

<b>WASHINGTON ADVENTIST UNIVERSITY</b> <b>DEPARTMENT OF PUBLIC SAFETY</b> <b>&amp;</b> <b>DEPARTMENT OF FACILITY SERVICES</b>  <b>OCCUPATIONAL HEALTH &amp; SAFETY</b>	<b>APPLICABILITY:</b> <b>ALL UNIVERSITY AREAS</b>		
	<b>ISSUE DATE</b> <b>3-24-2016</b>	<b>PAGE NUMBER</b> <b>1 to 6</b>	<b>REVIEW</b> <b>3-9-2018</b>
	<b>TITLE: Appendix: Walking Working Surface</b> <b>Fall Protection Program</b>		

## PURPOSE

The purpose of this program is to establish the minimum requirements and responsibilities for employees when on walking-working surfaces, including elevated work platforms, and rooftops. This program is designed to protect all employees engaged in work activities that expose them to falls when working four feet or more above a lower level as prescribed in the Occupational Safety and Health Administration's (OSHA's) Walking-Working Surfaces Standard - 29 CFR 1910.21 and the 2003 Walking and Working Surfaces; Personal Protective Equipment (Fall Protection Systems).

## SCOPE

This program applies to all Washington Adventist University (WAU) students and employees - including faculty - who perform any work activities that expose them to slips, trips, or falls through unguarded floors and wall openings, floor holes, and falls from elevated work platforms and roofs.

## REFERENCES

- OSHA Walking-Working Surfaces – 29 CFR 1910.21-30 and 501, Subpart D
- OSHA 2003 Walking and Working Surfaces; Personal Protective Equipment (Fall Protection Systems)

## RESPONSIBILITIES

WAU-Facility Services (DFS) Executive Director and Public Safety Department (DPS) Safety Office  
As the administrative departments for the Walking Working Surfaces – Fall Protection Program, DFS and DPS are responsible for:

- Development, implementation, and administration of the Walking Working Surfaces – Fall Protection Program.
- Conducting workplace risk assessments to determine the need for fall protection and assess the condition of walking and working surfaces.
- Development and implementation of fall protection training.
- Reviewing, updating, and evaluating the overall effectiveness of the Walking Working Surfaces – Fall Protection Program.
- Providing technical support and consultation to departments of affected employees to interpret requirements and establish safe practices.

### Directors, Supervisors, and Managers

Directors, supervisors, and managers have primary responsibility for the management and enforcement of the Walking Working Surfaces – Fall Protection Program in their areas. They are responsible for:

- Ensuring employees are able to recognize potential fall hazards based on this policy.
- Notifying WAU-DFS or DPS of each fall hazard that their employees may face.
- Notifying WAU-DFS or DPS of the need for fall protection training, including when a new employee is assigned, and when there is reason to suspect a previously trained employee does not have the understanding required to safely work from elevated surfaces.
- Ensuring employees attend all required training.
- Periodically evaluating the effectiveness of the program as it applies to the work that their affected employees perform and providing with their conclusions, compliance challenges, and recommendations.
- Contacting DPS for technical support when questions arise regarding compliance and safe procedures.
- Ensuring that proper safety equipment is supplied to their affected employees where needed, such as fall arrest systems, guardrail systems, toe boards, stanchions and supports for designated areas, etc.
- Ensuring that all workplaces are safe to conduct the work that their affected employees are expected to perform.
- Notifying DPS if contractors are observed working in an unsafe manner.

### Employees

All employees are responsible for complying with the rules set forth by this program. They are responsible for:

- Complying with the rules set forth by this program.
- Notifying their supervisor when questions arise surrounding safe procedures, the need for fall prevention equipment, and difficulties complying with these requirements.
- Reporting all accidents and near miss incidents.
- Inspecting all personal fall arrest systems for signs of damage and deterioration prior to each use.
- Attending all required Walking Working Surfaces – Fall Protection Training annually.

### **CONTRACTORS**

Contractors working on campus are required to comply with 29 CFR 1926.501, Duty to have fall protection and all other applicable OSHA workplace safety regulations. Contractor's safety programs shall be available for review upon request by representatives of DFS and DPS.

### **WALKING WORKING SURFACES**

#### General Requirements

- All walking and working surfaces shall be kept clean, dry (where possible) and orderly.
- Every floor, workplace, and passageway shall be kept free from protruding nails, splinters, holes, or loose boards.

