



SMU

PROGRAM

Walking-Working Surfaces Program

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1.0 Applicability

This program applies to all SMU faculty, staff, students, and service providers at all facilities owned and/or operated by SMU.

2.0 Scope

This program provides instruction to prevent injuries by outlining the minimum acceptable guidelines for developing and implementing the Walking and Working Surfaces program. The program includes Housekeeping, Slips & Trips, fall protection, stairways, scaffolding, and Ladders to further SMU's accident prevention efforts and comply with regulations and SMU Programs.

This program conforms to SMU's policies and EHS Management System standards and guidance documents and complies with regulatory requirements.

3.0 Definitions

The following terms are defined to allow a better understanding of this program. They are located at the end of the program.

4.0 Housekeeping

All places of employment, passageways, storerooms, service rooms, and walking-working surfaces are kept in a clean, orderly, and sanitary condition.

- The floor of each workroom is maintained in a clean and, to the extent feasible, a dry condition.
- When wet processes are used, drainage must be maintained, and to the extent feasible, dry-standing places, such as false floors, platforms, and mats, must be provided.
- Walking-working surfaces are maintained free of hazards such as sharp or protruding objects, loose boards, corrosion, leaks, spills, snow, and ice.
- All walking-working surfaces must have a safe means of access and egress.
- Hazardous conditions on walking-working surfaces must be corrected or repaired as soon as possible. If the correction or repair cannot be made immediately, the hazard must be guarded to prevent people from using the walking-working surface until the hazard is corrected or repaired
- **All employees and contractors should look for hazards and report them immediately to SMU ORM or SMU Facilities.**



4.1 Slips and Trips

Slips and Trip hazards can appear anywhere on campus. Most slips and trips occur from hurrying and not paying attention to surroundings. Wearing proper footwear and paying attention to where someone is walking can reduce the chance of a slip or trip.

Slips occur when there is a loss of balance caused by too little friction between someone's feet and the surface you are standing on.

- Spills of non-hazardous materials need to be cleaned up immediately by the person who created them. Hazardous Materials should be cleaned up by people trained to deal with that hazardous material.

Report hazardous material spills to ORM.

- Areas that become frequently wet need to have slip protection. This can include adding mats, redirecting water, or other engineering or administrative controls.

Trips occur when someone is walking and their foot hits an object which causes their momentum to be thrown off balance.

- Cables and Cords should avoid crossing walkways, and when they must, they should be used in cable curbs or tunnels.
- Random objects and obstructions should not remain to lie in the walkway without appropriate signage or barricades.
- Flooring should be free of cracks, holes, and uneven surfaces that may cause a trip hazard.

4.2 Winter Slips and Trips

- During the winter months, encountering a slip or trip hazard is increased.
- Black Ice can form above freezing conditions and remain invisible to pedestrians.
- Proper footwear with good traction is essential for walking in winter weather conditions.
- If working outside in winter, when ice may be present, footwear should be equipped with ice cleats.

5.0 Fall Hazards:

Fall hazards are a leading cause of serious bodily injuries and death in the workplace. There are a variety of fall hazards on campus. All fall hazards must be protected from any exposed employee, contractor, student, or visitor. Fall hazard regulations and mitigation strategies may vary across campus. Except for construction sites, fall risks greater than 4' feet need protection via Personal Fall Arrest System (PFAS), guardrails, or covers.

Please see the SMU Fall Protection Program or contact **SMU ORM for more details.**

- **Holes** - A gap or void 2 inches (5.1 cm) or more in its least dimension, in a floor, roof, or other walking/working surface that could cause a trip or fall.
- **Opening**- Opening means a gap or open space in a wall, partition, vertical walking-working surface, or similar surface that is at least 30 inches (76 cm) high and at least 18 inches (46 cm) wide, through which an employee can fall to a lower level.



6.0 Ladders

Ladders are tools. Portable ladders are used at SMU in various settings, both academic and administrative. Misuse of portable ladders can result in severe injuries from falls or, in the case of metal ladders, electrical shock.

Many of the basic safety rules that apply to most tools also apply to the unsafe use of ladders.

