

WALKING AND WORKING SURFACES GUIDE

Version	Date	Comments
1	December, 2008	Initial <i>Walking and Working Surfaces</i> Guide
2	August, 2011	Routine review - minor changes
3	July, 2015	Routine review

A. INTRODUCTION

The purpose of this Guide is to provide information regarding the condition of and standards related to walking and working surfaces. This Guide is based upon Occupational Safety and Health Administration (OSHA) Standard 29 CFR, Subpart D, 1910.22 and 1910.23, *Walking-Working Surfaces*.

B. SCOPE

This Guide applies to all George Mason University property. It is designed to assist University employees in the use, modification, and evaluation of walking and working surfaces in order to provide a safe environment for all employees, students, and visitors.

C. GENERAL REQUIREMENTS

- All work areas, offices, classrooms, passageways, sidewalks, and public areas must be kept sanitary and orderly.
- Walking and working surfaces must be kept free from protrusions, clutter, splinters, slip hazards, trip hazards, holes, and unstable or loose floor coverings and boards.
- Floors must be maintained in a dry condition as much as reasonably possible. Drainage shall be provided where wet processes are used.
- False floors, mats, platforms, and other dry standing surfaces should be provided where drainage does not prevent a slippery or hazardous surface.
- Covers and/or standard guardrails must be put in place to protect employees from the hazards of open pits, vats, tanks, ditches, or any floor opening.
- All open-sided floors or platforms and other elevated walkways that are four feet above the adjacent level must be guarded with a standard rail and toeboard.
- Every flight of stairs having four or more risers shall be equipped with standard railings or standard handrails as follows:
 - On stairways less than 44 inches wide with both sides enclosed, at least one handrail, preferably on the right side descending.
 - On stairways less than 44 inches wide having one side open, at least one stair railing on the open side.

- On stairways less than 44 inches wide having both sides open, one stair railing on each side.
- On stairways more than 44 inches wide but less than 88 inches wide, one handrail on each enclosed side and one stair railing on each open side.
- On stairways more than 88 inches wide, one handrail on each open side, and one intermediate stair railing located approximately midway of the width.

D. SIDEWALKS AND PUBLIC AREAS

- Sidewalks and public walkways must be maintained in a safe condition, free from debris, and may not have any unprotected holes and openings.
- Public walkways must be provided with lighting of sufficient strength to perceive trip hazards and other pedestrians after daylight.
- Walkways may not have two horizontal surfaces adjacent to one another separated by a height greater than 0.5 inches (13 mm) that could cause pedestrians to trip or prevent the wheels of a wheelchair or stroller from rolling smoothly.

E. AISLES AND PASSAGEWAYS

- Sufficient clearance must be allowed on aisles and loading docks where mechanical materials handling equipment such as forklifts or power jacks are used.
- Doorways and passageways must not be obstructed. The following aisles and passageway clearances must be maintained at all times:
 - 36 inches for areas with 50 occupants or less; or
 - 44 inches for areas with greater than 50 occupants.
- Permanent aisles, emergency exits, and passageways must be suitably lighted and marked with signs, barrier belts, floor signs, or other appropriate means.

F. FLOOR LOADING PROTECTION

- The load rating, approved by the building official, must appear on marked plates of structure such as mezzanines or pillars. Such plates must be conspicuous, legible, and securely attached and may not be removed or defaced.
- The maximum load rating of floors and walking-working surfaces must not be exceeded.

G. FLOOR OPENINGS AND HOLES

- A floor *opening* has a measurement of 12 inches or more across its least dimension. It must be guarded by a standard railing except at the entrance to a stairway.
- A floor *hole* measures less than 12 inches across its greatest dimension but more than one inch across its least dimension.

- Every floor hole into which persons can accidentally walk must be guarded by a standard railing with standard toeboard on all exposed sides or with a floor hole cover of standard strength and construction.
- If an employee cannot accidentally walk into a hole due to fixed machinery, equipment, or walls, it must be protected by a cover that leaves no opening more than one inch wide.
- Manhole openings must be guarded by a standard manhole cover and be attended by someone or protected by removable standard railings when the cover is not in place.
- Trapdoor and pit openings that are infrequently used must be guarded by a standard strength floor opening cover and be attended by someone or protected by removable standard railings when cover is not in place.
- A floor opening or platform that leads to a descending ladder must be guarded by a standard railing with a standard toeboard on all exposed sides except at the entrance which shall be provided with a swinging gate or offset to prevent direct access.
- Skylight openings must be guarded by a standard skylight screen or a fixed standard railing on all exposed sides.
- For infrequently used stairways where traffic across the opening prevents the use of a fixed standard railing, the guard must have a hinged floor opening cover.
- Hatchways and chute floor openings must be guarded either by a standard strength hinged cover or a removable railing with toeboard on not more than two sides and fixed standard railings with toeboards on all other exposed sides.

H. OPEN-SIDED FLOORS, PLATFORMS, AND RUNWAYS

- Every open-sided floor or platform that is four feet or more above adjacent floor or ground level must be guarded by a standard railing with toeboards on all open sides except at the entrance.
- Regardless of height, a standard railing and toeboard must be used to guard open sided floors, walkways, runways, or platforms above or adjacent to dangerous equipment, tanks, machinery, and similar hazards.
- Runways must be guarded by standard railings on all open sides that are four feet above the ground level. Where tools, materials, or machinery are likely to be used on the runway, a toeboard shall be provided on each exposed side.

I. OTHER WORKING SURFACES

- Powered and portable dockboards and ramps must be secured in position and be provided with handholds to permit safe handling. The load rating must never be exceeded.
- Machine areas must have ample room for cleaning, servicing, and repairing machines.
- Machines must be arranged to give the operator enough clearance for movement without obstructing doorways, exits, or stand in aisles and passageways.

J. WALL OPENINGS AND HOLES

- Every wall opening with a drop of more than four feet must be guarded by:
 - An extension platform onto which materials can be hoisted for handling, and which will have side rails or equivalent guards of standard specifications;
 - A rail, roller, picket fence, half door, or equivalent barrier; and
 - A removable toeboard must be provided where there is exposure below to falling materials.
- Window wall openings at a stairway landing, floor, platform, or balcony from which there is a drop of more than four feet, and where the bottom of the opening is less than three feet above the landing or platform, must
 - Be guarded by standard slats or standard railing; and
 - Where the window opening is below the landing, or platform, a standard toeboard must be provided.
- Temporary wall openings must have adequate guards. (e.g., portable barriers and barricades).

K. RAILING, TOE BOARDS, AND COVER SPECIFICATIONS

- A standard railing shall consist of a top rail, intermediate rail, and posts and shall:
 - Have a height of 42 inches from upper surface of top rail to floor, platform, ramp, or runway level; and
 - The intermediate rail shall be approximately halfway between top rail and floor, platform, ramp, or runway; and
 - The ends of the rail shall not overhang the end posts unless the overhang doesn't post a projection hazard.
- A standard toeboard shall be 4 inches in height from its top edge to the floor, platform, ramp, or runway level and shall:
 - Be securely fastened in place; and
 - Be made of any substantial material, either solid or with openings not greater than 1 inch.

The information contained in this Guide is not inclusive of all OSHA regulations. Please contact Environmental Health and Safety Office at (703) 993-8448 or visit www.OSHA.gov for more information regarding workplace hazards, safety precautions, and regulations.