

City of Portland

Fall Protection/Walking-Working Surfaces Plan

Purpose:

The City of Portland is dedicated to protecting its employees from on the job injuries, and will take all practical measures possible to prevent employees from being injured by falls from heights. The purpose of this Fall Protection/Walking-Working Surfaces Plan is to provide safe standards to enable employees to recognize the fall hazards at all City locations and worksites, and to establish procedures to prevent falls to lower levels, holes, and openings in walking or working surfaces. No exposure to an elevated fall is permitted without protection/continuous worker protection.

All personnel will be trained to recognize potential fall hazards and techniques to minimize the exposures. Each employee will strictly adhere to the guidelines set forth, except when doing so would expose the employee to a greater hazard. If, in the employee's opinion, this is the case, the employee is to notify their supervisor of the concern, and the concern will be addressed prior to proceeding.

Policy:

This policy will follow the OSHA Standard 29 C.F.R. 1910 Subpart D for potential fall from heights of at least 4 feet. First consideration will be given to the elimination of fall hazards. If a fall hazard cannot be eliminated, effective fall protection will be planned, implemented, and monitored to control the risks of injury due to falling.

Any task that requires an employee to be on a walking/working surface that is 4 feet or above a lower level is to be protected from falling to the lower level via guardrail, safety net, lanyard, travel restraint system, anchorages or personal fall arrest system.

Any task that brings an employee close to a hole in a walking working surface or close to an excavation that may allow a fall to a lower level will utilize a protection device such as a cover, guardrail, or personal fall arrest system. (See Body Harness instructions Attachment A)

Responsibility:

It is the responsibility of the City's management to implement this policy. Management is responsible for continual observational safety checks of their work operations and to enforce the safety policy and procedures.

The supervisor at each worksite or location will be responsible for identifying potential fall hazards. The supervisor will evaluate each situation or work procedure where employees may be exposed to a fall of 4 feet or more. The supervisor will also be responsible for developing a plan to eliminate the exposures if possible, or to select the appropriate fall protection equipment needed, communicating to and obtain feedback from the crew performing the work on identification of hazards.

It is the responsibility of the employee to understand and adhere to the work plan and to follow the instructions of their immediate supervisor. It is also the responsibility of the employee to bring to management's attention any unsafe or hazardous conditions or acts that may cause injury to either themselves or any other employee.

Walking Working Surfaces

All places of employment, passageways, storerooms, service areas and WWS must be kept in a clean, orderly and sanitary condition. Floors must be maintained in a clean and, to the extent feasible, in a dry condition.

WWS must be maintained free of hazards such as sharp or protruding objects, loose boards, corrosion, leaks, spills, snow and ice.

Employees must be provided with a safe means of access and egress to and from WWS. Employees on a WWS 4 feet or more above a lower level must be protected from falling via guardrail systems, safety net systems or personal fall arrest systems. This includes loading docks.

Employees must be protected from falling through any hole that is 4 feet or more above a lower level. Each employee must be protected from tripping into or stepping into or through any hole that is less than 4 feet above a lower level by covers or guardrails.

Dangerous Equipment

Employees less than 4 feet above dangerous equipment must be protected from falling by a guardrail system or travel restraint system, unless the equipment is covered or guarded to eliminate the hazard. Each employee 4 feet or more above dangerous equipment must be protected from falling by: guardrail systems, safety net systems, travel restraint systems or personal fall arrest systems.

Portable Ladders

Fall protection is not required when using a portable ladder, however, to be considered are: the height of the ladder, type of work being performed, work environment and limitations of the fall arrest system. Any ladder (fixed or portable) with structural or other defects must be immediately tagged "Dangerous: Do Not Use" or with similar language. Ladder must be removed from service until repaired or replaced. (See Attachment B)

Fixed Ladders

Employees must be protected from falling into a ladderway floor hole or platform hole by a guardrail system and toe boards erected to the hole, where a self-closing gate or an offset must be used. Personal fall arrest systems or safety ladder systems shall be used on new fixed ladders over 24 feet and/or on replacement ladders/ladder sections. Existing fixed ladders over 24 feet shall be equipped with a cage, well, personal fall arrest system or ladder safety system. Cages and wells that are used as fall protection on ladders over 24 feet must be replaced with personal fall arrest systems or ladder safety arrest systems by November 18, 2036. Fixed ladders must be capable of supporting their maximum intended load.

Step bolts

Each step bolt installed on or after January 17, 2017 in a possible corrosive environment shall be constructed of, or coated with, material that protects against corrosion. Step bolts shall be designed, constructed and maintained to prevent the employee's foot from slipping off the end of the step bolt. They shall be uniformly spaced at a vertical distance of not less than 12 inches and not more than 18 inches apart, measured center to center. Each step bolt has a minimum clear width of 4.5 inches. Minimum perpendicular distance between the centerline of each step bolt to the nearest permanent object in the back of the step bolt is 7 inches. When

and obstruction cannot be avoided, the distance must be at least 4.5 inches. Step bolts installed prior to January 17, 2017 shall be capable of supporting its maximum intended load. After January 17, 2017, they must be capable of supporting at least 4 times its maximum intended load. Each step bolt shall be inspected at the start of the work shift and maintained in accordance with the OSHA standard. Bent or damaged step bolts shall be removed and replaced with bolts that meet the standard.