6.1 Ladder Selection

Ladders come in a variety of types, duty ratings, and composition materials.

The length of the ladder must be sufficient so that the climber does not have to stand on the top rung or step. The ladder you select must be the right ladder for the job.

6.2 Ladder Types

6.2.1 Duty Rating


- Each Ladder is rated with a specific duty rating.
- The Duty Rating of the ladder must be greater than the total weight of the climber, tools, supplies, and other objects placed upon the ladder.
- Employees will not load a ladder beyond its maximum intended load.

Ladder Type	Duty Rating	Load Capacity
Light Duty Household	Type III	200 lbs.
Medium-Duty Commercial	Type II	225 lbs.
Heavy Duty Industrial	Type I	250 lbs.
Extra Heavy Duty Industrial	Type I A	300 lbs.
Special Duty Industrial	Type I AA	375 lbs.

6.2.2 Ladder Types:

Ladder Type	Best Used For
Stepladders	Temporary tasks. Minimal storage space is required.
Straight or extension ladders	They are generally used for higher climbing heights. Extension ladders allow for a variation in height.
Platform ladders	A combination ladder/scaffold allows for both climbing structure and work surface.
Rolling staircases	More gradual climbing angle and stable work platform. Requires larger area for storage.
Combination Ladders	Some specialty ladders may have a combination of multiple types. Always follow manufacturing guidelines.



Stepladder	Platform Stepladder	Extension Ladder	Combination
			

6.2.3 Ladder Composition Materials:

Ladders are typically made of three different types of materials designed for specific work situations.

Ladder Material Type:	Purpose:
Wood	Can be custom made, can be used for electrical work
Aluminum	Lightweight and strong (Cannot be used for electrical work)
Fiberglass	It may be used for electrical work or exposure.

6.3 Stepladders

Stepladders (or A-frame ladders) are designed to be self-supporting. There are several important requirements when using stepladders:

- The spreaders must be fully extended and locked in place before climbing.
- The maximum working height of a stepladder may not be exceeded.
- People can not stand on the top 2 steps of a step ladder.
 - **Unless** the step ladder has a platform.
- Paint trays are not steps and should only be used for holding paint cans and trays.
- Unless designed for such use, the back of the ladder may not be used for climbing.
- Stepladders should never be leaned against a wall for use as a straight ladder.
 - **Unless** it is designed and labeled by the manufacturer.



6.4 Straight and Extension Ladders:

There are several important requirements when using straight and extension ladders.

- The ladder is set to a 75-degree angle from the ground.
 - To measure the horizontal distance, pull the ladder 1 foot away from the wall for every four feet in height.
- Both upper contact points must rest firmly against the structure.
- The ladder must be set on a level surface.
- Users should make sure that both rung locking mechanisms are fully engaged.
- The National Institute of Occupational Safety and Health (NIOSH) has a free app to assist with portable ladder safety. Download the NIOSH Ladder Safety app at: <https://www.cdc.gov/niosh/topics/falls/mobileapp.html>



6.5 Fixed Ladders:

Fixed ladders are subject to different standards and requirements than portable ladders. The following are just some of the requirements for fixed ladders.

- Ladder safety devices must be installed on fixed ladders 24 feet or higher.
 - New installed fixed ladders exceeding 24' must have a personal fall arrest system or ladder safety system.
 - By 2036, all fixed ladders above 24' installed before November 2018 must use these systems instead of cages.
- Fixed ladders must be able to support at least two loads of 250 lbs. each.
- Rungs must be shaped to minimize slipping.
- Fixed ladders that will be utilized as a point of access must be equipped with guardrails and a gate.



6.6 Use of fall protection on ladders:

Fixed Ladders:

- Fall protection must be provided in the form of a vertical lifeline for employees climbing or working on fixed ladders above 24 feet.
- Fall protection is not required when using fixed ladders less than 24 feet without a vertical lifeline.

Portable Ladders

- Fall protection is not required for employees climbing or working on portable ladders.
- Although the OSHA standards do not require fall protection for workers on fixed ladders below 24 feet or portable ladders, it is encouraged to provide additional protection where the worker could fall four feet or more.
- Fall protection must be used if employees are within six feet or less of a fall hazard.
- Identify the appropriate means of protection:
 - 100% tie-off, other fall arrest means as appropriate.

