

8.1.4 Ladders

Fixed Ladders

A fixed ladder must be designed, constructed, installed and maintained according to the latest version of ANSI A14.3 “American National Standard for Ladders – Fixed – Safety Requirements”.

Portable Ladders

A portable ladder is a ladder that can be readily moved or carried and usually consists of side rails joined at intervals by steps, rungs, cleats or rear braces and are intended for use by only 1 person at a time. Portable ladders include, but are not limited to:

single ladder



combination ladder



extension ladder



step ladder



The following safe work practices will reduce injury risks involving portable ladders:

- Only CSA Grade 1 or Grade 2 ladders are permitted (CSA Grade 3 ladders are prohibited).
- Maintain ladders in a safe condition. Store ladders where they are protected against the weather. Ladder at rest must be on both side rails. Store ladders horizontally on racks and to prevent sagging, support ladders every 2 m (6'). Do not hang from rails or rungs and do not store materials on ladders.
- Use a ladder that is designed for your task. Assess the task for the proper length, strength and type of ladder required. Ladders may not be loaded beyond the manufacturer's rated capacity. Consider personal weight, tools, equipment and materials while on the ladder. The ladder must not sway or sag under use.
- Do not use a ladder as a scaffold, ramp or as a support for such.
- Ladders are to be inspected by a competent person (knowledgeable through work experience and training) before and after each use, and at least annually (refer to

- checklist). Ladders are to be clean and free of grease, oil or other slippery substances. Discontinue using a ladder that has defects; have the ladder tagged and arrange for repair or disposal.
- Get help when handling a heavy or long ladder; carry on the same side. If carrying alone, grasp near the centre when carrying. Do not carry the front of ladder at head level.
 - Avoid using ladders around power lines and areas containing electrical circuits. Where there a risk of contact with live conductors is possible, a non-conductive ladder is to be used.
 - Do not use a ladder in an elevator shaft or hoistway when that space it is being used for hoisting.
 - Use ladders on stable and level surfaces, unless they can be secured adequately against movement. Do not use on slippery surfaces (ie, wet concrete, muddy ground), unless they are secured or slip-resistant feet provide adequate protection.
 - Avoid placing ladders in areas where they can be bumped, or secure the ladder or barricade the area. Do not place ladders in front of, or against, a door that can be opened towards the ladder unless the door is blocked in the open position, locked or guarded.
 - Do not use makeshift items such as a chair, barrel, box as a substitute for ladders. Do not place a ladder on a box, barrel, scaffold or any other unstable base. Do not splice ladders together or lash to another ladder to increase its length.
 - Use the “Quarter Length Rule” for non-self-supporting ladders: the base should be $\frac{1}{4}$ the working length of the ladder from the wall or upper support. For example, a 16’ ladder must be placed about 4’ from the base off the wall that is being accessed.
 - The two rails of a non-self-supporting ladder shall be supported equally. If the ladder support is a pole, light standard, a building corner, or a tree, then a substantial and large enough single support attachment shall be used. If it is necessary to support the top of a ladder at a window opening, then a device should be attached across the back of the ladder extending across the window to provide firm support against the building walls or frames.
 - Extension ladders must maintain adequate overlap between the sections of the ladder and has locks engaged before climbing. Erect so that the upper section rests on the bottom section. Raise and lower the ladder from the ground.

- When ladders are used to access an upper landing surface, such as a roof, the side rails must extend at least 1 m (3.3') above any platform or landing and is at least 150 mm (6") between it and the supporting structure (except where the ladder is supported against the structure). The ladder should be tied off at the top to prevent slipping. Care must be taken when ascending or descending from the ladder on the upper landing surface to avoid tipping the ladder sideways for causing the ladder base to slide.
- For step-ladders, the legs must be secured in position by making sure the braces and shelf are opened fully. Do not use a step-ladder leaning against a wall, use a straight ladder.
- Ladders are not to be climbed by more than 1 person at a time, unless they are designed to support more than 1 person. If a ladder is used as a means of access or exit for a height above 6 m (19.6') and for 7 or more persons, then 2 separate lines of ladders shall be used.
- Wear footwear in good condition with a heel. Avoid climbing a ladder with wet, muddy or otherwise slippery soles.
- When climbing up or down, always face the ladder and grasp the rungs, not the side rails.
- When above 1 m (3.3'), maintain adequate contact with the ladder: During climbing, 3 points of contact (2 hands+1 foot; 2 feet+1 hand) must be used and hands are to be free for climbing, not holding tools and materials. Wear a tool belt, hoist materials up with a rope, or have someone pass items up. During work, maintain adequate contact with either 3 points of contact, body contact or a work positioning belt if the ladder is anchored in place.
- When standing on a ladder, stand in the centre between the side rails. Avoid overreaching from a ladder; move the ladder as required. If work is to be done such that the body is off-centre of the ladder, a second worker must hold the ladder for stability or use a side-stability bar. Do not straddle the space between a ladder and another object.
- Do not work from the top 3 rungs of a ladder. For a step-ladder, ideally use a ladder that is about 1 m (3.3') shorter than the highest point needed to reach. Do not stand on the material shelf, the top, or the top step of the ladder.
- Rest frequently when looking and working above your head to avoid arm fatigue and disorientation. If you feel dizzy or panicky, drape your arms over a rung and rest your head against another rung or side rail. Climb down slowly.

- Ladders may not be moved, shifted, or extended while a person is on the ladder. Climb down, make the adjustment, then climb back up.

- A ladder shall not be left up and unattended.

Ladder Inspection Checklist

Ensure all components are in adequate condition and the ladder is safe to use. It is recommended to follow manufacturer's instructions for inspection (check for instruction labels on ladder), and to include:

- ✓ Clean, free of grease, oil, or other slippery substances
- ✓ Loose or missing steps or rungs (loose is they can be moved by hand)
- ✓ Loose nails, screws, bolts or other metal parts
- ✓ Cracked, split worn or broken rails, braces, steps or rungs
- ✓ Damaged or worn non-slip feet
- ✓ Twisted or distorted by sighting along rails
- ✓ Corrosion, rust, oxidization and excessive wear, especially on treads
- ✓ Sharp edges on rails and rungs
- ✓ Stepladders:
 - Wobbly
 - Loose or bent hinge spreaders
 - Loose hinges
- ✓ Extension ladders:
 - loose, broken or missing extension locks
 - Defective locks that do not seat properly when ladder is extended
 - Sufficient lubrication of working parts
 - Defective or worn cords, chains and ropes
 - Missing or defective pads or sleeves