

Fire Engineering®

Construction Concerns: Walking and Working Surfaces

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March 7, 2018

The surfaces upon which we work and walk must be clean and clear of obstacles if we are to work safely and avoid slipping, tripping, and falling. These surfaces include floors of buildings, ladders, roofs, aerial apparatus, and even the ground on which we walk and drive. Slips, trips, and falls, including those on level surfaces, are one of the leading causes of injuries at work (Photo 1).



(1)

The Occupational Safety and Health Administration (OSHA) has standards and regulations to help us keep these surfaces safe places to work. These are located at www.osha.gov, in 29 CFR 1910.22, .25. and .30. Although these sections were written for the industrial workplace, they also apply to construction job sites and emergency responders.



(2)

In summary, the hazards include:

- Materials and equipment staged in corridors should be placed against one wall, to leave the center of the corridor and the other side clear for foot, wheelbarrow, cart, and emergency traffic; and the staged materials should not block doorways. (Photo 2)
- Materials and equipment staged or stored in rooms should be placed in the center of the room, to allow access to the walls, windows, and other features in the room which may yet need work.
- If pallets cannot be removed from the building as soon as they are empty, they should be stacked flat in one location near the entrance against a wall, for removal from the building no later than the end of the work day, to relieve congestion and reduce the fire load in the building.
- Packing materials and construction debris must be placed in waste containers as it is generated and removed from the building when the containers are full. These

materials must not be dumped in piles on the floor and left for removal during a weekly clean-up. A weekly clean-up is not enough to maintain a workplace free of slip, trip, and fall hazards--and fire hazards. Even floor sweepings from an area where a task is complete should be picked up and placed in a waste container before the work moves to another location.

- Painters' drop cloths and other finished surface protection can cause trips and falls. If they are on smooth surfaces, they can slide underfoot and cause slips and falls. This kind of protection includes the sheet plastic sometimes used in curing concrete. Extreme caution must be used when walking in these areas. Ideally, access to these areas should be restricted to the workers on the task that requires this surface protection.
- Insulated blankets on subsoil can conceal uneven ground and excavations for footing pads. These can cause trips and falls. Don't walk on them.
- Insulated blankets on curing concrete sidewalks, floors, and stairways can conceal floor openings, and they may slide underfoot on the concrete. Don't walk on them.
- Water or oil on smooth troweled concrete can be extremely slippery. Clean up these spills before walking in the area.
- Mud, snow, and ice that have accumulated or been tracked on temporary or permanent floors, stairs, scaffold planks, ladders, aerial apparatus, and the steps providing access to machinery can be extremely slippery. Clean up these areas regularly to prevent slips and falls.
- The surface of the ground outside the building can also be hazardous. If the ground is wet, soft, or not compacted, trucks and machinery can leave ruts, which are a trip hazard. While a fall into mud or loose sand may be only unpleasant, a trip on frozen ruts can break bones. Where the ground on the job site has become rutted (Photo 3), it should be graded off with a skid-steer or other machine regularly, to remove the trip hazards.



(3)

It is everyone's responsibility to help keep your work place safe. The simplest way is to address any of these hazards as they appear. It takes no more time or effort to remove debris and sweepings from the area when a task is complete than it does to attempt to remove a week's accumulation on a Friday afternoon. And if the materials and equipment are staged properly, and packing materials and debris are removed as they are generated, we can also eliminate most of the slip and trip hazards before they cause injuries.

When walking and working surfaces are not optimal, emergency responders may have to do some basic clean-up in the area to which they respond and remove congestion in corridors and aisles. This work can be essential for our own safety, for patient access and movement, and for access to the problem areas in other types of responses.



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