Skylight Falls Rampant in Snowy New England; Industry Discussing Fall Resistance

February 26th, 2015 by **DWM Magazine**

The New England area has been pounded with snow during the past few weeks, and weather-related accidents in the region haven't been confined to roads. There have been an alarming number of incidents involving skylights in the past week alone—including at least one fatality, according to police and media reports.

Last Wednesday, a mechanical worker was seriously injured after falling through a skylight at a mall in Auburn, Maine. That same day, a custodian at a high school in Smithfield, R.I., fell about 12 feet while shoveling snow. And on Friday, a Burlington, Mass., town employee fell about 35 feet after stepping through a skylight at a warehouse, sustaining serious injuries.

On Saturday, a worker in Avon, Mass., fell 35 feet through a skylight, and on Sunday, a worker in Canton, Mass., fell 40 feet to his death. According to the Canton Police and Fire Department, the worker was "assessing snow removal operations" with a colleague when he walked across a snow-covered skylight and fell through.

It was the second death from a roof fall in Canton in just five days. Earlier, a man fell from the roof of a commercial structure. He was airlifted to a Boston hospital, where he died.

The Occupational Safety and Health Administration (OSHA), which reportedly has been contacted about these accidents as well as another skylight fall last week in Georgia, published a Hazard Alert in 2012 titled "Falls and Other Hazards to Workers Removing Snow from Rooftops and Other Elevated Surfaces." The document breaks down accident-prevention methods, reiterates employer safety requirements and addresses potential dangers, including "a snow-covered skylight."

"Every year, workers are killed or seriously injured while performing snow or ice removal from rooftops and other building structures, such as decks," the document reads. "OSHA has investigated 16 such serious injuries or fatalities in the past 10 years—all of which could have been prevented."

If this week is any indication, the danger—particularly around skylights—may be much greater than OSHA realized, prompting the administration to issue an advisory to news outlets throughout New England. The advisory points out snow-removal hazards and highlights safety messages, according to Ted Fitzgerald, regional director for public affairs at the U.S. Department of Labor.

He says OSHA's compliance-assistance specialists are also "getting the word out to stakeholders and others about rooftop snow removal hazards and safeguards, including a link to the appropriate OSHA Hazard Alert."

"Employers need to take precautions, assess hazards, ensure workers are trained and properly equipped and safeguards are in place before they go up on a roof to remove snow," says Fitzgerald. "One factor to consider is whether there are any hazards on the roof—such as skylights—that might become hidden by the snow and need to be marked so that workers can see them." OSHA recommends marking such hazards ahead of time if snow accumulation is expected.

OSHA advises the use of required fall protection when removing snow from a roof. "OSHA standards require employers to evaluate hazards and protect workers from falls when working at heights of four feet or more above a lower level (1910.23) or six feet or more for construction work (1926.501)."

Here are the Hazard Alert's recommendations if workers must access roofs or elevated surfaces to clear snow:

Train workers on fall hazards and the proper use of fall protection equipment, as required by 1910.132(f)(1) and 1926.503(a)(1).

Provide and ensure that workers use fall protection equipment if they are removing snow in areas that are not adequately guarded (e.g., with a guardrail system or cover) as required by STD 01-01-013 and 1926.501(b).

Instruct workers who wear personal fall protection equipment to put on their harnesses and buckle them snugly before mounting the roof.

Have a plan for rescuing a fallen worker caught by a fall protection system, as required by 1926.502(d)(20).

Remove or clearly mark rooftop or landscaping features that could become trip hazards.

The Glass Association of North America (GANA) addressed the concern in 2012 in a bulletin titled "Skylights and Sloped Glazing are Not Walking Surfaces," which reads, in part, "Installation and maintenance of skylights and sloped glazing systems require special consideration to minimize the potential for serious injury or death. While architectural flat glass can be designed and engineered for use as a walking surface, glass typically used in skylights and other sloped glazing applications is rarely designed to support the concentrated weight of live loads such as a human standing or walking on the glass or temporary equipment or structures used in installation, cleaning or maintenance."

GANA technical director Urmilla Sowell says the international standards organization ASTM is working on a new test method for human impact on commercial skylights. It aims "to develop a standard for the purpose of establishing fall resistance criteria and a test method that will simulate falls of persons onto unit skylights and related products installed onto low-slope roofs. A consensus based upon standard practices, standard impact test methods, materials commonly used, and risk assessment will be the basis for developing this human fall resistance specification and test method. Exploration of meaningful certification and/or labeling will be examined."

John Westerfield, AAMA Skylight Fall Protection Task Group chair, adds that the fall-protection specification and method "is not that far off."

"In general, it is a straightforward impact test utilizing an existing drop bag," he says. "The topic that we continue to get hung up on is the durability of materials. We have spent quite a bit of time and effort reviewing all possible options to validate the durability of plastic glazing through existing and trusted outdoor exposure and accelerated weathering test procedures.

"Currently, the draft includes some rather strict language in the draft document. However, some are still concerned with the inclusion of plastic glazing due to a wide variety of reasons, some valid and some may not be. We will be addressing this issue head on during out next [conference] call, to come to a decision on how to proceed—in order to bring this draft up to the committee level."

http://www.dwmmag.com/index.php/skylight-falls-rampant-in-snowy-new-england-industry-discussing-fall-resistance/