

## SECTION 24

# FLOOR AND WALL HOLES AND OPENINGS

### 24.A GENERAL

24.A.01 All floor and roof openings into which persons can accidentally walk or fall through shall be guarded by a physical barrier or covered.

24.A.02 All floor and roof holes through which equipment, materials, or debris can fall shall be covered.

24.A.03 Coverings for floor and roof openings shall be of sufficient strength to support any load that may be imposed and shall be secured in place to prevent accidental removal or displacement.

24.A.04 Conduits, trenches, and manhole covers and their supports, when exposed to vehicles or equipment, shall be designed to carry a truck rear axle load of 2 times the maximum anticipated load.

24.A.05 Wall openings, from which there is a drop of more than 4 ft (1.2 m) and the bottom of the opening is less than 3 ft (0.9 m) above the working surface, shall be guarded with a top rail or a top rail and intermediate rail or a standard guardrail. A toe board or enclosing screen shall be provided where the bottom of the wall opening, regardless of width, is less than 4 in (10.1 cm) above the working surface.

24.A.06 Wall opening protection shall meet one of the following requirements:

- a. Barriers of such construction and mounting that, when in place at the opening, the barrier is capable of withstanding a load of at least 200 lb (90.7 kg) applied in any direction (except upward) with a minimum of deflection at any point on the top rail or corresponding member; or

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b. Screens of such construction and mounting that they are capable of withstanding a load of at least 200 lb (90.7 kg) applied horizontally at any point on the near side of the screen. They may be of solid construction, or grill work with openings not more than 8 in (20.3 cm) long, or of slat work with openings not more than 4 in (10.1 cm) wide of unrestricted length.

24.A.07 Every hatchway and chute floor opening shall be guarded by a hinged floor-opening cover. The opening shall be barricaded with railings so as to leave only one exposed side. The exposed side shall be provided either with a swinging gate or so offset that a person cannot walk into the opening.

24.A.08 An extension platform outside a wall opening onto which materials can be hoisted for handling shall have a standard railing that meets 21.B of this manual. However, one side of an extension platform may have removable railings to facilitate handling materials.