

Guard your Workers from Falls

Falls from elevated surfaces have the potential to cause a serious or fatal injury. Employers can help to reduce or eliminate the chance of a fall injury by putting into practice a fall safety program.

The components of an effective fall safety program include:

- Identifying the potential fall hazards throughout the workplace.
- Training employees.
- Providing fall protection equipment.
- Placing guardrails around elevated locations.

Guardrails protect workers from falls and act as a barrier to prevent tools and equipment from falling onto workers below. *In buildings, guardrails are required on all open sides of elevated work locations that are more than 30 inches above the floor, ground, or other working areas.* Elevated work locations include roof openings, open and glazed sides of buildings, balconies, porches, platforms, runways, and ramps. *For other worksites, guardrails are required on open sides of the elevated work locations that are 4 feet or more above the ground.*

Exceptions apply for guarding rules for specific industries and situations, including railroad car loading, gardens and plazas, and auditorium stages and balconies. These exceptions have specific guarding requirements or may allow removable guards. If removable guards are used, they should be fixed or tied off to prevent them from falling on workers below. For more specific information on these exceptions, refer to <http://www.dir.ca.gov/title8/3210.html>

Guardrails may be constructed with wood, metal pipe, structural metal, and other suitable materials. They should have a smooth top rail, midrail, and posts.

- The *top rail's* upper surface should be 42 to 45 inches tall.
- The *mid rail* needs to be halfway between the top rail and the surface.
- A *lower rail* should be installed if overhead clearance does not allow for a 42-inch guardrail.

Guardrails and their connections and anchorages must withstand a live load of 20 pounds per linear foot applied outward or downward on the top rail. For heavy stresses from crowds, trucking, and handling materials, additional strength is required by use of heavier stock, closer spacing of posts, or bracing.

Toeboards are also required if the elevated worksite is 6 feet or more above working employees to prevent a hazard from falling tools, material, or equipment. Toeboards may be constructed of wood, concrete, metal, or at least 1-inch metal mesh. The toeboard should be 4 inches tall. The bottom clearance (or gap) must not exceed 1/4-inch.

Guardrails, along with other fall protection measures, help protect workers when they are working at heights.

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