6.7 Inspections:

- Informal inspect ladders shall be inspected before each use.
- Formal ladder inspections and their safety lifelines are conducted at least annually.
- Online SMU Inspection form <https://veoci.com/v/p/form/v4daasbddymf>
- Employees may also use their ladders manufacturer inspection form.

6.8 Storage and Maintenance

- Whenever possible, ladders should be hung horizontally on wall hooks in a dry place, not subject to extremes of temperatures.
- Users can do minor maintenance, like lubricating hinges and tightening hardware. However, ladder repair is specialized work and should be completed by qualified persons or manufacturers.
- If conditions exist that make a ladder unsafe for use, it should be removed from service immediately and marked with a warning such as
 - "Dangerous - Do Not Use."
- If a ladder cannot be repaired, it should be destroyed before disposal.



6.9 Ladder Safety Usage

- If you have not been trained in the safe use of a ladder, you may not use the ladder for the work performed for SMU.
- If you feel tired or dizzy or are prone to losing your balance, stay off the ladder.
- Do not use ladders in high winds or storms.
- Wear clean slip-resistant shoes; free of mud or grease.
- Clean ladder rungs of mud, grease, or ice off ladders before climbing.
- If necessary, have another person hold the base of the ladder.
 - If no one is available, extension ladders should be securely lashed or fastened top and bottom to prevent slipping.
- Overreaching can cause instability.
- Always face the ladder and maintain a 3-point contact when climbing or descending.
 - Employees should avoid carrying tools/objects when climbing or descending ladders.
 - People should have at least one hand to grasp the ladder and not carry objects or loads that could cause them to lose their balance
 - Tools should be attached, raised, or lowered when working on a ladder.
- Always check to ensure tools and equipment have been removed from the top of the ladder before moving it.
- Ladders must be maintained in good condition and inspected before use at regular, frequent intervals to confirm it is in good working condition.
- Ladders with loose or missing parts must be rejected.
- Ladders that sway or lean to the side must be rejected.
- Only one person at a time is permitted on a ladder unless the ladder is specifically designed for more than one climber (such as a Trestle Ladder).
- Ladders must not be placed in front of closed doors that can open toward the ladder.
 - The door must be blocked open, locked, or guarded.
 - **Do not create a fire egress issue.**
- Read the safety information labels on the ladder
- Place ladders on stable bases
- Ladders cannot be placed on boxes, barrels, or unstable bases to obtain added height.





7.0 Stairways:

A stairway, staircase, stairwell, flight of stairs, or simply stairs is a construction designed to bridge a vertical distance by dividing it into smaller vertical spaces, called steps. This section covers all stairways, except for stairs serving floating roof tanks, stairs on scaffolds, stairs designed into machines or equipment, and stairs on self-propelled motorized equipment. This section outlines safe work practices while using stairs.

- Wear clean slip-resistant shoes; free of mud or grease
- Always maintain a 3-point contact when climbing or descending.
- Do not slide down handrails.
- When there is only one point of access between levels, the access way must be kept clear to permit free passage by workers. If the free path becomes restricted, the second entry point must be provided and used.
- Stair rail systems, handrails, and stair treads must be surfaced to prevent injuries such as punctures or lacerations and to keep clothing from snagging.
- Slippery conditions on stairways must be corrected immediately.
- Handrails must be easy to grab to prevent falls.
- A stairway or ladder must be provided at all worker points of access where there is a break in elevation of 19 inches or more, and no ramp, runway, sloped embankment, or personnel hoist is provided.
- Stairways must be installed at least 30 degrees and no more than 50 degrees from the horizontal.
- Variations in riser height or stair tread depth must not exceed 1/4 inch in any stairway system, including any foundation structure used as one or more stairs treads.
- Where doors or gates open directly onto a stairway, a platform must be provided that extends at least 20 inches beyond the door's swing.
- Every flight of stairs having four or more risers or rising more than 30 inches, whichever is less, must be equipped with one stair rail system along each unprotected side or edge; and at least one handrail.
- Mid-rails must be located midway between the top of the stair rail system and the stairway steps.
- Vertical members, when used, must not be more than 19 inches apart. (No openings more than 19in)
- Handrails must have a minimum clearance of 3 or 2.25 inches between the handrail and walls, stair rail systems, and other objects.
- Except during the construction, stairways with metal pan landings and treads must not be used where the treads and/or landings have not been filled in with concrete or other material unless the pans of the stairs and/or landings are temporarily filled in with wood or other material.
- All temporary treads and landings must be replaced when worn below the top edge of the pan.
- Temporary treads must be made of wood or other solid material and installed the full width and depth of the stair.
- Stairways that will not be a permanent part of the structure on which work is performed must have landings at least 30 inches deep and 22 inches wide at every 12 feet or less of vertical rise.
- The height of the handrails must not be more than 37 inches or less than 30 inches from the upper surface of the handrail to the surface of the tread.
- Unprotected sides and edges of stairway landings must be provided with a standard 42-inch guardrail.



