

achieve electrical continuity in accordance with the listing, this cover shall not be permitted as the means for providing electrical continuity for a receptacle mounted in the cover.

Part III. Construction Specifications

384.100 Construction. Strut-type channel raceways and their accessories shall be of a construction that distinguishes them from other raceways. Raceways and their elbows, couplings, and other fittings shall be designed such that the sections can be electrically and mechanically coupled together and installed without subjecting the wires to abrasion. They shall comply with 384.100(A), (B), and (C).

(A) Material. Raceways and accessories shall be formed of steel, stainless steel, or aluminum.

(B) Corrosion Protection. Steel raceways and accessories shall be protected against corrosion by galvanizing or by an organic coating.

Informational Note: Enamel and PVC coatings are examples of organic coatings that provide corrosion protection.

(C) Cover. Covers of strut-type channel raceways shall be either metal or nonmetallic.

384.120 Marking. Each length of strut-type channel raceway shall be clearly and durably identified as required in the first sentence of 110.21(A).

ARTICLE

386

Surface Metal Raceways

Part I. General

386.1 Scope. This article covers the use, installation, and construction specifications for surface metal raceways and associated fittings.

The installation shown in Exhibit 386.1 is an example of how a surface metal raceway can be used to extend branch-circuit wiring to new switch-controlled outlets.

386.6 Listing Requirements. Surface metal raceway and associated fittings shall be listed.

Part II. Installation

386.10 Uses Permitted. The use of surface metal raceways shall be permitted in the following:

- (1) In dry locations.
- (2) In Class I, Division 2 hazardous (classified) locations as permitted in 501.10(B)(3).

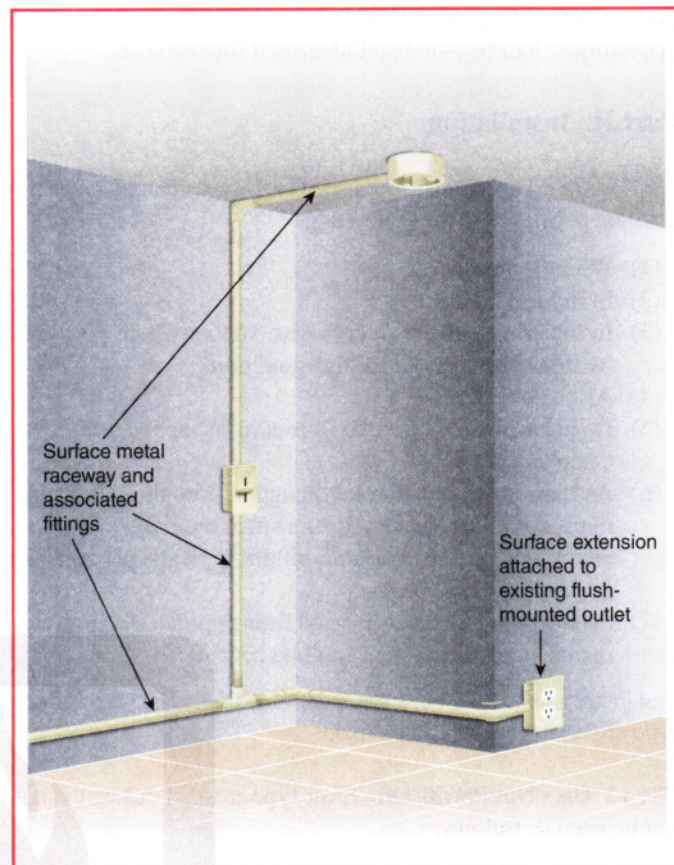


EXHIBIT 386.1 An example of a surface metal raceway extending from an existing receptacle outlet.

- (3) Under raised floors, as permitted in 645.5(E)(2).
- (4) Extension through walls and floors. Surface metal raceway shall be permitted to pass transversely through dry walls, dry partitions, and dry floors if the length passing through is unbroken. Access to the conductors shall be maintained on both sides of the wall, partition, or floor.

386.12 Uses Not Permitted. Surface metal raceways shall not be used in the following:

- (1) Where subject to severe physical damage, unless otherwise approved
- (2) Where the voltage is 300 volts or more between conductors, unless the metal has a thickness of not less than 1.02 mm (0.040 in.) nominal
- (3) Where subject to corrosive vapors
- (4) In hoistways
- (5) Where concealed, except as permitted in 386.10

386.21 Size of Conductors. No conductor larger than that for which the raceway is designed shall be installed in surface metal raceway.

