



## Safe Work Practices / Procedures / Instruction

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### FALL PROTECTION

Any contractor, when working at a location where workers are not protected by permanent guardrails and where a fall of 7.5m (25 ft) or greater may occur, must have a site specific fall protection plan for the tasks that affect their work before work begins.

A copy of each contractor's Fall Protection Plan/Program must be submitted to the Project Superintendent or Site Safety Officer. Contractors may use **Scaffold Depot** Trade Specific Fall Protection Plan which must be completed by the Contractor Supervisor/Foreman and reviewed and signed by **Scaffold Depot** Site Safety Officer or the Safety Manager as well as his/her employees before commencing work.

### **General Rules and Requirements**

- Workers must have their supervisor's permission to bypass guardrails or barriers erected to prevent them from entering areas where there is a falling hazard.
- In situations where it is necessary to temporarily bypass guardrails or barriers, workers must use a lifeline, lanyard and safety belt to prevent them from falling.
- In situations where fall-prevention equipment is inadequate for fall-protection workers must wear fall-arresting equipment.
- Fall-prevention and fall-arresting devices must meet CSA and WORKSAFE BC requirements.
- A fall protection system is to be used by all workers when work is being done at a place;
- from which a fall of 3m (10 ft), or more may occur, or
- where a fall from a lesser height involves an unusual risk or injury
- If the use of a fall restraint system is not practicable, then a fall arrest system must be used. If the use of the fall arrest system is not practicable or will result in a hazard greater than if the system was not used then;
- a control zone is to be used;
- a safety monitor system with a control zone is to be used; or
- Other procedures acceptable to Worksafe BC Safety Standards

### **Responsibilities**

#### Project Superintendent

- Ensure a Fall Protection Plan is developed on all projects under his/her supervision and that meet the above policy criteria;
- Maintain copies of such plans on site.

#### Site Safety Officer

- Ensure training documentation is kept on file for all employees that receive fall protection training.
- Reports any unsafe acts or conditions relating to this policy to the Project Superintendent.



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### Contractor Supervisor/Foreman

- Ensure all workers under his/her authority receive Fall Protection training from a qualified individual.
- Ensure training documentation is kept on site and is made available to **Scaffold Depot** upon request.
- Ensure that the proper safety equipment is available.
- Ensure that the required safety equipment is regularly inspected and maintained.
- Ensure workers under his/her authority sign and adhere to the Fall Protection Plan.

### Workers

- Receive training in and adhere to the project Fall Protection Plan/Procedures.
- Report to the Supervisor/Foreman any non-compliance of the Fall Protection Plan/Procedures.

### **Danger Areas**

Elevator shafts, scaffolding, perimeter slab edge, ladders, powered mobile equipment, leading edge work, floor openings, roof tops and any other area where a fall from 10 feet (3 m) or greater, or when a fall from a lesser height involves a risk of injury greater than the risk of injury from the impact on a flat surface.

The danger area extends 6.5 ft (2m) back from any unprotected edge plus the height of any elevated work platform such as stilts or a ladder. For example, a worker on 2 ft. stilts must have a third guardrail 2 ft. above the normal 40" – 44" guardrail. The preferred method of fall protection is guardrails. Whenever possible, danger areas including floor openings will be protected by proper guardrails.

### **Obligation to Use Fall Protection**

Unless elsewhere provided for in the **Scaffold Depot** Health & Safety Program, an employer must ensure that a fall protection system is used when work is being done at a place:

- From which a fall of 3 m (10 ft) or more may occur;
- Where a fall from a height of less than 3 m involves a risk of injury greater than the risk of injury from the impact on a flat surface;
- If the use of a fall arrest system is not practicable, or will result in a hazard greater than if the system was not used, the employer must ensure that work procedures are followed that are acceptable to WorkSafeBC and minimize the risk of injury to a worker from a fall;
- Before a worker is allowed into an area where a risk of falling exists, the employer must ensure that the worker is instructed in the fall protection system for the area and the procedures to be followed;
- A worker must use the fall protection system provided by the employer.



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### Guardrails on Working Top Decks

It is **Scaffold Depot** policy that the top working formed deck of all concrete low rise / high rise projects or commercial buildings require that orange safety fence be attached to the inside of the guardrails, or the inside of the guardrails have plywood attached to prevent the possibility of a person falling through the openings or material falling over the toe board.