8.0 Scaffolding:

Scaffolding: A scaffold is any temporary, elevated platform and its supporting structure for supporting people, material, or both.

There are three main types of suspended, supported scaffolding, and mobile.

- **Supported scaffolds** is an erected by a structure that supports the load.
- **Suspend scaffolding** is a work platform suspended by ropes or cables in the air.
- **Mobile scaffolding** is a scaffolding built on wheels and used to move around.

8.1.1 Scaffolding Permit

- A Scaffolding permit must be completed before the erection of scaffolding on campus:
- This permit is part of SMU's Permit-to-Work system
- The permit must be closed upon completion of work.
- The City may have additional scaffolding permit requirements

8.1.2 Erecting Scaffolding

Only trained and authorized employees of SMU or the contractor will supervise the erection of scaffolding. The following applies:

- Manufacturers' erection instructions will be followed.
- Advance planning considerations will be followed during the erection process
- Only trained and authorized employees will supervise the erection of scaffolding.
- Each component will be visually inspected before use.
- Defective or unserviceable materials will not be used
- Only approved lumber will be used.
- Consult with the ORM where any instructions are unclear.

8.1.3 Pre-inspection of Scaffolding

Scaffolding components will be inspected before use, and inspections will look for rust, straightness of members, and welds. Only trained and professional contractors will conduct the pre-inspections.

- **Rust:**
 - Heavily rusted scaffolding equipment is a possible sign of abuse or neglect.
 - Severely rusted components should be thoroughly inspected and cleaned before being approved for use.
- **Straightness of Member:**
 - Mishandling, trucking, and storing may cause damage to scaffolding equipment.
 - All members or parts of all steel scaffolding components should be straight and free from bends, kinks, or dents
- **Welds:**
 - Scaffolding equipment should be checked before use for broken welds, and any piece of equipment showing damaged welds or rewelding beyond the original factory weld should not be used.
 - The factory weld reference pertains to the location and quality of rewelds.
- **Components:**
 - Check the serviceability of locking devices.
 - Check alignment of coupling pins and braces.
 - Check serviceability of caster brakes (rolling scaffolds).



8.1.4 Final Inspection of Erected Scaffolding

Only trained and authorized employees of SMU or the Contractor will conduct the final inspection of erected scaffolding. Pertinent OSHA regulations and information and guidance provided by the manufacturer of the particular type of scaffolding will be used. **The following, as a minimum, apply:**

- Check for proper support under every leg of every frame.
- Check for washout (if outside) due to rain.
- Check to ensure all base plates or adjustment screws are in contact with supports.
- Check frames for plumpness and squareness in both directions.
- Check serviceability and correctness of all cross braces.
- Check to ensure that all planking and accessories are correctly installed.
- Check to ensure that all guard rails are in place.
- Recheck regularly to ensure conditions remain safe.
- Green Tag scaffolding daily and before use.