386.22 Number of Conductors or Cables. The number of conductors or cables installed in surface metal raceway shall not

be greater than the number for which the raceway is designed. Cables shall be permitted to be installed where such use is not prohibited by the respective cable articles.

The adjustment factors of 310.15(C)(1) shall not apply to conductors installed in surface metal raceways where all of the following conditions are met:

- (1) The cross-sectional area of the raceway exceeds 2500 mm² (4 in.²).
- (2) The current-carrying conductors do not exceed 30 in number.
- (3) The sum of the cross-sectional areas of all contained conductors does not exceed 20 percent of the interior cross-sectional area of the surface metal raceway.

The number, type, and sizes of conductors permitted to be installed in a listed surface metal raceway are marked on the raceway or on the package in which it is shipped.

386.30 Securing and Supporting. Surface metal raceways and associated fittings shall be supported in accordance with the manufacturer's installation instructions.

386.56 Splices and Taps. Splices and taps shall be permitted in surface metal raceways having a removable cover that is accessible after installation. The conductors, including splices and taps, shall not fill the raceway to more than 75 percent of its area at that point. Splices and taps in surface metal raceways without removable covers shall be made only in boxes. All splices and taps shall be made by approved methods.

Taps of Type FC cable installed in surface metal raceway shall be made in accordance with 322.56(B).

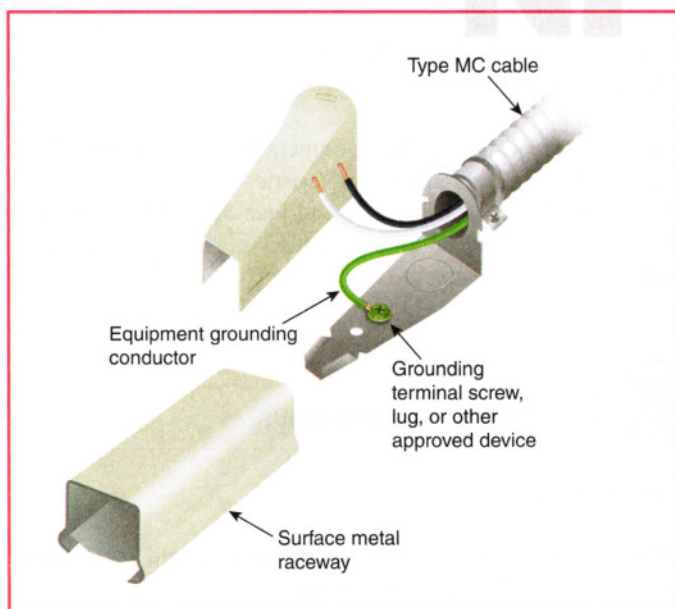


EXHIBIT 386.2 One means for terminating an EGC at a surface metal raceway.

386.60 Grounding. Surface metal raceway enclosures providing a transition from other wiring methods shall have a means for connecting an equipment grounding conductor.

As the example in Exhibit 386.2 shows, where a surface metal raceway is supplied by Type MC or NM cable, a means (e.g., grounding terminal screw or lug) for terminating the equipment grounding conductor (EGC) must be available at the surface metal raceway.

386.70 Combination Raceways. When combination surface metal raceways are used for both signaling and for lighting and power circuits, the different systems shall be run in separate compartments identified by stamping, imprinting, or color coding of the interior finish.

Part III. Construction Specifications

386.100 Construction. Surface metal raceways shall be of such construction as will distinguish them from other raceways. Surface metal raceways and their elbows, couplings, and similar fittings shall be designed so that the sections can be electrically and mechanically coupled together and installed without subjecting the wires to abrasion.

Where covers and accessories of nonmetallic materials are used on surface metal raceways, they shall be identified for such use.

386.120 Marking. Each length of surface metal raceway shall be clearly and durably identified as required in the first sentence of 110.21(A).

ARTICLE

388

Surface Nonmetallic Raceways

Part I. General

388.1 Scope. This article covers the use, installation, and construction specifications for surface nonmetallic raceways and associated fittings.

Surface nonmetallic raceways may resemble base or chair rail molding and allow for circuit conductors to be installed without the need for wall penetration. The installation shown in Exhibit 388.1 is typical of how a surface nonmetallic raceway can be used to supply power, community antenna television (CATV), and communications outlets.

388.6 Listing Requirements. Surface nonmetallic raceway and associated fittings shall be listed.

Part II. Installation

388.10 Uses Permitted. Surface nonmetallic raceways shall be permitted as follows: