



GUARDRAILS

Potential Hazards

1. fall from elevated heights
2. cuts/lacerations
3. falling objects

Personal Protective Equipment Required

- | | | |
|-----------------|--------------------|-----------------|
| Hard hat | CSA Boots | Eye protection |
| Hand protection | Hearing protection | Skin protection |
| Respirator/mask | Face protection | (clothing) |

PRELIMINARY ACTIVITIES

Where multiple trade activity is scheduled, the general contractor is to review in advance the priority of work and schedule the appropriate time frame to allow each trade to complete their scope of work. Prior to any work commencing supervisors must conduct a hazard assessment of all applicable work areas. Any hazards that are found during the hazard assessment must be addressed prior to any work commencing.

DO'S:

1. Make sure a competent person has inspected the guardrail before use.
2. Ensure that the guardrail is properly secured.
3. Ensure nails are not protruding.
4. Ask a supervisor if you're not sure if working conditions are safe.

DON'Ts:

1. Do not take chances.
2. Do not stand on the guardrail.
3. Do not hang materials and equipment on the guardrail.
4. Do not apply excessive pressure on the guardrail.
5. Do not remove the guardrail unless authorized by a competent/qualified person. Others are to be notified of the change.

SAFE WORK PROCEDURE

An area accessible to workers must have guards or guardrails installed in any of the following circumstances:

- if a raised floor, open-sided floor, mezzanine, gallery, balcony, work platform, ramp, walkway, or runway is 122 cm (4 ft) or more above the adjacent floor or grade level;
 - on both sides of any walkway over or adjacent to any substance which is a hazard if a worker fell in, or on it, or which is over machinery or work areas;
 - around the perimeter of any open container or containment area such as an open vat, bin, tank or pit which is 122 cm (4 ft) or more in depth and which has sides that do not extend at least as high as required for a guardrail above the adjacent grade or work surface;
 - if a stairway ends in direct proximity to dangerous traffic or other hazard to prevent inadvertent entry into the dangerous area.
1. Supervisors are responsible for ensuring that all guardrails are to WorkSafeBC requirements.
 2. In cases where it is impractical to use fall prevention devices such as guardrails, FULL fall arrest equipment must be used.
 3. Warning signs must be posted at locations where guardrails are not in place to notify all trades that fall arrest is required.
 4. Guardrails that have been removed by trades in order to complete any scope of work must be replaced before leaving the area.
 5. At work areas in excess of 10 feet (3m) above grade, all workers shall be protected from injury by falling from unguarded portions of the structure. One method of achieving this is by installing proper guardrails.
 6. Guardrails are also required on all fixed and rolling scaffold systems in excess of 10 feet (3m) in height as well as all stairs and walkways in excess of 4 feet (1.22m) above grade.
 7. Areas where guardrails might be used for protection would include;
 - open edges of floors, mezzanines and balconies



- open edges of scaffolds, platforms, and ramps
 - openings in floors, roofs, and other working surfaces not otherwise covered or protected
 - edges of slab formwork
 - edges of bridge surfaces
 - locations where a worker may fall into water, operating machinery or hazardous substances.
8. All guardrail systems must be built in accordance with WorkSafeBC Regulation.
 9. Unless otherwise permitted by WorkSafeBC OH&S Regulations, guardrails must be installed to withstand a load applied horizontally and normal to the span of the rail, of 550 N (125 lbs) applied at any point along the rail, and a vertical, downward load of 1.5 kN per m (100 lbs per ft) along the top rail, but the horizontal and vertical loads need not be considered to act simultaneously.
 10. Guardrails temporarily installed during the construction, demolition, maintenance or renovation of a work area must be able to withstand a load of 550 N (125 lbs.) applied perpendicular to the span in a horizontal or vertically downward direction at any point on the top rail, or be built to the criteria of subsection (12) below.
 11. If part or all of the top rail or a midrail of a guardrail that is temporarily installed during the construction, demolition, maintenance or renovation of a work area is made of fibre rope, wire rope, chain or other non-rigid material, that part of the guardrail must meet the requirements of WorkSafeBC Standard - Guardrails using rope or other non-rigid material, as set out in Schedule 4-A of Part 4 in the WorkSafeBC OH&S Regulations.
 12. Unless designed by a professional engineer, temporary wooden guardrails on floors and platforms must meet the following criteria:
 - posts must be spaced not more than 2.4 m (8 ft) apart, except a scaffold may have posts spaced not more than 3 m (10 ft) apart;
 - wooden top rails must be at least 38 mm x 89 mm (2 in x 4 in nominal) lumber for a span of up to 2.4 m between supports, and at least 38 mm x 140 mm (2 in x 6 in nominal) lumber for a span of 2.4 m to 3 m between supports;
 - wooden midrails must be 19 mm x 140 mm (1 in x 6 in nominal) or 38 mm x 89 mm (2 in x 4 in nominal) lumber;
 - wooden rails must be secured to the tops or inner sides of their vertical supports;
 - wooden guardrail posts must be at least 38 mm x 89 mm (2 in x 4 in nominal) lumber, and must be installed with the narrow dimension facing the open edge;
 - plastic or wire mesh fencing of adequate strength may be used in place of the midrail, but posts and top rails must comply with the requirements of this section and such fencing must be secured in place.
 13. Guardrails should be installed as close to the edge as possible.
 14. Should it be necessary to remove guardrails, the open edge shall be roped off and marked with warning signs. In addition, workers inside the area will wear fall protection and make sure they are tied off.
 15. Missing or removed guardrails shall be replaced immediately.