8.1.5 Dismantling:

Only trained and authorized employees of SMU or the Contractor will supervise the dismantling of the scaffolding. Pertinent OSHA regulations and information and guidance provided by the manufacturer of the particular type of scaffolding will be used. **The following applies:**

- Manufacture's dismantling instructions will be followed.
- Relocation planning considerations will be considered during the dismantling process.
- A competent employee will supervise dismantling.
- Each component will be visually inspected after use.
- Defective or unserviceable materials will not be stored with functional materials.
- Avoid dropping or throwing the parts as this could damage the equipment.
- Consult with ORM where any instructions are unclear.

8.1.6 Working Loads:

Work platforms and scaffolds will be capable of carrying the design load under varying circumstances depending upon the conditions of use.

- **Scaffolds design load calculations:**
 - Light:
 - They are designed and constructed to carry a working load of 25 pounds per square foot.
 - Medium:
 - They are designed and constructed to carry a working load of 50 pounds per square foot.
 - Heavy:
 - They are designed and constructed to carry a working load of 75 pounds per square foot.



8.2 Working Platform:

The working platform is the area on the scaffolding where people will be working.

The following applies:

- The supporting structure for the work platform will be rigidly braced, using adequate cross bracing or diagonal bracing with rigid platforms at each work platform.
- The work platform of scaffolds will be of wood, aluminum, or plywood planking, steel, or expanded metal, for the entire width of the scaffold, except for necessary openings.
- Work platforms will be secured in place.
- **Entry & Exit**
 - All work platforms will have a safe way to be accesses or egress
 - Ladder stands will have a minimum step width of 16 inches.
- **Guard Rails**
 - All scaffold work platforms 10 feet or higher above the ground floor will have a standard (4-inch nominal) toeboard.
 - Guardrail systems must be installed along all open sides and ends of platforms.
 - All work platforms 10 feet or higher above the ground floor will have a guardrail.
 - Guardrails must be strong enough to withstand 200 pounds of force applied in a downward or horizontal direction.
 - Screens over the guardrails are required when anyone may work or pass underneath the scaffolding.
 - Crossbracing is acceptable in place of a midrail when the crossing point of two braces is between 20 inches and 30 inches above the work platform or as a top rail when the crossing point of two braces is between 38 inches and 48 inches
 - above the work platform.
- **Decking:**
 - All planking will be 2-inch (nominal) scaffold grade minimum 1,500 f. (stress grade) construction grade lumber or equivalent.
 - All platforms must be at least 18 inches (~two boards) wide.
 - Extend scaffold decking on single section scaffolds over their end supports not less than six inches and not more than eighteen inches.
 - Space platform planks are no wider than 1 inch and as close together as possible to prevent tools or materials from falling through cracks.
 - Secure each plank at both ends, using heavy gauge wire or fit-for-duty clamps to prevent movement.
 - Guardrails must be surfaced to prevent an employee from punctures or lacerations and to prevent snagging of clothing.





8.3 Rolling Scaffolding:

Rolling//Baker/Mobile scaffolding is used frequently on campus. The following general precautions will apply.


- The maximum work platform height will not exceed four (4) times the minimum or least base dimensions of any mobile scaffold.
 - Outrigger can be installed to increase base dimension,
 - Or provisions will be made to guy or brace the unit against tipping.
- People are not permitted to ride rolling scaffolds during relocation.
- Adjusting screws may not be extended more than 12 inches.
- Before moving the platform, secure all equipment and material.
- Casters or wheels must have a serviceable locking device.
- Preventing overloading by following the manufacturer’s recommendations.
- Never pull scaffolds from the top; always push at the base level.
- Never run over electrical cords.
- Be aware of overhead obstructions when moving scaffolds.

(Especially Electrical Objects)

Scaffolding Outrigger	Rolling or Baker Scaffolding
	

8.4 Suspended Scaffolding:

- Anyone working on a suspended scaffolding or a bosun chair must wear a personal fall arrest system.
- Each lifeline must be attached to a separate anchorage capable of holding a minimum of 5000 lbs and following manufacturing guidelines.

	<p>Bosun Chair</p>
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9.0 Roles and Responsibilities:

9.1 Executives and Administrators:

- Ensure that responsibilities assigned within this program are carried out within their administrative work units.
- Monitor implementation of this program within their work unit.
- Ensure adequate funding is available to support this program.

