

Fixed Ladder Safety – Compliance Game Plan

Falls are the leading cause of workplace injuries and OHS penalties. Although horizontal falls, i.e., slips, trips and falls from the same level) happen more often, vertical falls are more likely to kill or seriously injure a worker. Over 20% of all workplace fall injuries involve ladders; that rate rises to 81% when the sample is limited to construction workers. Here's a 6-step game plan for preventing fall injuries and ensuring compliance with OHS requirements for one of the most common types of ladder found on work sites: fixed ladders that are permanently affixed to a building or structure.

1. Ensure Fixed Ladders Meet Design Standards

Employers must ensure that fixed ladders are properly designed and constructed for the work they're used to carry out. Generally, ladders must be made of appropriate materials, solidly constructed and strong enough to support the load they'll be expected to bear. Many jurisdictions also require ladders to meet a voluntary standard, typically some version of American National Standards Institute ANSI A14.3, Ladders – Fixed – Safety Requirement. Only one province that incorporates a voluntary standard by reference into its OHS regulations uses a standard other than ANSI A14.3—namely, Alberta, where the required standard is Construction Industry Institute PIP STF05501, Fixed Ladders and Cages.

Design & Construction Standards for Fixed Ladders Across Canada

Jurisdiction *	Required Standards
Federal	ANSI A14.3-`984 (as amended from time to time)
Alberta	PIP STF05501 (February 2002)
BC	ANSI or CSA standard in effect when ladder manufactured, an alternative acceptable to WorkSafeBC or a professional engineer's requirements if none of the former apply.
Manitoba	ANSI A14.3-2008 (R2018)
Newfoundland	ANSI A14.3-2002 or other standard acceptable to the minister
Nova Scotia	ANSI A14.3 (latest version)
Yukon	ANSI A14.3-2002 or other similar standard acceptable to the director

**New Brunswick, Northwest Territories, Nunavut, Ontario, Prince Edward Island, Quebec, and Saskatchewan don't require fixed ladders to meet any specific voluntary standard.*

2. Ensure Fixed Ladders Are Safely Installed

Fixed ladders must be securely attached to the building or structure and held in place at the top and bottom, as well as at any intermediary points necessary to prevent the ladder from swaying. There must be minimum clearance between the rungs and the wall or surface of the structure to which the ladder is attached. Several jurisdictions, including BC and Manitoba require the installation to be certified by a professional engineer.

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3. Verify the Safety of Fixed Ladder Components

In most jurisdictions, there are specific requirements for how fixed ladders are assembled and the safety components they must include. Common examples:

- Side rails or other secure handholds that extend at least 1 metre above any platform, roof or other landing on the building or structure to which the ladder's attached;
- Rest platforms spaced no more than 5 cm to 9 cm apart (depending on jurisdiction);
- Rungs must be spaced no more than a specific distance apart; and
- An opening in the platform, roof or other landing may not exceed 750 mm x 750 mm.

4. Ensure Fixed Ladders Have Proper Fall Protection & Ladder Cages

Fixed ladders must have a gate or some other kind of device or feature to arrest a worker's fall. Depending on length and angle, ladders might have to be equipped with a safety cage comprised of metal hoops spaced to prevent falls away from the ladder and contain workers who lean or fall against the cage. Where ladder cages are required, they typically must:

- Be strong enough to contain any worker who lean or fall against a hoop;
- Extend no less and no more than a specified distance from the centre line of the rungs;
- Have a lowest hoop that's no more than a specified distance from a platform, landing or the ground; and
- Have an uppermost hoop extending at least 1 metre above the level of the platform, landing or roof.

5. Properly Maintain & Inspect Fixed Ladders

Ladders must be kept clean and maintained in accordance with manufacturer's instruction. Employers must ensure that workers inspect the ladder before each use and that ladders found to have loose, broken or missing rungs, split siderails or other potentially dangerous damages or defects be immediately removed from service and not used again until they're verified as having been properly repaired.

6. Ensure Safe Ladder Use

It's critical to ensure that workers use fixed ladders safely and in accordance with the manufacturer's instructions. Strategy: Implement a ladder safety policy that includes safe work procedures.

Things workers **SHOULD DO**:

- Face the ladder at all times;
- Stay in the centre of the steps or rungs;
- Maintain 3 points of contact when climbing or coming down the ladder; and
- Keep their body from extending beyond the side rails (except their arms).



Things workers generally **SHOULD NOT DO**:

- Work from the top 3 rungs of the ladder; and
- Carry heavy or bulky equipment up or down the ladder.

