

2024-12-09 TBT Warning Lines

This toolbox talk explains construction-industry best practices for using a warning line to alert workers that they are approaching an unprotected edge of a roof, floor, or other work surface.

This information applies to all trades except those that do roofing work – roofing work means “hoisting, storing, applying, and removing roofing materials and equipment.” When doing roofing work, you can use a warning line for fall protection only if you follow the requirements in 1926.502(f), Warning Line Systems, and WAC 296-155-24615 (4), Warning line systems.

What is a warning line?

A warning line is a barrier such as rope, wire, or chain that warns workers they are approaching an unprotected roof, floor, or other work surface edge.

How do you set up a warning line?

Set up the warning line so that it keeps workers at least 15 feet back from the unprotected edge. This “setback” distance must eliminate the exposure and the risk that a worker could fall over the edge. You may need to increase the distance to eliminate the risk in some situations. Factors such as weather, visibility, the slope and condition of the work surface, the work performed, materials handled, and the experience and supervision of the workers can increase the risk of a fall – even at a 15-foot setback. The correct setback distance eliminates the exposure and the risk of a fall.

Never use a warning line as a substitute for a guardrail. Use a guardrail or another fall protection system described in WAC 296-155-24615, Fall Restraint Specifications.

Industry (all trades) best practices include the following:

- The work surface should be relatively flat with a slope of 4”:12” or less
- The warning line should be 34-39 inches above the work surface
- The warning line should be rope, wire, or chain
- Avoid using plastic tape for a warning line
- Workers should be able to feel the line if they back up against it, even if they’re wearing heavy clothing
- The warning line should be flagged at least every 6 feet with high-visibility material and have warning signs that are visible to workers

- Stanchions that support the warning line should be able to withstand a force of at least 16 pounds, applied horizontally in the direction of the unprotected edge, without tipping over
- No workers can enter the area between the warning line and the unprotected edge unless they are protected by a fall protection system described in WAC 296-155 Part C-1, Fall protection requirements for construction
- When there are multi-trades (roofer and other trades) on the roof working at the same time, all should either use the 15' warning line, or there should be two distinct lines (color coded) at trade-specific distances
- Roofers performing roofing work are allowed 6' set back from the leading edge and all others 15'
- Access and egress are also crucial to workers' safety
- If roof access is only available outside the warning line, an access path should be created out of warning lines to guide workers safely to the working area
- Once inside the warning line system, a means of closing off the access path where it joins the warning line system should be in place
- Maintaining warning line systems is critical to their effectiveness
- Lines must be regularly inspected and maintained, and any damaged or worn components must be replaced immediately

Where can you learn more about warning lines?

Federal OSHA rules:

- 1926.502, Fall protection systems, criteria, and practices
- 1926.502(f), Warning line systems

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