

GUARDRAILS

1. Task

Building/installing guardrails on construction projects.

2. Hazards

Fall hazards, material/equipment handling hazards (cut by, struck by), electrical hazards, heat/cold stress.

3. Controls

Pre-Job Safety Assessment (PSA). CSA/ANSI approved PPE and tools fall protection plan and legislated training, Site specific written safe work procedure, GFCI protection, long pants and full T shirt, sunscreen, cold weather gear. Workers must be prevented from accessing fall hazards using guardrails as prescribed by Regulatory and Best Personnel safety policy requirements, i.e. when exposed to:

1. falling more than 3 metres (10ft);
 2. falling more than 6 metres, if the work area is used as a path for a wheelbarrow or other equipment;
 3. falling into operating machinery;
 4. falling into water or another liquid;
 5. falling into or onto a hazardous object;
 6. falling through an opening in a work surface;
 7. exposed to a fall of 2.4 metres or more by accessing the open side of a floor (including a mezzanine or balcony), the surface of a bridge, a roof while form work is in place, a scaffold platform or other work platform runway or ramp;
 8. working on a work platform higher than legislated / owner / site specific requirements.
- ❖ Guardrails, whether job built wooden type, or pre-fabricated metal, must be constructed and installed to meet Regulatory and Best Personnel safety policy requirements, i.e. have a top rail, mid rail, and toe board, be .9 to 1.1 m. in height, (36 – 42 “), have support posts 2.4 m. or (8’) o/c, be located not more than 300 mm away from the edge of work surfaces, made from construction grade or better spruce pine fir, have a top rail able to withstand a laterally applied point load of 890 newtons (200 lbs), mid rail, (or other material in the case of some pre-fab metal guardrails), able to withstand a laterally applied point load of 450 newtons (101 lbs.), and a toe board able to withstand a laterally applied point load of 225 newtons (52 lbs.).
 - ❖ Prefabricated steel guardrails are to be inspected for cracks in welding.
 - ❖ Bent prefabricated railings are to be removed from service.
 - ❖ Guardrails that are heavily oxidized are to be removed from service.
 - ❖ Support posts need to be checked frequently to ensure secure attachment to mounted service.
 - ❖ Wire rope guardrails are not to be used as static lines unless otherwise engineered.
 - ❖ Toe boards are required for all wire rope guardrails.
 - ❖ Workers installing or temporarily removing guardrails must be protected from fall hazards using an approved travel restraint or fall arrest system.
 - ❖ Guardrails that must be temporarily removed must be re-installed as quickly as possible and before workers leave area unattended. Caution off area with red danger tape and signage to warn other workers of temporary guardrail removal.
 - ❖ Where a section of guardrails has been moved to allow ladder access between levels, adequate signage must be in place identifying the fall hazard and signage must be on more than one side of the hazard.
 - ❖ Tools and electrical equipment used in the installation of guardrails must be CSA/ANSI approved, extension cords must be in good shape and provided with a GFCI.
 - ❖ All workers must wear CSA/ANSI approved PPE when installing guardrails, i.e. hard hat, safety boots, safety glasses, protective gloves, sunscreen, cold weather gear.
 - ❖ Elevating platforms shall be equipped with guardrails.
 - ❖ Hoists: when used on a roof they shall have a guardrail installed on both sides of the frame at the edge of the roof.