### Associated Hazards with Working on the Top Working Deck of a Concrete Building

When a deck is first built for a floor, the plywood is laid out, the bulkhead is built (usually 3 ft or less from the guardrail), the mechanical, electrical and rebar is placed and when concrete is ready to be poured, all additional materials are stored between the bulkhead and guardrails.

This area between the guardrail and bulkhead is often used as a walkway especially during the concrete pour. The tripping hazards on this working deck are many times greater than any other floor. Additionally, the material being stored next to a 4" toe board may fall over the toe board to the ground below, thus the need for safety fence or plywood on guardrails.

### Safety Fence; Highly Visible and Heavy Duty Material

The safety fence must be applied to the guardrail with:

- Rebar Wire: Doubled over rebar wire every 4 ft. is a good method. Snow fence and wire reusable; or
- Black electrical cable ties ("zap straps") 14 in. long: Easy, quick application, less labor / material cost.

### Selection of Harness or Belt

A worker must wear a full body harness or other harness acceptable to WorkSafeBC when using a personal fall protection system for fall arrest. A worker must wear a safety belt, a full body harness or other harness acceptable to WorkSafeBC when using a personal fall protection system for fall restraint.

### Equipment Standards

Equipment used for a fall protection system must:

- consist of compatible and suitable components;
- be sufficient to support the fall restraint or arrest forces;
- meet, and be used in accordance with, an applicable CSA or ANSI standard in effect when the equipment was manufactured, subject to any modification or upgrading considered necessary by WorkSafeBC.



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### **Anchors**

In a temporary fall restraint system, an anchor for a vertical lifeline, or for a lanyard used without a lifeline, must have an ultimate load capacity in any direction in which a load may be applied of at least 3.5 kN (800 lbs), or four times the weight of the worker to be connected to the system. Each vertical lifeline used for fall arrest must be secured to an independent point of anchorage. All manufacturers' installation instructions shall be followed.

In a fall arrest system or permanent fall restraint system, an anchor for a vertical lifeline, or for a lanyard used without a lifeline, must have an ultimate load capacity in any direction required to resist a fall of at least 22 kN (5000 lbs), or two times the maximum arrest force.

### **Temporary Horizontal Lifelines**

A temporary horizontal lifeline system may be used if the system is:

- Manufactured for commercial distribution and installed and used in accordance with the written instructions and drawings from the manufacturer or authorized agent, and the instructions and drawings are readily available in the workplace;
- Installed and used in accordance with written instructions and drawings certified by a professional engineer, and the instructions and drawings are readily available in the workplace; or
- Designed, installed and used in a manner acceptable to WorkSafeBC.

### **Certification by Engineer**

The following types of equipment and systems, and their installation, must be certified by a professional engineer:

- Permanent anchors;
- Anchors with multiple attachment points;
- Permanent horizontal lifeline systems; and
- Support structures for safety nets.

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### **Inspection and Maintenance**

Equipment used in a fall protection system must be:

- inspected by a qualified person before use on each work shift;
- kept free from substances and conditions that could contribute to its deterioration; and
- maintained in good working order.

### **Removal from Service**

After a fall protection system has arrested the fall of a worker, it must:

- be removed from service; and
- not be returned to service until it has been inspected and recertified as safe for use by the manufacturer or its authorized agent, or by a professional engineer.

Section 11.2 of WorkSafeBC OHS Regulation prescribes a hierarchy of choice that **MUST** be followed when selecting a method of fall protection. The selection of method(s) depends on what is practicable and is not a matter of free choice by the employer. What is practicable will depend on the circumstances of each work location at the site and the fall hazard assessment conducted.

### **Fall Protection Hierarchy**

- 1<sup>st</sup> Consideration** - Guardrails or Equivalent
- 2<sup>nd</sup> Consideration** - Another fall restraint system
- 3<sup>rd</sup> Consideration** - Fall Arrest System
- 4<sup>th</sup> Consideration** - Procedures acceptable to WorkSafeBC to minimize the risk of to a worker from a fall.

### **Floor Roof and Wall Openings**

- All openings must be guarded in order to prevent injury to employees
- The opening may be covered with a piece of 5/8" plywood, secured over the opening, and clearly identified using orange fluorescent paint, marked with a circle with a cross in it. Openings greater than four feet square must incorporate bracing to support the cover.
- The covering must be secured to prevent movement.

