

Roofer Falls 20 Feet through Rotten Roof

INCIDENT FACTS

REPORT #: 71-190-2020s

REPORT DATE: January 6, 2020

INCIDENT DATE: September 3, 2016

VICTIM: 39 years old

INDUSTRY: Roofing contractors

OCCUPATION: Roofer

SCENE: Storage building at manufacturing plant

EVENT TYPE: Fall



A 39-year-old roofer was severely injured when he fell 20 feet through a rotten roof.

He had 22 years of experience in the roofing industry and had been with his employer, a roofing contractor, for a year.

He was a member of a four-person crew that had been tearing-off and replacing the flat (low pitch) roof of a manufacturing storage facility for a month.

On the day of the incident, they were working to remove three layers of roofing materials to check for rotten spots.

Warning lines were set up near the roof's edges and a safety monitor was used. Workers were not required to use personal fall protection while inside the warning lines.

Outside of the warning lines, they were required to use a personal fall arrest system consisting of a full body harness with ropes tied-off to anchor points. Most of the visible rotten roof was in the area outside of the warning lines.

The roofer was inside the warning lines near the roof ridge using a shovel to scrape off shingles and insulation. As he stepped backward, a patch of rotten roof gave way and he fell through, landing 20 feet below on wood flooring. He was severely injured and suffered numerous fractures and internal injuries.

Investigators found that a worker had previously placed an orange cone to mark a rotten spot near where the roofer broke through the roof.

The spot he fell through was three feet away from the cone and under three layers of roofing material so he was not able to recognize it was rotten.

Workers had also been walking across the roof in the area for several weeks. At the time of the incident, the safety monitor was on the other side of the roof ridge throwing debris into a truck below.

After the incident, the employer required workers to use a personal fall arrest system at all times.

INJURY NARRATIVE



Photo 1. The rotten patch of roof that gave way when the roofer stepped on it.

INJURY NARRATIVE



Photo 2. Hole created when the roofer fell through the roof. He landed on the floor 20 feet below.

INJURY NARRATIVE



Photo 3. Close up of the roof hole that the roofer fell through showing the rotten wood.



Photo 4. Building area where the roofer fell through the roof.

INJURY NARRATIVE

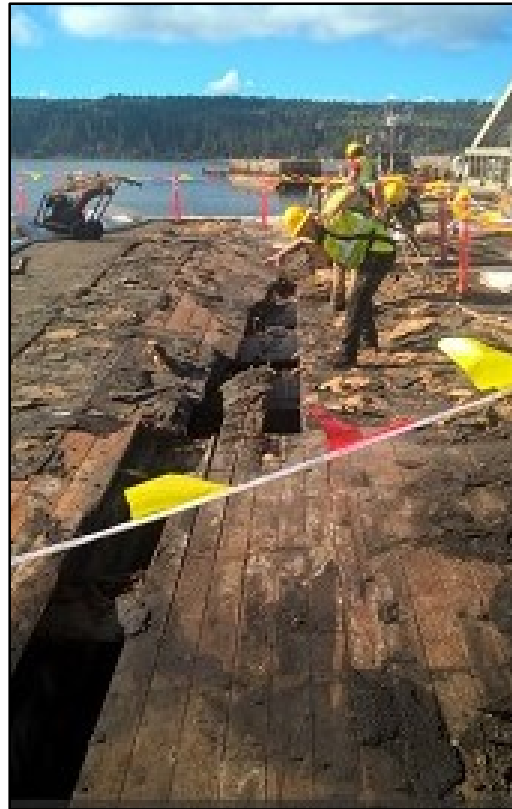


Photo 5. Employees using personal fall arrest systems while working near rotten roof area.

Requirements

Employers must ensure that all surfaces on which employees will be working or walking on are structurally sound and will support them safely prior to allowing employees to work or walking on them.

See [WAC 296-155-24605\(1\)](#)

Requirements

Ensure that the appropriate fall protection system is provided, installed, and implemented when employees are exposed to fall hazards of 10 feet or more to the ground or lower level while engaging in roofing work on a low-pitched roof.

See [WAC 296-155-24611\(1\)\(a\)](#)

Requirements

Prior to permitting employees to start demolition operations, you must make an engineering survey, by a competent person, of the structure to determine structural integrity and possibility of unplanned collapse of any portion of the structure.

See [WAC 296-155-775\(1\)](#)

Recommendations

- Erect guardrails around rotten roof areas to prevent access.
- Place a cover of standard strength and construction over localized rotten roof areas. (A sheet of plywood would have covered the rotted deck area in this case.)
- Use scaffolds and/or elevating work platforms to access the underside of a roof to remove rotted deck when site conditions allow their use.

This bulletin was developed to alert employers and employees of a serious traumatic injury of a worker in Washington State and is based on preliminary data ONLY and does not represent final determinations regarding the nature of the incident or conclusions regarding the cause of the injury.

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