

Union County Public Schools
Facilities Department

**Walking and Working Surfaces &
Fall Protection
Safe Work Practices**

Purpose

Slips, trips and falls make up the majority of general industry workplace accidents. They cause 15% of all accidental deaths and are second only to fatal motor vehicle accidents.

Responsibilities

Managers are to:

- Conduct routine inspections to ensure all walking and working surfaces are free from slip, trip, and fall hazards.
- Ensure employees have received proper training to use ladders, scaffolds, lifts and other elevated platforms as well as training in use of fall protection and the inspection of fall protection equipment. Training on fall protection equipment shall be provided annually.
- Provide adequate fall prevention and arrest equipment.

Employees are to:

- Maintain work areas free from slip, trip, and fall hazards.
- Use proper ladders and other elevated platforms according to their assigned task.
- Correct or immediately report slip, trip, and fall hazards.

Hazard Controls

Engineering Controls

- Proper construction of elevated locations
- Use of properly constructed guardrails where required
- Proper design of fixed ladders and stairs
- Adequate lighting in all areas

Administrative Controls

- Training for all employees
- Routine inspections for ladders, stairs, walking and working surfaces
- Follow housekeeping program requirements
- Immediate cleanup of material spills

General Requirements

General housekeeping methods can prevent slip, trip, and fall hazards. Keep all work areas, aisles, and storage areas in a clean and orderly fashion. Floors shall remain in a clean and dry condition. Every floor, work area, and passageway will be kept free from protruding nails, splinters, holes or loose boards.

Aisles and passageways will be kept clear and in good repair with no obstructions that could create a hazard.

Guardrails

Floor openings and holes, wall openings and holes, and the open sides of platforms may be hazardous. Standard railings will be provided on exposed sides of a stairway. Standard railings consist of a toprail, midrail, and posts, and will have a vertical height of 42 inches from the upper surface of the toprail to the floor, platform, runway or ramp level. The midrail shall be 21 inches. A standard toeboard is 4 inches in vertical height with no more than $\frac{1}{4}$ inch clearance above floor level.

Floor openings may be covered rather than guarded with rails. When the floor opening cover is removed, a temporary guardrail will be in place or an attendant shall be stationed at the opening to warn other personnel. Every floor hole which people can accidentally walk into will be guarded by either a standard railing with toeboard or a cover of standard strength and construction.

Every open-sided floor or platform four feet or more above adjacent floor or ground level shall be guarded by a standard railing on all open sides, except where there is an entrance to a ramp, stairway or fixed ladder. The railing will be provided with a toeboard when beneath the open sides, people can pass, there is moving machinery, or falling materials could create a hazard.

Runways will be guarded by standard railing, or equivalent, on all sides four feet or more above floor or ground level.

Every flight of stairs with four or more risers shall have standard stair railings or standard handrails. "Standard handrails" for stairs will have a vertical height of no more than 34 inches and not less than 30 inches from the upper surface of the toprail to the surface of the tread in line with the face of the riser at the forward edge of the tread. Stairways less than 44 inches wide shall have at least one affixed handrail when both sides are enclosed. Stairways less than 44 inches wide with one open side shall have at least one stair rail affixed to the open side. Stairways less than 44 inches wide having both sides open shall have two stair rails, one on each side. Stairways more than 44 inches wide but less than 88 inches shall have a stair rail provided on each enclosed side and open side. Stairways 88 inches wide or more shall have stair rails on each side and one in the middle of the stairs.

Ladders

The main hazard when using a ladder is falling. Ladders that are poorly designed and not maintained properly may collapse causing employee injury. A ladder is a piece of equipment consisting of two side rails joined at regular intervals by crosspieces on which a person may step to ascend or descend.

Ladders will be maintained in good condition at all times and shall be inspected frequently. Those with defects shall be removed from use and tagged "Do Not Use."

A fixed ladder is permanently affixed to a structure, building or equipment. A cage or ladder safety device is required around fixed ladders that are between 20-30 unbroken feet. A cage is a guard that is fastened to the side rails of the fixed ladder or to the structure that encircles the climbing space of the ladder for the safety of the employee who must climb the ladder.

Please see the UCPS Ladder Safety Program and Work Safe Practices for more information on the safe use of ladders.

Roofing

Employees who make repairs to roofs as part of their job duties shall adhere to OSHA regulations for construction industry by wearing fall protection for leading edge work.

Each employee engaged in roofing activities on low-slope roofs with unprotected sides and edges 6 feet or more above lower levels shall be protected from falling by guardrail systems, safety net systems, personal fall arrest systems or a combination of a warning line system and guardrail system, warning line system and safety net system, warning line system and personal fall arrest system, or warning line system and safety monitoring system. On roofs 50 feet or less in width, the use of a safety monitoring system without a warning line system is permitted.

Each employee on a steep roof with unprotected sides and edges 6 feet or more above lower levels shall be protected by guardrail systems with toeboards, safety net systems, or personal fall arrest systems.

Personal Fall Arrest Systems

Personal fall arrest systems consist of an anchorage, connectors, and a body harness and may include a deceleration device, lifeline, or suitable combinations. If a personal fall arrest system is used for fall protection, it must do the following:

- Limit maximum arresting force on an employee to 1,800 pounds when used with a body harness
- Be arranged so that an employee can neither free fall more than 6 feet nor contact any lower level
- Bring an employee to a complete stop and limit maximum deceleration distance an employee travels to 3.5 feet
- Have sufficient strength to withstand twice the potential impact energy of an employee free falling a distance of 6 feet or the free fall distance permitted by the system, whichever is less.

The use of a body belt for fall arrest is prohibited.

Personal fall arrest systems must be inspected prior to each use for wear damage, and other deterioration. Defective components must be removed from service. D-rings and snaphooks must have a minimum tensile strength of 5,000 pounds. D-rings and snaphooks shall be proof-tested by the manufacturer to a minimum tensile load of 3,600 pounds without cracking, breaking, or suffering permanent deformation.

Snaphooks shall be of a locking configuration. The use of nonlocking snaphooks is prohibited.

Horizontal lifelines shall be designed, installed, and used under the supervision of a qualified person, as part of a complete personal fall arrest system that maintains a safety factor of at least two. Lifelines shall be protected against being cut or abraded.

Self-retracting lifelines and lanyards that automatically limit free fall distance to 2 feet or less shall be capable of sustaining a minimum tensile load of 3,000 pounds applied to the device with the lifeline or lanyard in the fully extended position.

Self-retracting lifelines and lanyards that do not limit free fall distance to 2 feet or less, ripstitch lanyards, and tearing and deforming lanyards shall be capable of sustaining a minimum tensile load of 5,000 pounds applied to the device with the lifeline or lanyard in the fully extended position.

Ropes and straps (webbing) used in lanyards, lifelines, and strength components of body belts and body harnesses shall be made of synthetic fibers.

Anchorage shall be designed, installed, and used under the supervision of a qualified person, as part of a complete personal fall arrest system that maintains a safety factor of at least two, i.e., capable of supporting at least twice the weight expected to be imposed upon it. Anchorages used to attach personal fall arrest systems shall be independent of any anchorage being used to support or suspend platforms and must be capable of supporting at least 5,000 pounds per person attached.

Lanyards and vertical lifelines must have a minimum breaking strength of 5,000 pounds.

Contractors

All outside contractors working at UCPS sites will be required to follow the guidelines set forth in this program.