

# FALL PROTECTION

Facility maintenance operations may require the use of stairways, mezzanines or elevated platforms and loading docks, as well as include roof inspection and maintenance or other operations above ground level. All of these present potential fall hazards to employees.



FALL PROTECTION



## FALL PROTECTION OPTIONS

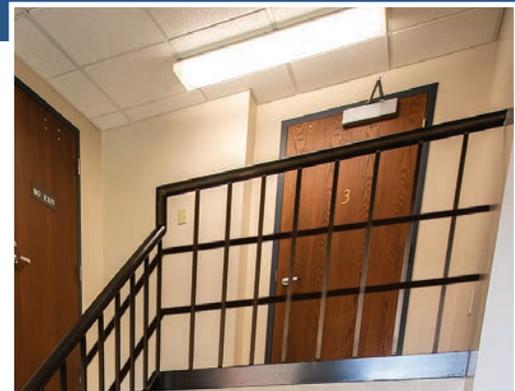
To protect employees from falls of 4 feet or more along an unprotected edge, OSHA previously required the installation of a standard guardrail. With the adoption of the OSHA walking-working

surfaces standards, employers may install a standard guardrail, safety net system or personal fall protection system. All devices should be used according to manufacturer specifications.

### GUARDRAILS

If this option is used, guardrails should be at a height no lower than 39 inches to 45 inches from the floor and include a midrail halfway between the top edge of the guardrail and the walking/working surface. If there is a risk of falling objects, a toeboard or screen should be installed.

Guardrails must be capable of supporting at least 200 pounds of force downward or outward, though more may be necessary when considering the combined weight of employees and equipment.



*Guardrails must be capable of supporting at least 200 pounds of force.*

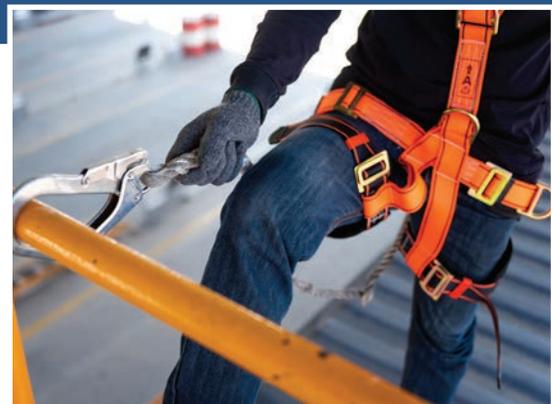
### PERSONAL FALL PROTECTION SYSTEMS

These may include personal fall arrest systems, travel restraints or positioning systems. Personal fall arrest systems feature a harness; connector; and lanyard, lifeline, deceleration device or combination of the three.

Any damaged or defective equipment must be removed from service.

Body belts are prohibited from use as a personal fall protection system. Personal fall protection systems are required to be connected to a secure anchor point.

- Anchorages for personal fall protection must be independent of platforms to support employees or work surfaces and follow manufacturer guidelines.
- Anchors must be capable of supporting at least 5,000 pounds per employee attached.
- Anchor locations must prevent employees from



*When using personal fall protection systems, the system must be inspected before every shift.*

- free-falling distances of 6 feet or more and may need to be placed overhead.
- Anchors for mobile work platforms or powered industrial trucks must be attached to an overhead member of the platform at a point located above and near the center of the platform.



## SAFETY NET SYSTEMS

If this option is used:

- Employers should follow the manufacturer's recommendations and ensure sufficient clearance beneath the system to prevent contact with objects or the ground below it.
- Nets should be visually inspected at least once a week for wear, damage and deterioration. Defective nets should not be used.
- Any materials, scraps, equipment or other items in the net should be removed as soon as safely possible.
- All inspections and corrective actions taken as described above should be documented and retained.
- Employers are required to provide for prompt rescue should an employee fall.

## ROPE DESCENT SYSTEMS

Rope descent systems are typically used during window washing activities and involve individuals tied off to anchor points and suspended with a harness and ropes. Often, window washing services are contracted.

Facility managers are required to inform the employer or contractor in writing that the anchors have been identified, tested, certified and maintained so it is capable of supporting 5,000 pounds of force in any direction for each employee attached. These anchor points must be inspected by a qualified person annually and certified by a qualified person at least every 10 years.

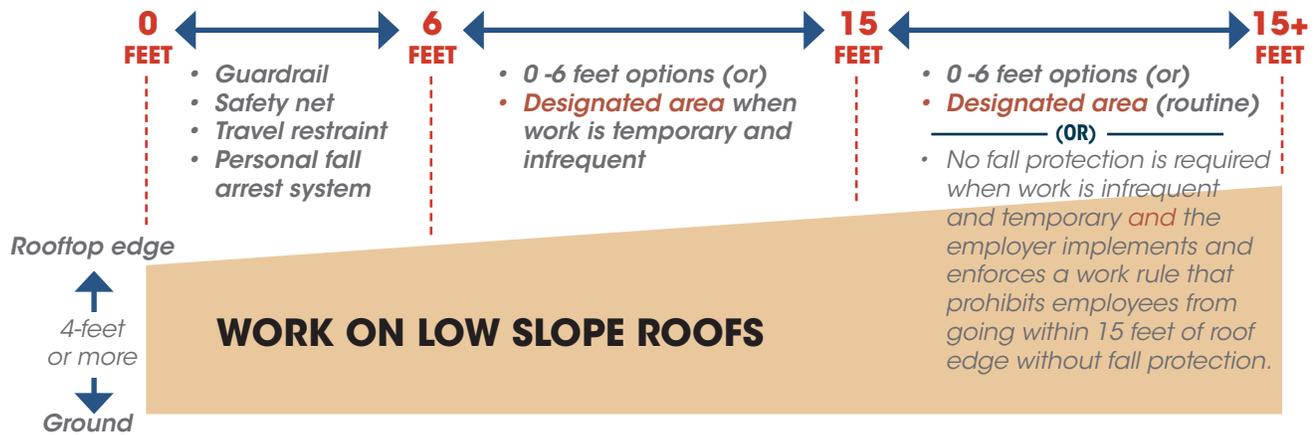
When choosing a contractor to clean windows or perform other services, it is recommended to



*Window washers use rope descent safety system.*

obtain a written contract. For more information about contracts, see Chapter 27, Independent Contractors.

