



# PREVENTING SLIPS, TRIPS, AND FALLS IN THE CONSTRUCTION INDUSTRY

Nearly one-third of reportable injuries and 40% of fatalities in construction result from slips, trips, and falls. These injuries result in 50% more days away from work than other injuries. However, steps can be taken to ensure maximum workplace safety. The following checklist of requirements and recommendations can be used as a method of minimizing slip, trip and fall incidents using readily available resources as defined by OSHA under General Requirements for Walking-Working Surfaces 1910 Subpart D. This checklist is by no means all inclusive, and it may be necessary to make changes to cover specific areas in your own industry.

SUBJECT	GENERAL REQUIREMENTS/RECOMMENDATIONS
<b>Employees Need to Know</b>	Pay attention to where you are going and what you are doing
	Slow down when the ground is soft or wet
	Eliminate the distractions as much as possible
	Walk at a speed appropriate for the conditions
	Take your time and pay attention to where you are walking
	Use installed light sources or flashlights that provide sufficient light for your tasks
	Make sure materials or equipment you are carrying or pushing do not prevent you from seeing obstructions or spills
<b>Housekeeping</b>	Regular maintenance with safety in mind is required so that working surfaces are maintained free of slip, trip, and fall hazards
	Passageways should be clear of obstructions, in good repair and large enough to allow safe clearance
	Employers should allow time for cleaning work areas
	Pick up after yourself
	Keep surfaces and stairways clear of debris
	Put away tools and equipment after use
	Develop a written protocol that addresses cleaning procedures and proper response to housekeeping emergencies, such as spills
	Establish procedures to clean up spills immediately
	Display signs warning people of the danger
	Determine an appropriate cleaning schedule to keep stairways, passageways, scaffold, ladders, and gangways free of material, supplies, and obstructions
	Keep hoses, power cords, or welding leads from lying in heavily traveled walkways or areas
	Debris should be removed to keep the worksite orderly
	Adequately dispose of scrap, waste, and surplus materials
	Designate areas for waste materials and provide containers
	Maintain slip-resistant walking surfaces
	Clean spills immediately
	Mop or sweep debris from walking surfaces
	Remove obstacles and clutter from walkways
	Secure (tacking, taping, etc.) mats, rugs and carpets that do not lay flat
	Cover cables that cross walkways
Keep working areas and walkways well lit	
Assign workers to clean or hiring a cleaning service	
Assign a worker to check the worksite for fall hazards daily	

<b>Lighting</b>	Use proper indoor and outdoor lighting
	Outdoor stairs, walkways, and parking lots should be well lit
	Conduct regular lighting inspections of the construction site
	replace burned-out bulbs immediately
	Ensure adequate outdoor lighting as the seasons change and it gets dark earlier and stays dark longer
	Keep indoor and outdoor surfaces clean and dry
<b>Floor Mats</b>	Should have beveled edges
	Should lay flat
	Should be made of nonslip material that will not slide
	Should be placed where moisture can collect
	Allow people to clean their shoes often
<b>Non-Level Walking Surfaces</b>	Install mats and/or pressure-sensitive abrasive strips
	Install metal or synthetic decking
	Replace flooring or recoat existing flooring with abrasive-filled paint-on coating
	It is important to stay focused while navigating uneven ground
<b>Walkways</b>	Inspect regularly to identify ruts, slippery conditions, and other uneven ground on the worksite
	Identify holes and trenches on the site. Cover them and rope them off with caution tape to prevent access to the area
	Workers should not take shortcuts through debris piles
	Floors should be kept clean and free of water, oil, and grease
	Floors should be treated with high-traction products to provide a nonslip, nonskid surface
<b>Lifting Equipment</b>	All lifting equipment requires training to operate
	Personal fall arrest systems also require training
	Never operate equipment without training
	Only use equipment that is in good condition and inspect it before use
	If you notice problems, remove it from service and notify a supervisor
<b>Floor Loading Protection</b> The load rating is the maximum weight that a surface can safely hold	The approved load limit should be posted
	This limit includes the total weight of all people and objects on that surface
	It is unsafe and against the law to exceed the load rating
	If you bring an unusual amount of weight onto a surface, or if work is being performed on a surface that has not been rated, check that the surface can handle the load
<b>Stairs, Stairwells and Steps</b>	Always use the handrail
	Do not carry loads that block your view
	Check individual stairs regularly for damage
	Repair steps when necessary
	Clean up any moisture you find
	Stairwells and steps should be well lit
	sturdy railings should be provided along both sides when possible
	Steps should not be dangerously steep and should have the same rise and depth with visible edges
	Keep stairs and stairwells free of grease, ice, snow, boxes, and other obstacles that could cause slips or trips

