(F) Optical Fiber Cable. Where optical fiber cable is used to provide a communications circuit within a building, Article 770 shall apply.

N **(G) Vertical Support for Fire-Resistive Cables and Conductors.** Vertical installations of circuit integrity (CI) cables and conductors installed in a raceway or conductors and cables of fire-resistive cable systems shall be installed in accordance with 300.19.

N **(H) Bonding and Grounding of Cable Shields.** The requirements of 250.4(A)(5) shall apply to the metal shields of cables used for communications.

800.21 Access to Electrical Equipment Behind Panels Designed to Allow Access. Access to electrical equipment shall not be denied by an accumulation of wires and cables that prevents removal of panels, including suspended ceiling panels.

An excess accumulation of wires and cables can limit access to equipment by preventing the removal of access panels or ceiling tiles. Exhibit 800.1 shows examples of proper and improper installation of communications cables above ceiling tiles that are designed to allow access to the space above.

Δ **800.24 Mechanical Execution of Work.**

N **(A) General.** Circuits and equipment shall be installed in a neat and workmanlike manner. Cables installed exposed on the surface of ceilings and sidewalls shall be supported by the building structure in such a manner that the cable will not be damaged by normal building use. Such cables shall be secured by hardware, including straps; staples: cable ties listed and identified for securement and support; and hangers, or similar fittings, designed and installed so as not to damage the cable. The installation shall also conform to 300.4 and 300.11. Plenum cable ties and other nonmetallic cable accessories used to secure and support cables in other spaces used for environmental air (plenums) shall be listed as having low smoke and heat release properties in accordance with 800.170.

Informational Note No. 1: See ANSI/BICSI N1-2019, *Installation Practices for Telecommunications and IC Cabling and Related Cabling Infrastructure*; ANSI/TIA-568.1- E-2020, *Commercial Building Telecommunications Infrastructure Standard;* ANSI/TIA-569-E-2019, *Telecommunications Pathways and Spaces;* ANSI/TIA-570-C-2012, *Residential Telecommunications Infrastructure Standard;* ANSI/TIA-1005-A-2012, *Telecommunications Infrastructure Standard for Industrial Premises;* ANSI/TIA-1179-A-2017, *Healthcare Facility Telecommunications Infrastructure Standard;* ANSI/TIA-4966-2014, *Telecommunications Infrastructure Standard for Educational Facilities;* and other ANSI-approved installation standards for accepted industry practices.

Informational Note No. 2: See NFPA 90A-2021, *Standard for the Installation of Air-Conditioning and Ventilating Systems*, for discrete combustible components installed in accordance with 300.22(C).

Informational Note No. 3: Paint, plaster, cleaners, abrasives, corrosive residues, or other contaminants may result in an undetermined alteration of wire and cable properties.

This requirement does not contain specific supporting and securing intervals. It does reference 300.4 and 300.11 as a general rule for securing equipment and cables, as well as for protection of cables from physical damage. Securing and supporting intervals are typically found in the manufacturer's installation instructions.

See also

800.110(C) for support of cable routing assemblies

N **(B) Circuit Integrity (CI) Cable.** CI cable shall be supported at a distance not exceeding 610 mm (24 in.). Cable shall be secured to the noncombustible surface of the building structure. Cable supports and fasteners shall be steel.

800.25 Abandoned Cables. The accessible portion of abandoned cables shall be removed. Where cables are identified for future use with a tag, the tag shall be of sufficient durability to withstand the environment involved.

See Article 100 for the definition of *accessible (as applied to wiring methods)*. Abandoned cable unnecessarily increases fire loading and can affect airflow where installed in plenums.

See also

Article 100 for the definition of the term *cable, abandoned (abandoned cable)*

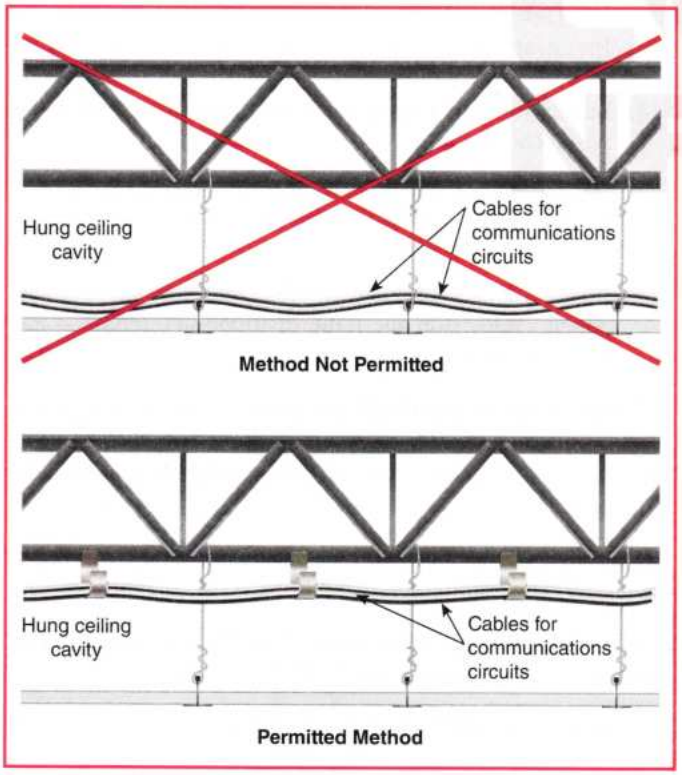

EXHIBIT 800.1 Incorrect installation of cables *(upper diagram)* and correct method *(lower diagram)*.