## DESIGNATED AREAS (for work performed on roofs)



For work performed on a flat or low-slope rooftop, fall protection may not be required, depending on the frequency of the work and the distance it is carried out from the fall edge. The work could be done in a “designated area.” A designated area is a well-defined part of the roof surface delineated by a warning line in which employees may perform work without additional fall protection.

Any work that is done less than 6 feet from the roof edge requires the use of conventional means of protection as noted above.

For routine work performed between 6 and 15 feet, fall protection as noted above must be in place. However, for temporary or infrequent work performed between 6 and 15 feet from the fall edge, a designated area may be used.

Identifying infrequent or temporary work requires a bit of a judgment call. As a general rule, temporary work should be fast, less than one to two hours or less time than is needed to install or set up conventional fall protection. Infrequent tasks are those done annually, quarterly, monthly or as needed, such as during equipment breakdown. Examples of temporary and infrequent tasks include changing filters in rooftop HVAC systems, annual maintenance or servicing of equipment, or caulking and resealing flashing around a skylight.

If a designated area is used for temporary or infrequent work, the warning line must be set up at least 6 feet from the roof’s edge to serve as a warning

that a worker is nearing an unprotected edge.

For routine work performed more than 15 feet from a roof edge, no fall protection other than a designated area is required. The warning line must be set up at least 15 feet from the edge. For temporary or infrequent work, no designated area is necessary as long as a rule is in place prohibiting workers from going within 15 feet of the roof edge without fall protection.

When using designated areas, employees must be trained to understand the limitations of the protection and not to go beyond the delineation. The area must be clearly marked by a rope, wire, tape or chain that is both highly visible and positioned between 34 and 39 inches above the walking surface. The warning line must have a minimum breaking strength of 200 pounds.

Other rooftop considerations include skylights and falls down into stairways or other holes. Hatched roof openings should be closed or removable guardrails attached around the hatch on all sides. Any hatches must be secured to prevent accidental displacement and capable of supporting twice the intended maximum load. They should open with sufficient clearance to provide easy access to or from the ladder or stairway.

Skylights should be protected by guardrail systems or a personal fall arrest system. They can also be covered by approved covers, typically a strong metal screen able to withstand 200 pounds applied perpendicularly at any one area of the screen.

## TRAINING

Any employee using a personal fall protection system or others at risk of falls must be trained about fall hazards and any fall protection equipment or other related equipment before use. A qualified person must conduct the training, and instruction must include identifying and minimizing fall hazards.

Training must include the following if used:

- Procedures for installing, inspecting, operating, maintaining and disassembling the personal fall protection system(s) offered at the facility
- Proper hook up, anchoring, tie-offs, inspections and storage of fall protection systems
- Secure placement of dockboards
- Proper setup and use of rope descent systems
- Proper setup and use of designated areas

Retraining should occur after any changes in equipment or the workplace renders previous training obsolete or when deemed necessary by the employer. All training should be documented.

## FALLING OBJECTS

In situations where objects could fall on employees working below, employers are required to provide head protection and ensure that it is being used. Additionally employers are required to install devices to prevent falling objects from injuring those below. Employers may implement at least one of the following options:

- Toeboards, screens or guardrails to prevent objects from falling
- Canopy structures and placing loose items far from edges, holes or openings
- Barricading areas where objects could fall and prohibiting employees from entering the barricades

**Further safety rules and regulations regarding fall protection can be primarily found in OSHA Standard 29 CFR1910 Subpart D—Walking-working Surfaces. For specific equipment safety requirements, review OSHA Standard 29 CFR1910.140—Personal Protective Equipment, Personal Fall**



*Workers must wear head protection if objects could fall from above.*

### Fixed Ladders

Fixed ladders built after November 2018 that extend more than 24 feet above a lower level require the addition of a personal fall protection system or ladder safety system. These systems gradually phase out wells or cages on ladders as the primary form of fall protection.

Existing fixed ladders need to be updated with a personal fall protection system or ladder safety system when they undergo repairs or renovations between now and 2036.



## FALL PROTECTION CHECK LIST

ITEM	YES	NO	ACTION ITEM
Are employees protected from falls of 4 feet or more?			
Are personal fall protection systems inspected prior to use for each shift?			
Are inspections of and resulting corrective actions for safety nets, anchors or tie-offs and personal fall protection equipment documented?			
If used, are safety nets inspected initially and at least weekly thereafter?			
When using designated areas:			
• Is the work infrequent or temporary?			
• Is the area clearly identified?			
• Are employees trained to stay within the area?			
Are floor or roof openings covered, or are employees protected from fall hazards around these areas?			
Are employees trained to identify and address fall hazards?			
Are employees who use personal fall protection equipment trained about the proper use, maintenance and storage of their equipment?			
Are employees trained about the proper use of dockboards, rope descent systems and designated areas?			
Is all training documented and retained?			
Have measures been taken to prevent injuries from falling objects?			
Are provisions in place to provide prompt rescue for employees in the event of a fall?			