9.2 Office of Risk Management

- Assist work units in implementing the provisions of this program.
- Develop training materials related to this program.
- Assist in providing general Stairway and Ladder training to employees.
- Maintain records following this document.
- Periodically audit and update the Stairway and Ladder Program as needed.
- Coordinate implementation of the Walking & Working Surface Program
- Ensure required training is provided to employees within the work unit.
- Assist in the investigation of all injuries and incidents involving Stairways and Ladders.

9.3 Directors and Managers:

- Be thoroughly informed of the contents of this program and how it applies to their areas of responsibility and authority.
- Ensure employees comply with all provisions of the program.
- Ensure employees receive general safety training.
- Ensure that the records of this document are maintained for their work unit.
- Make positive changes based on corrective actions as determined from the annual review of the program and periodic inspection assessments.
- Investigate all injuries and incidents involving walking and working surfaces.
- Complete inspections and inventory following this document.

9.4 Employees

- Comply with all provisions of the program.
- Perform and participate in Stairway and Ladder inspections and inventory.
- Attend training sessions as required.
- Promptly report any safety concerns to their immediate supervisor and the Office of Risk Management and SMU facilities.



10.0 Program:

10.1 Periodic Inspections:

Inspections will be conducted to evaluate and correct any deficiencies in the program. Periodic inspections are completed as part of an ongoing quality process. Supervisors are responsible for completing regular checks to ensure adherence to the requirements described in this document.

10.2 Annual Inspections:

- Ladders shall be inventoried and inspected by a competent person for visible defects annually and after any occurrence that could affect their safe use.
- Ladders inspections will be conducted using the checklist found online at
 - <https://veoci.com/v/p/form/v4daasbddymf>
- For three years, the inventory and inspection documents will be kept on record with ORM.

10.3 Consequences:

ORM will record any reports or observations of unsafe operations or conditions. Failure to follow this program, the procedures, render common practices or courtesies, or follow regulation standards may result in progressive disciplinary action, including termination.

10.4 Training:

Training is available initially upon hiring SMU Employees. SMU shall provide a training program for each employee as necessary or requested. The program shall enable each employee to recognize hazards related to walking and working surfaces and procedures to be followed to minimize these hazards.

Each work unit is responsible for maintaining a master list of all authorized employees and delivering it to the EHS Department. If you have not been trained in the safe use of a ladder, scaffold, or any other safety equipment, you may not use that equipment for the work performed for SMU. SMU shall ensure that the necessary employee has been trained by a competent person in the following areas, as applicable:

Retraining shall be provided at a minimum of three years after the last training for each employee so that the employee maintains the understanding and knowledge acquired through compliance with this OSHA and S-002 Walking Working Surfaces Safety Program.

Retraining will be provided to employees whenever there is a change in job assignments, processes, or equipment that creates a new hazard.

SMU ORM will provide general safety training to employees. Supervisors are responsible for training their employees on equipment-specific training.

Work units are responsible for maintaining a record of all training provided to their employees. SMU ORM will maintain records of training provided by EHS personnel.



10.5 Program Evaluation

The ORM will review the effectiveness of the program by:

- Verifying and documenting that all qualified persons have had appropriate training.
- Reviewing of incidents and Injuries.
- Providing an annual review of the program for compliance and opportunities for improvement.

10.6 Document Control

Owner Departments must keep records concerning ladder safety inspections, inventories, and training.

All records must be kept for a minimum of 3 years within the department.

SMU will keep records of employee training. The training records will include the employee's name, training date, and the content of the training. Keep documentation of training for at least three years from the training date.

10.7 Reviewed:

Date of Review	Reviewed By	
01	Director of EHS	07/07/2022
	Annual Review	
	EHS Manager	



11.0 Definition List:

Definitions:

Alternating tread-type stair: means a type of stairway consisting of a series of treads that usually are attached to a center support in an alternating manner such that an employee typically does not have both feet on the same level while using the stairway.

Anchorage: means a secure point of attachment for equipment such as lifelines, lanyards, deceleration devices, and rope descent systems.