- Walking and working surfaces must have the strength and integrity to support employees.
- Covers and/or guardrails shall be provided to protect personnel from the hazards of open pits, tanks, vats, ditches, etc.
- The floor or roof of a building shall not be overloaded with materials and/or equipment over the approved load limits. Elevated storage and other platforms shall be marked with the load bearing weight.
- All aisles and passageways shall be clearly marked, have adequate space for passage of both moving equipment and employees, have safe clearances at all turns, doors, and passageways, and shall not be obstructed by physical barriers or stored materials.

#### Floor Openings, Wall Openings, and Holes

- Every floor opening or platform shall be guarded by a standard railing.
- Toe boards must be installed around floor and wall openings, and where the potential exists for tools and other materials to fall on personnel working below.
- All floor and wall openings, including manholes, trapdoors, pits, ladder way floor openings, and chute openings, must be safely covered or blocked from access.
- When an opening is not covered or blocked from access, a person must be assigned for constant attendance to the opening until the cover is replaced.
- Covers must be sound, solid, not easily opened, and cannot project more than one (1) inch above the floor or surface level. All hinges, handles, bolts, or other parts must set flush with the floor or cover surface.
- Barricades that are designed to prevent someone from falling into the opening must be visually noticeable and cannot have additional openings that create additional fall hazards.
- Floor surfaces surrounding the opening shall be free of clutter and slippery material.

#### Fixed Industrial Stairs

- Standard stair railings and handrails shall be provided on stairs with four (4) or more risers.
- Standard railings, including top rails, mid-rails, and toe boards shall be provided on the open sides of all exposed stairways and stair platforms.
- Handrails shall be provided on at least one side of closed stairways, preferably on the right side descending.
- Fixed stairways must be designed and constructed to carry a load of five (5) times the normal load anticipated at any one time and be able to safely carry a moving concentrated load of 1000 pounds.
- Fixed stairways shall have a minimum width of twenty-two (22) inches.
- Fixed stairs shall be installed at angles to the horizontal of between thirty (30) and fifty (50) degrees.
- Stairway platforms shall not be less than the width of a stairway and must be a minimum of thirty (30) inches in length measured in the direction of travel.
- Adequate headroom of seven (7) ft. must be maintained above stair tread.
- Stairs shall be free of clutter and treads must be reasonably slip resistant.

### **FALL PROTECTION SYSTEMS**

Employees performing work from walking and working surfaces that are four (4) ft. or higher above a lower level must be protected from falls by passive fall protection systems (i.e., guardrails or parapet walls) when feasible. When the use of a guardrail system is infeasible, alternative fall protection (i.e., designated areas or personal fall protection equipment) will be used. This includes maintenance work on exhaust equipment, Heating Ventilation and Air Conditioning (HVAC) systems, plumbing, etc., as well as inspections and assessments of work conducted on rooftops.

### Guardrail Systems

- The top edge height of top rails must be 39 - 42 inches above the walking working level.
- Mid-rails must be installed at a height midway between the top edge of the guardrail system and the walking working level.
- Guardrail systems must be capable of withstanding, without failure, a force of at least 200 pounds.
- Guardrail systems must be surfaced to prevent injury to an employee from punctures or lacerations, and to prevent snagging of clothing.
- Guardrail systems used on ramps and runways must be erected along each unprotected side or edge.
- Toe boards must be four (4) inches in height from its top edge to the level of the walking working surface.
- Toe boards must be securely fastened in place and with not more than ¼ - inch clearance above the walking working surface level.

### Designated Areas

- The work must be of a temporary nature, such as maintenance of rooftop equipment.
- Designated areas must only be established on surfaces that have a slope from the horizontal of 10 degrees or less.
- Designated areas must consist of an area surrounded by a rope, wire, or chain and supporting stanchions.
- After being erected with the line attached, stanchions must be capable of resisting - without tipping over - a force of at least 16 pounds applied horizontally against the stanchion.
- The line must have a minimum breaking or tensile strength of 500 pounds.
- The line must be attached at each stanchion in such a way that pulling on one section of the line between stanchions will not result in slack being taken up in adjacent sections before the stanchion tips over.
- The line must be installed in such a manner that its lowest point is no less than 34 inches no more than 39 inches from the work surface.
- The line forming the designated area must be clearly visible from any unobstructed location within the designated area up to 25 feet away.
- The stanchions must be erected as close to the work area as is permitted by the task.
- The perimeter of the designated area must be erected no less than six (6) feet from the unprotected side or edge.
- Access to the designated area shall be by a clear path formed by two lines attached to stanchions.

## Personal Fall Arrest Equipment

Personal fall arrest systems are designed to stop a fall once it has begun. The system includes an anchorage, full body harness, lanyard, locking snap hooks, lifeline and connector, and may include a descent control device. Body belts are not acceptable as part of a personal fall arrest system. However, the use of body belts in positioning device systems is acceptable. The manufacturer's procedures for the equipment must be followed. In addition, personal fall arrest equipment must comply with the following:

- Harnesses must be attached in the center of the back near shoulder level, or above the wearer's head.
- Personal fall arrest systems must limit the maximum arresting force on an employee to 1,800 pounds.
- Systems must bring an employee to a complete stop and limit maximum deceleration distance an employee travels to 3.5 feet.
- Systems must have sufficient strength to withstand twice the potential impact energy of an employee free falling a distance of six feet, or the free fall distance permitted by the system, whichever is less.
- Systems must be rigged in such a way that employees can neither freefall more than six (6) feet, nor contact any lower level.

## **EQUIPMENT ANCHORAGE, TIE-OFF, AND USE**

Anchoring the fall arrest system is critical. The selection of the anchoring point should be made carefully. When the employee is uncertain about the anchoring point, he/she is expected to consult with a supervisor or DFS and DPS. Equipment anchorage, tie-off, and use must meet the following conditions:

- Anchoring points must be permanent fixed objects.
- Anchors, to which personal fall arrest equipment is attached, must be capable of supporting at least 5,000 pounds for each attached employee.
- When tying off, the employee must tie off at such a location where there are no obstacles in the potential path of a fall.
- The employee must follow the anchoring tie off and equipment tie off procedures that are specified by the fall arrest system manufacturer PRIOR to getting into a position where he/she could fall.

## **EQUIPMENT CARE AND INSPECTION**

Keeping equipment in good working order is essential. Follow the manufacturer's instructions and training protocols for equipment maintenance, cleaning and storage. Personal fall arrest systems shall be inspected prior to each use for mildew, wear, damage and other deterioration. Any defective components shall be removed from service.

## **RESCUE AFTER A FALL**

Prompt rescue must be provided in the event of a fall or employees must be able to rescue themselves. Therefore, when personal fall arrest equipment must be used, employees will work in teams of two or more. If it is safe to do so and neither the rescuer nor the person needing rescue will be placed in danger, then assisted rescue using a ladder or man-lift should be done.

If it is not safe to attempt rescue, or the person has been injured from the fall, local emergency services should be contacted by dialing 911.

### **INFORMATION AND TRAINING**

- DFS is responsible for ensuring that Walking Working Surfaces – Fall Protection training is provided to Washington Adventist University employees exposed to falls when working four (4) feet or more above a lower level. This training shall be given upon initial assignment and annually thereafter, or whenever a supervisor has reason to believe any affected employee who has already been trained does not have the understanding and skill required to safely work from elevated surfaces, whichever is sooner.
- Training will be overseen by DPS. Training will be provided for all newly assigned staff and when there is reason to suspect a previously trained employee does not have the understanding required to safely work from elevated surfaces.
- Training will include the following:
  - Instruction on using personal fall arrest equipment by the vendor supplying the equipment.
  - Instruction will include: methods of use; limitations of the equipment; inspection and storage requirements; and proper anchoring and tie-off techniques, including determination of elongation and deceleration distance.
  - The requirements of 29 CFR 1910.21 Walking-Working Surfaces.
  - The requirements of the 2003 Walking Working Surfaces; Personal Protective Equipment (Fall Protection Systems) Proposed Rule.
  - The requirements of fall protection systems used at Washington Adventist University.
- DFS, DPS and Department of Human Resources (DHR) will maintain documentation of attendance which will include the employee's name, department, and date of training.

### **PROGRAM EVALUATION**

The written Walking Working Surfaces – Fall Protection Program shall be reevaluated annually and revised as necessary.

### **RECORD KEEPING**

Training records are retained by DFS and DPS and are available through DHR.