Manhole Steps

Steps must be capable of supporting the maximum intended load. On or after January 17, 2017 manhole steps must: have corrugated, knurled, dimpled surfaces that minimize the possibility of slipping. Be coated or constructed of material that protects against corrosion, have a minimum clear step width of 10 inches, are uniformly spaced at a vertical distance not more than 16 inches apart, measured center to center between steps. Steps shall have a minimum perpendicular distance between the centerline of the manhole step to the nearest permanent object in the back of the step of at least 4.5 inches. Steps shall be inspected at the start of the work shift and maintained in accordance with the standard.

Roofing

Fall protection shall be provided to employees engaged in roofing activities. Fall protection on low-slope roofs must be provided where the roofs have unprotected sides and edges, and where workers are exposed to a fall of 4 feet or more to a lower level. If utilizing a travel restraint system for fall protection, it must be short enough to prevent the user from going over the edge of the roof.

If engaging in temporary or infrequent work on a low slope roof at least 6-15 feet from the edge, a designated roof area may be used and no fall protection is required. Temporary or brief tasks include those that a worker is able to perform in less time than it takes to set up or install conventional fall protection, or tasks that generally take less than 1-2 hours to complete. Examples of temporary or short duration tasks include changing a filter in a rooftop HVAC system, caulking or resealing the flashing around a skylight, clearing a clogged drainage system or sweeping a chimney.

Stairways

Each flight of stairs having at least 3 treads and at least 4 risers must be equipped with stair rail systems and handrails per Table D-2 (Attachment C) Finger clearance between handrails and any other object shall be a minimum of 2.5 inches. Vertical clearance above any stair tread to any overhead obstruction is at least 6 feet, 8 inches, measured from the leading edge of the tread. Stairs must: have uniform riser heights and tread depths between landings, landings and platforms shall be at least the width of the stair and at least 30 inches in depth, as measured in the direction of travel. When a door or gate opens directly on a stairway, a platform shall be provided and the door or gate swing shall not reduce the platform's effective usable depth to: less than 20 inches (prior to January 17, 2017) and less than 22 inches for platforms installed after January 17, 2017. Each stair shall support at least 5 times the normal anticipated live load but never less than a concentrated load of 1,000 pounds at any point.

In addition, standard stairs must: be installed at angles between 30-50 degrees from the horizontal, have a maximum riser height of 9.5 inches, have a minimum tread depth of 9.5 inches and have a minimum width of 22 inches between vertical barriers. Stairs must be kept in good condition and be free of debris that may cause tripping hazards. Exception is given to standard stairs installed prior to January 17, 2017.

Guardrail systems

The use of guardrail systems is considered a passive method of fall protection. Guardrails are needed at the edge of work areas 4 feet or more in height to protect employees from falling. This includes the edge of excavations greater than six feet in depth. Guardrail systems need to meet the following criteria:

- Top rail is 42 inches, +/- 3 inches above the walking/working level
- Midrail is located midway between the top rail and the walking/working level
- It is important to remember that the working level is that level where the work is being done. Someone working on a stepladder next to an edge may raise his/her working surface well above the walking surface.
- Both top and mid rails should be constructed of materials at least one-quarter inch in thickness or diameter. If wire rope is used for top rails, it needs to be flagged with a high-visibility material at least every 6 feet and can have no more than 3" of deflection
- The top rail needs to withstand a force of 200 pounds when applied in any downward or outward direction.
- The mid rail needs to withstand a force of 150 pounds applied in any downward or outward direction
- Toe boards are required for all guardrails on elevated walking or working platforms where employees working below are exposed to falling objects. Toeboards must be four inches in height and must be securely fastened.
- The system should be smooth to prevent punctures, lacerations or snagging of clothing
- The ends of the top rail shouldn't overhang the terminal posts, except when such overhang does not present a projection hazard
- When a hoisting area is needed, a chain, gate or removable guardrail section must be placed across the access opening when hoisting operations are not taking place.

OSHA has aligned scaffolding fall protection requirements for general industry with those for construction. Guardrails are no longer mandated as a primary fall protection method. Employers may choose from accepted fall protection systems they believe will work best in particular situations.

Work from Aerial Lifts and Self Powered Work Platforms

Training in the proper operation and inspection of the equipment must be received prior to operating or working from an aerial lift or self-powered work platform, regardless of the type.

Body harnesses must be worn with a shock-absorbing lanyard (preferably not to exceed 3 feet in length) and must be worn when working from an elevated work platform. The point of attachment must be the anchor point installed by the equipment manufacturer. Personnel cannot attach lanyards to adjacent poles, structures or equipment while they are working from the aerial lift.

Personnel cannot move an aerial lift while the boom is in an elevated working position and the operator is inside of the lift platform.