<b>Holes and Openings</b> A hole is a gap or space more than 2 inches wide in any horizontal working surface. An opening is a gap or space at least 30" high and at least 18" wide in a vertical surface through which a person could fall	Holes and openings must have covers or railings to prevent tripping or falling
	Holes and openings must have a toeboard if tools may fall into it or people can pass under it
	If holes or openings must be left temporarily unguarded, they must be attended until covered again
<b>Ladders</b>	Inspect ladder prior to use to make sure it has no defects
	If damaged, remove ladder from service, tag it "Dangerous, Do Not Use," and notify your supervisor
	Never use metal ladders around electrical equipment
	Never exceed the ladder's load rating
	Never use ladders horizontally as work platforms
	Use the appropriate ladder for the job
	Mount and dismount the ladder improperly
	Setup the ladder properly checking that the ladder is set up at the proper angle of 4 ft. in height for every foot out
	Do not over-reach
	Do not climb the ladder with tools or materials in your hands
	Always face the ladder when climbing or descending
	Inspect the ladder for oil, grease, or mud on ladder rungs and clean immediately
	Secure the ladder at the base or top
	Do not extend the ladder three feet above the upper surface
	Never use the top step of a step ladder
	Do not place the ladder on unstable surfaces
	Always use three points of contact
	Ascend the ladder no higher than the third step from the top
Always pause before starting descent	
Always look at the next step before moving the foot	
<b>Open-Sided Floors</b>	Open-sided floors 6 feet above the surface must have a railing on open sides, except for entrances to ramps, stairways, etc.
	If the floor is used for non-construction activities, it must have a railing at 4 ft
	There must be a toeboard below the railing if people pass under it, there is moving machinery below and there is a danger of falling objects
	If an open-sided floor is lower than the 4 or 6 ft. threshold, there must still be a railing and toeboard if it is near hazardous equipment
	If railing systems are not possible, an approved fall protection method must be in place
<b>Loading Docks (Dockboards)</b>	Dockboards are movable ramps
	They bridge the gap between a loading dock and a truck
	Ensure Dockboards are secured
	Vehicles must be secured from moving with wheel chocks, or brakes which meet Federal Motor Carrier Safety Administration (FMCSA) requirements
	Entryways into trailers from loading docks be well lit
	Ensure workers are aware of sharp edges and uneven ground
	Ensure workers keep docks free of moisture and debris
	Do not jump off landings or loading docks. Use the stairs

