


<i>HEALTH AND SAFETY MANUAL</i>	
Title: Floor and Wall Openings and Holes	
Approved by: Greg Savoy	Rev. 1/1/08

1 Purpose/Scope:

The purpose of this program is to meet the requirements for guarding floor and wall openings and holes in the workplace to protect the safety of our employees.

This program applies to all Company employees.

2 Definitions/Responsibilities:

2.1 Definitions:

2.1.1 Standard Railing – a vertical barrier erected along exposed edges of a floor opening, wall opening, ramp, platform or runway to prevent falls.

Specifications:

- ✓ A standard railing consists of a top rail, intermediate rail, and posts, and has a vertical height of 42 inches nominal from upper surface of top rail to floor, platform, or ramp level.
- ✓ The top rail must be smooth-surfaced throughout the length of the railing.
- ✓ The intermediate rail should be approximately halfway between the top rail and the floor, platform, or ramp.
- ✓ The ends of the rails must not overhang the terminal posts except where such overhang does not constitute a projection hazard.
- ✓ Wood railing posts must be of at least 2-inch by 4-inch stock spaced not to exceed 6 feet; the top and intermediate rails must be of at least 2-inch by 4-inch stock
- ✓ If the top rail is made of two right-angle pieces of 1-inch by 4-inch stock, posts may be spaced on 8-foot centers, with 2-inch by 4-inch intermediate rail.
- ✓ For pipe railings, posts and top and intermediate railings must be at least 1 1/2 inches nominal diameter with posts spaced not more than 8 feet on centers.
- ✓ For structural steel railings, posts and top and intermediate must be made of 2-inch by 2-inch by 3/8-inch angles or other metal shapes of equivalent bending strength with posts spaced not more than 8 feet on centers.
- ✓ The anchoring of posts and framing of members for railings of all types must be of such construction that the completed

structure must be capable of withstanding a load of at least 200 pounds applied in any direction at any point on the top rail.

2.1.2 Standard Strength and Construction – any construction of railings, covers or other guards to the following specifications:

- Railings and other guards must withstand 200 lbs. top rail pressure.
- Covers located in roadways must carry a truck rear-axel load of at least 20,000 lbs.
- Covers not located in roadways must be of sufficient strength to withstand anticipated loads.

2.1.3 Standard Toe Board – a vertical barrier nominally 4 inches from its top edge to the floor surface, erected along exposed edges of a floor opening, wall opening, platform, runway or ramp to prevent falls of materials.

- Specifications:
 - ✓ A standard toe board is 4 inches nominal in vertical height from its top edge to the level of the floor, platform, or ramp and must be securely fastened in place and not more than 1/4-inch clearance above floor level.
 - ✓ It may be made of any substantial material, either solid or with openings not over 1 inch in greatest dimension.
 - ✓ Where material is piled to such height that a standard toe board does not provide protection, paneling from floor to intermediate rail, or to top rail must be provided.

2.1.4 Hand rail – a single bar or pipe supported on brackets from a wall or partition to provide a continuous handhold for persons using a stair.

- Specifications:
 - ✓ The height of handrails must be not more than 34 inches from upper surface of handrail to surface of floor, platform, or ramp.
 - ✓ Handrails must be provided with a clearance of not less than 3 inches between the handrail or railing and any other object.

2.2 Responsibilities:

2.2.1 Regional Managers shall ensure that guarding of floor and wall openings and holes is achieved location(s) within their Regions.

2.2.2 Supervisors shall ensure that guarding of floor and wall openings and holes is achieved at work location(s) assigned to them.

2.2.3 Employees are responsible to be aware of and take proper measures in the guarding of floor and wall openings and holes at the work site where they are working.

3 Requirements:

3.1 Protection for floor openings:

- 3.1.1 Every stairway floor opening must be guarded by a standard railing on all exposed sides (except at the entrance of the stairway).
- 3.1.2 Every ladder way, floor opening, or platform must be guarded by a standard railing with a standard toe board on all exposed sides (except at entrance to opening).
- 3.1.3 Every ladder way, floor opening, or platform must have a passage through the railing provided either with a swinging gate or offset so that a person cannot walk directly into the opening.
- 3.1.4 Where doors or gates open directly on a stairway, a platform must be provided, and the swing of the door must not reduce the effective width to less than 20 inches.

3.2 Skylight floor openings:

- 3.2.1 Every skylight floor opening and hole must be guarded by a standard skylight screen or a fixed standard railing on all exposed sides.

3.3 Pit and trapdoor floor openings:

- 3.3.1 Every pit and trapdoor floor opening, infrequently used, must be guarded by a floor opening cover of standard strength and construction.
- 3.3.2 While the cover is not in place, the pit or trap opening must be constantly attended or protected on all sides by removable standard railings.

3.4 Manhole floor openings:

- 3.4.1 Every manhole floor opening must be covered:

- The cover need not be hinged in place.

- 3.4.2 While the cover is not in place, the manhole opening must be constantly attended or protected by removable standard railings.

3.5 Temporary floor openings:

- 3.5.1 All temporary floor openings must have standard railings, or constantly attended.
- 3.5.2 Every floor hole into which persons can accidentally walk must be guarded by either a standard railing with standard toe board on all exposed sides, or a cover of standard strength and construction.

- While the cover is not in place, the floor hole must be constantly attended or be protected by a removable standard railing.
- Every floor hole into which persons cannot accidentally walk (on account of fixed machinery, equipment, or walls) must be protected by a cover that leaves no openings more than 1 inch wide.
- The cover must be securely held in place to prevent tools or materials from falling through.

3.6 Temporary wall openings.

3.6.1 Every wall opening from which there is a drop of more than 4 feet must be guarded by one of the following:

- Rail.
- Roller
- Picket fence
- Half door.
- or equivalent barrier.

3.6.2 Where there is exposure below to falling materials, a removable toe board or the equivalent must also be provided.

3.6.3 When the opening is not in use for handling materials, the guard (3.6.1) must be kept in position regardless of a door on the opening.

- In addition, a grab handle must be provided on each side of the opening with its center approximately 4 feet above floor level and of standard strength and mounting.

3.7 Stairway railings:

3.7.1 Every flight of stairs having four or more risers must be equipped with standard stair railings or standard handrails.

4 References:

OSHA 29 CFR 1910.23 Guarding Floor and Wall Openings and Holes.

5 Exhibits:

None.