Authorized: means an employee who SMU assigns to perform a specific type of duty, or allows in a specific location or area.

Cage: means an enclosure mounted on the side rails of a fixed ladder or fastened to a structure behind the fixed ladder that is designed to surround the climbing space of the ladder. A cage also is called a "cage guard" or "basket guard."

Carrier: means the track of a ladder safety system that consists of a flexible cable or rigid rail attached to the fixed ladder or immediately adjacent to it.

Combination ladder: means a portable ladder that can be used as a stepladder, extension ladder, trestle ladder, or stairway ladder. The components of a combination ladder also may be used separately as a single ladder.

Designated area: means a distinct portion of a walking-working surface delineated by a warning line in which employees may perform work without additional fall protection.

Dockboard: means a portable or fixed device that spans a gap or compensates for a difference in elevation between a loading platform and a transport vehicle. Dockboards include, but are not limited to, bridge plates, dock plates, and dock levelers.

Extension ladder: means a non-self-supporting portable ladder that is adjustable in length.

Failure: means a load refusal, breakage, or separation of component parts. A load refusal is the point at which the ultimate strength of a component or object is exceeded.

Fall hazard: means any condition on a walking-working surface that exposes an employee to a risk of harm from a fall on the same level or to a lower level.

Fall protection: means any equipment, device, or system that prevents an employee from falling from an elevation or mitigates the effect of such a fall.

Fixed ladder: means a ladder with rails or individual rungs that is permanently attached to a structure, building, or equipment. Fixed ladders include individual-rung ladders, but not ship stairs, step bolts, or manhole steps.

Grab bar: means an individual horizontal or vertical handhold installed to provide access above the height of the ladder.

Guardrail system: means a barrier erected along an unprotected or exposed side, edge, or other area of a walking/working surface to prevent employees from falling to a lower level.

Handrail: means a rail used to provide employees with a handhold for support.

Hole: means a gap or open space in a floor, roof, horizontal walking-working surface, or similar surface that is at least 2 inches (5 cm) in its least dimension.

Individual-rung ladder: means a ladder that has rungs individually attached to a building or structure. An individual-rung ladder does not include manhole steps.

Ladder: means a device with rungs, steps, or cleats used to gain access to a different elevation.

Ladder safety system: means a system designed to eliminate or reduce the possibility of falling from a ladder. A ladder safety system usually consists of a carrier, safety sleeve, lanyard, connectors, and body harness. Cages and wells are not ladder safety systems.

Low-slope roof: means a roof that has a slope less than or equal to a ratio of 4 in 12 (vertical to horizontal).



Lower level: means a surface or area to which an employee could fall. Such surfaces or areas include, but are not limited to, ground levels, floors, roofs, ramps, runways, excavations, pits, tanks, materials, water, equipment, and similar surfaces and structures, or portions thereof.

Manhole steps: means steps that are individually attached to, or set into, the wall of a manhole structure.

Maximum intended load: means the total load (weight and force) of all employees, equipment, vehicles, tools, materials, and other loads SMU reasonably anticipates to be applied to a walking-working surface at any one time.

Mobile ladder stand (ladder stand): means a mobile, fixed-height, self-supporting ladder that usually consists of wheels or casters on a rigid base and steps leading to a top step. A mobile ladder stand also may have handrails and is designed for use by one employee at a time.

Mobile ladder stand platform: means a mobile, fixed-height, self-supporting unit having one or more standing platforms that are provided with means of access or egress.

Open riser: means the gap or space between treads of stairways that do not have upright or inclined members (risers).

Opening: means a gap or open space in a wall, partition, vertical walking working surface, or similar surface that is at least 30 inches (76 cm) high and at least 18 inches (46 cm) wide, through which an employee can fall to a lower level.

Personal fall arrest system: means a system used to arrest an employee in a fall from a walking-working surface. It consists of a body harness, anchorage, and connector. The means of connection may include a lanyard, deceleration device, lifeline, or a suitable combination of these.

Personal fall protection system: means a system (including all components) an employer uses to provide protection from falling or to safely arrest an employee's fall if one occurs. Examples of personal fall protection systems include personal fall arrest systems, positioning systems, and travel restraint systems.