<b>Scaffolds</b>	Scaffolds must support 4x the maximum intended load
	Workers must be protected from overhead hazards
	Scaffolding higher than 10 ft. must have guardrails, mid-rails, and toeboards
	Use wire mesh between the toeboard and guardrail if people pass below
	Workers must have a safe way to get onto the scaffold
	Do not use damaged or weakened scaffolding
	Do not move or alter scaffolding while someone is working on it
	Never work on scaffolds during storms, high winds, ice, or snow
	OSHA requires that fall protection must be provided on any scaffold 10 feet or more above a lower level. Fall protection consists of either personal fall-arrest systems or guardrail systems
	Ensure scaffolds are erected or used properly. This includes planning ahead for assembly and disassembly, ensuring tie-ins or bracing are used, that loads are not too heavy and that the scaffold is not being used close to power lines
	Planking should extend all the way across the scaffold and OSHA's maximum allowable gap between planks is one inch
	Workers should not climb on the scaffold components
	A proper ladder placed next to the scaffold or one built into the scaffold's frame must be used
	The OSHA standard for scaffolds stipulates that during storms or high winds, work on or from a scaffold is prohibited unless a competent worker has determined it is safe
	Workers on scaffolding should comply with OSHA by wearing backup harnesses
	Designate a <u>competent person</u> to determine if the scaffold is safe to use
	Inspect the scaffold and the worksite regularly
	Make sure all scaffolds are fully planked and placed on a solid, level base
	Erect guardrails and cover holes
	Follow manufacturers' specifications
Inspect the scaffolding for oil, grease, or mud and clean immediately	
Report problems and do not work until problems are corrected	
<b>Footwear</b>	Do not wear work boots that have worn treads or are ill-fitting
	All employees should wear slip-resistant footwear
	Wear work boots that fit snugly and that have slip-resistant soles
	Employers should have cleaning mats available for cleaning treads regularly
	Regularly inspect soles to be sure they still provide traction
<b>Seasonal Safety Hazards</b>	Evaluate your equipment and employee needs before each new season begins
	Devise a team of volunteers or employees to handle snow- and ice-removal emergencies
	Stock up on salt and shovels before the winter season
	Clear snow and ice from emergency exits, outdoor staircases, walkways, and parking lots as soon as possible
	Evaluate downspouts to ensure runoff does not form ice buildup on sidewalks or parking areas
	Keep floors dry and alert people to potentially slippery surfaces in the event of rain
<b>Survey the jobsite each day</b>	Identifying the ruts, slippery conditions, and other uneven ground on the worksite
	Identifying holes and trenches on the site. Cover them and/or rope them off with caution tape to prevent access to the area
	Make sure walkways and areas around ladders are always kept clear of tools or debris
	Pay close attention to where cords and hoses are placed as these can also create tripping hazards

<b>Hold Regular Safety Meetings and Provide Employee Training</b>	Explain the hazards of slips, trips, and falls with the employees
	Discuss with your employees how being distracted increases the risk of injury and strategize on how best to avoid those distractions
	Discuss the ground conditions you will be working with and seek out ideas on how best to avoid the hazards created by those conditions
	Identify an obvious hazard – such as slippery conditions or a deep rut caused by heavy machinery – and demonstrate the risks involved and how to navigate these areas
	Emphasize the importance of keeping shoe or boot soles clean. Provide a tool such as a small brush or even a stick where workers can easily clean off the dirt or mud while in the field
	Remind employees to report any unsafe conditions
	Practice good housekeeping: if you drop it, pick it up. Return all tools, hoses, and cords to their proper location
	Train your employees to recognize and avoid unsafe conditions
	Review OSHA 1910.22 Walking/Working Surfaces
	Explain to your employees what is expected of them to prevent accidents
	Based upon your workplace, discuss how the right choice of shoe can help prevent slips, trips, and falls
	Discuss any company programs for shoe purchase or reimbursement
	Show new employee's areas that might create slip, trip, or fall hazards
	Emphasize safe walking skills and demonstrate taking short steps on slippery surfaces to keep your center of balance under you and point your feet slightly outward
	Emphasize cleaning up or reporting spills right away
	Discuss not letting grease accumulate
	Emphasize using caution on smooth surfaces such as newly waxed floors
	Demonstrate that you only carry loads that you can see over and that you can always see where you are walking
	Emphasize keeping walking and working areas well lit, especially at night and how to report light outages
	Demonstrate how to keep the workplace clean and tidy
Demonstrate the proper way to store materials and supplies in the appropriate storage areas	
Demonstrate arranging furniture and office equipment so that it does not interfere with walkways or pedestrian traffic in your area	
Train employees on properly maintaining walking areas, and how to alert appropriate personnel regarding potential maintenance related hazards	
<b>Other Resources</b>	<a href="https://www.osha.gov/stopfalls/">https://www.osha.gov/stopfalls/</a> <a href="https://www.cdc.gov/niosh/construction/stopfallscampaign.html">https://www.cdc.gov/niosh/construction/stopfallscampaign.html</a> <a href="http://stopconstructionfalls.com/">http://stopconstructionfalls.com/</a> <a href="https://www.osha.gov/Publications/OSHA3252/3252.html">https://www.osha.gov/Publications/OSHA3252/3252.html</a> <a href="https://www.osha.gov/Publications/osha3124.pdf">https://www.osha.gov/Publications/osha3124.pdf</a>