Inspections

Inspections of all Walking Working Surfaces (WWS) must be done:

Regularly – On a schedule, formal or informal, adequate enough to identify slip, trip, and fall hazards in the workplace. Conducted according to the frequency established by The City of Portland.

As necessary – When workplace conditions, circumstances, or events occur that warrant an additional check in the workplace to ensure that WWS are safe for employee use.

If the result of any inspection identifies a hazardous condition, it must be promptly corrected or repaired. If it cannot be repaired in a timely fashion, it must be guarded or hazards removed.

Inspections can be performed by managers, supervisors, safety officers, or maintenance/facilities employees.

Training

Supervisors are responsible for ensuring that each employee under their supervision who may be exposed to fall hazards is trained to recognize potential fall hazards and the procedures to follow to minimize those hazards. A competent person will provide the training.

The competent person must train employees in the following areas:

- fall hazards in the work area and how to recognize them
- correct procedures for erecting, maintaining, disassembling and inspecting the fall protection systems used
- selection, proper use and care of equipment comprising a personal fall arrest system
- role of employees in fall protection plans
- what rescue procedures to follow in case of a fall
- overview of the OSHA fall protection standards

A training record shall be maintained for each employee. The record will contain the name of the employee trained, date of training and the signature of the person who conducted the training. Retraining shall be required if there is a change in the fall protection system being used or if an employee's actions demonstrate that the employee has not retained the understanding or skills important to fall protection.

Policy Violations:

Any employee who violates this policy may be subject to discipline under the City's AR-25 Disciplinary Procedures Policy, up to and including termination of employment. The prohibitions in this policy are intended to complement any conduct or performance restrictions provided in additional City and departmental policies and procedures.

Questions concerning this policy should be addressed to the supervisor.

Jon P. Jennings
City Manager

Date

Origination Date: 2018

Revised Dates: 2.20.20

Attachment A

Putting on a Full Body Harness

1. After inspecting the harness, grab the dorsal (back) D-ring and give the harness a shake while lifting harness up. This ensures harness strapping is not tangled.
2. Unfasten all buckles (mating and/or tongue buckle). Slip one arm through harness making sure dorsal D-ring is on your back. Slip your free arm through other side of harness and position straps on shoulders. Chest strap will be across your chest if positioned properly.
3. Reach between legs and grab one leg strap. Bring strap up between legs and connect mating or tongue buckle. Repeat for other leg strap.
4. Connect chest strap by attaching mating buckle closures. Ideal position for your chest strap is about six (6) inches below your shoulders. Adjust waist belt (if included).
5. Adjust leg and chest straps to size. If you can slip your three lead fingers between yourself and webbing, proper sizing has been achieved.

Attachment B

Portable Ladders Checklist

1. Are all ladders in good condition, joints between steps and side rails tight? All hardware and fittings securely attached, and moveable parts operating freely without binding and undue play?
2. Are there non-slip safety feet on all ladders except step ladders?
3. Are ladder rungs free of grease and oil?
4. Are employees prohibited from placing a ladder in front of doors opening towards the ladder except when the door is blocked open, guarded or locked?
5. Are employees prohibited from placing ladders on boxes, barrels, or other unstable bases?
6. Are employees instructed to face the ladder when ascending or descending?
7. Are employees prohibited from using ladders that are broken, missing steps, rungs, cleats, broken side rails, or other faulty parts?
8. Are employees instructed not to use the top step of ordinary step ladders as a step?
9. When portable rung ladders are used to gain access to elevated platforms, roofs, and the like, does the ladder always extend at least three feet above the elevated surface?
10. Are users of portable rung or cleat type ladders required to place the base so that slipping will not occur or to fasten or otherwise hold the ladder in place?
11. Do portable metal ladders have legible signs reading "CAUTION – DO NOT USE AROUND ELECTRICAL EQUIPMENT?" or other equivalent wording?
12. Are the rungs of ladders uniformly spaced at 12 inches, center to center?

Attachment C

Table D-2 -- Stairway Handrail Requirements

Stair width	Enclosed	One open side	Two open sides	With earth built up on both sides
<i>Less than 44 inches (1.1 m).</i>	<i>At least one handrail</i>	<i>One stair rail system with handrail on open side.</i>	<i>One stair rail system with handrail on each open side.</i>	
<i>44 inches (1.1 m) to 88 inches (2.2 m).</i>	<i>One handrail on each enclosed side</i>	<i>One stair rail system with handrail on open side and one handrail on enclosed side.</i>	<i>One stair rail system with handrail on each open side.</i>	
<i>Greater than 88 inches (2.2 m).</i>	<i>One handrail on each enclosed side and one intermediate handrail located in the middle of the stair</i>	<i>One stair rail system with handrail on open side, one handrail on enclosed side, and one intermediate handrail located in the middle of the stair.</i>	<i>One stair rail system with handrail on each open side and one intermediate handrail located in the middle of the stair.</i>	
<i>Exterior stairs less than 44 inches (1.1 m).</i>				<i>One handrail on at least one side.</i>
<i>Note to table: The width of the stair must be clear of all obstructions except handrails.</i>				