Platform: means a walking-working surface that is elevated above the surrounding area.

Portable ladder: means a ladder that can readily be moved or carried, and usually consists of side rails joined at intervals by steps, rungs, or cleats.

Positioning system (work-positioning system): means a system of equipment and connectors that, when used with a body harness or body belt, allows an employee to be supported on an elevated vertical surface, such as a wall or window sill, and work with both hands free. Positioning systems also are called "positioning system devices" and "work-positioning equipment."

Qualified: describes a person who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience has successfully demonstrated the ability to solve or resolve problems relating to the subject matter, the work, or the project.

Ramp: means an inclined walking/working surface used to access another level.

Riser: means the upright (vertical) or inclined member of a stair that is located at the back of a stair tread or platform and connects close to the front edge of the next higher tread, platform, or landing.

Rope descent system: means a suspension system that allows an employee to descend in a controlled manner and, as needed, stop at any point during the descent. A rope descent system usually consists of a roof anchorage, support rope, a descent device, carabiner(s) or shackle(s), and a chair (seatboard). A rope descent system also is called controlled descent equipment or apparatus. Rope descent systems do not include industrial rope access systems.

Rung, step, or cleat: means the crosspiece of a ladder on which an employee steps to climb up and down.

Runway: means an elevated walking/working surface, such as a catwalk, a foot walk along shafting, or an elevated walkway between buildings.

Scaffold: means any temporary elevated or suspended platform and its supporting structure, including anchorage points, used to support employees, equipment, materials, and other items. For purposes of this subpart, a scaffold does not include a crane-suspended or derrick-suspended personnel platform or a rope descent system.



Side-step ladder: means a type of fixed ladder that requires an employee to step sideways from it in order to reach a walking-working surface, such as a landing.

Spiral stairs: means a series of treads attached to a vertical pole in a winding fashion, usually within a cylindrical space.

Stair rail or stair rail system: means a barrier erected along the exposed or open side of stairways to prevent employees from falling to a lower level.

Stairway (stairs): means risers and treads that connect one level with another, and includes any landings and platforms in between those levels. Stairways include standard, spiral, alternating tread-type, and ship stairs.

Standard stairs: means a fixed or permanently installed stairway. Ship, spiral, and alternating tread-type stairs are not considered standard stairs.

Step bolt (pole step): means a bolt or rung attached at intervals along a structural member used for foot placement and as a handhold when climbing or standing.

Stepladder: means a self-supporting, portable ladder that has a fixed height, flat steps, and a hinged back.

Stepstool: means a self-supporting, portable ladder that has flat steps and side rails. For purposes of the final rule, stepstool includes only those ladders that have a fixed height, do not have a pail shelf, and do not exceed 32 inches (81 cm) in overall height to the top cap, although side rails may extend above the top cap. A stepstool is designed so an employee can climb and stand on all of the steps and the top cap.

Through ladder: means a type of fixed ladder that allows the employee to step through the side rails at the top of the ladder to reach a walking-working surface, such as a landing.

Tieback: means an attachment between an anchorage (e.g., structural member) and a supporting device (e.g., parapet clamp or cornice hook).

Toe-board: means a low protective barrier that is designed to prevent materials, tools, and equipment from falling to a lower level, and protect employees from falling.

Travel restraint system: means a combination of an anchorage, anchorage connector, lanyard (or other means of connection), and body support that an employer uses to eliminate the possibility of an employee going over the edge of a walking-working surface.

Tread: means a horizontal member of a stair or stairway, but does not include landings or platforms

Unprotected sides and edges: mean any side or edge of a walking-working surface (except at entrances and other points of access) where there is no wall, guardrail system, or stair rail system to protect an employee from falling to a lower level.

Walking-working surface: means any horizontal or vertical surface on or through which an employee walks, works, or gains access to a work area or workplace location.

Warning line: means a barrier erected to warn employees that they are approaching an unprotected side or edge, and which designates an area in which work may take place without the use of other means of fall protection.

Well: means a permanent, complete enclosure around a fixed ladder.