraying paint, solvents, or other flammable materials in rooms with poor ventilation. Build-up of fumes and vapors can cause explosions or fires.
- Employees should be trained to use the PASS method to extinguish a fire:
 - Pull the pin.
 - Aim the nozzle.
 - Squeeze the lever.
 - Sweep the nozzle.
- Store gasoline and other flammable liquids in an approved container outdoors or in an approved storage facility.
- Do not store liquid propane gas cylinders inside buildings.
- Keep temporary heaters at least 6 feet away from any liquid propane cylinders.

• Ensure that leaks or spills of flammable or combustible materials are cleaned up promptly.

Toilet Facilities

- Proper toilet facilities must be provided and must be maintained, kept clean, and have adequate provision for privacy, heat, light and ventilation.
- In workplaces where running water is not available, the employer will provide privies, chemical toilets, or other types of toilets and facilities for hand washing to the satisfaction of an officer.
- Every employer will ensure that all chemical toilets or privies are:
 - ✓ Provided from the start of the project;
 - ✓ Constructed so that any user is sheltered from view and protected from weather and flying objects;
 - ✓ Adequately heated in cold weather;
 - ✓ Provided with adequate supplies of hand sanitizer;
 - ✓ Maintained in a clean and sanitary condition.

Portable toilet facilities will be provided on each worksite and maintained until such time as plumbed facilities have been installed on site.

Workplace Hazardous Materials Information System (WHMIS)

WHMIS is a national hazard classification system designed to ensure the safety of employers and employees while at the workplace. In particular, the system is designed to keep workers and employers informed of the dangers and hazards associated with the chemicals and substances that they may come into contact with while on the job.

An employer that uses or stores hazardous products at the construction site must:

- Ensure workers who are working with hazardous products are trained in WHMIS.
- Ensure the most current version of the Safety Data Sheets (SDSs) are on site.
- Ensure workers wear the proper Personal Protective Equipment (PPE) as required by the SDSs.
- Ensure all hazardous products are properly labelled and stored.
- Ensure any hazardous products which have been decanted into a makeshift container are properly labelled.

WHMIS 2015 PICTOGRAMS



Asbestos

Asbestos is a strong, fire-resistant mineral fibre. It was used as insulation against heat or noise, and for fire protection in homes and commercial buildings. When added to materials such as cement and plaster, the asbestos fibres provided more structural strength. More than 3,000 products containing asbestos were used in house construction up until the late 1980s. When renovating or demolishing older homes, there is a high probability of encountering asbestos-containing materials.

Demolishing or renovating structures containing asbestos products can release asbestos fibres, which are extremely fine and can stay in the air for hours. Unprotected workers exposed to asbestos-contaminated air can breathe in the fibres. This may cause serious health problems, such as lung disease and cancer. Most workers who have died from overexposure to asbestos fibres have been in the construction trades.

ASBESTOS MUST NOT BE DISTURBED OR REMOVED BY ANYONE OTHER THAN A CERTIFIED CONTRACTOR. In Prince Edward Island, an Asbestos Abatement Contractor Certificate is only issued by the Director of Occupational Health and Safety. An Asbestos Abatement Notification Permit must be posted at the worksite by the certified contractor.

If you suspect asbestos is present in your work area, check with a qualified asbestos sampling service provider who can test it for asbestos content. Specific training and steps MUST be taken before working with asbestos.



It is the <u>joint</u> responsibility of the insurance company, property manager, building owner, and/or contractor to comply with the *Occupational Health and Safety Act* and *General Regulations* whenever a renovation, restoration or demolition project is undertaken. Contractors MUST ensure all hazardous materials (including asbestos) are identified and abated in a safe manner. Failure to do so could expose workers, occupants and the general public to hazardous materials with significant potential liability issues for all involved. Contract firms that meet the legal requirements to protect the health and safety of workers employed on the project site.

The contractor MUST have a qualified person inspect the site to identify any onsite hazards such as lead and asbestos, or other hazardous materials that may be present. If the contractor is unable to provide documentation for a hazardous material assessment, it may result in a Stop Work Order at the project site by an OHS Officer.

Additional Resources

Visit the websites below for additional health and safety resources. Canadian provincial and territorial sites can be accessed through the Canadian Centre for Occupational Health and Safety (CCOHS) website.

Workers Compensation Board of PEI

Phone: 902-368-5697

wcb.pe.ca

Canadian Centre for Occupational Health and Safety (CCOHS)

Phone: 1-800-263-8466 Fax: 906-572-4500 ccohs.ca/ohsanswers/

Workplace Safety and Prevention Services (WSPS)

wsps.ca

National Institute for Occupational Safety and Health (NIOSH) cdc.gov/niosh/

WorksafeBC - Asbestos: Hidden Killer

www.hiddenkiller.ca



14 Weymouth Street, P.O. Box 757 Charlottetown, Prince Edward Island, C1A 7L7

Telephone: 902-368-5697 Toll-Free in Atlantic Canada: 1-800-237-5049 Fax: 902-368-5696

www.wcb.pe.ca