

- (2) 3.5 m (11½ ft) — over residential property and driveways, and those commercial areas not subject to truck traffic
- (3) 4.7 m (15½ ft) — over public streets, alleys, roads, parking areas subject to truck traffic, driveways on other than residential property, and other land traversed by vehicles such as cultivated, grazing, forest, and orchard

Informational Note: See ANSI/IEEE C2-2017, *National Electrical Safety Code*, Table 232-1, which provides for clearances of wires, conductors, and cables above ground and roadways, rather than using the clearances referenced in 225.18.

**(C) Over Pools.** Clearance of network-powered broadband communications cable in any direction from the water level, edge of pool, base of diving platform, or anchored raft shall comply with those clearances in 680.9.

**(D) Final Spans.** Final spans of network-powered broadband communications cables without an outer jacket shall be permitted to be attached to the building, but they shall be kept not less than 900 mm (3 ft) from windows that are designed to be opened, doors, porches, balconies, ladders, stairs, fire escapes, or similar locations.

*Exception: Conductors run above the top level of a window shall be permitted to be less than the 900-mm (3-ft) requirement above.*

Overhead (aerial) network-powered broadband communications cables shall not be installed beneath openings through which materials might be moved, such as openings in farm and commercial buildings, and shall not be installed where they obstruct entrance to these building openings.

**(E) Between Buildings.** Network-powered broadband communications cables extending between buildings or structures, and also the supports or attachment fixtures, shall be identified as suitable for outdoor aerial applications and shall have sufficient strength to withstand the loads to which they may be subjected.

*Exception: Where a network-powered broadband communications cable does not have sufficient strength to be self-supporting, it shall be attached to a supporting messenger cable that, together with the attachment fixtures or supports, shall be acceptable for the purpose and shall have sufficient strength to withstand the loads to which they may be subjected.*

In addition to the weight of the cable itself, wind and ice loads also must be considered because they can damage cables and attachment points.

**(F) On Buildings.** Where attached to buildings, network-powered broadband communications cables shall be securely fastened in such a manner that they are separated from other conductors in accordance with 830.44(F)(1) through (F)(3).

**(1) Electric Light or Power.** The network-powered broadband communications cable shall have a separation of at least 100 mm (4 in.) from electric light, power, Class 1, or non-power-limited fire alarm circuit conductors not in raceway or cable, or

be permanently separated from conductors of the other system by a continuous and firmly fixed nonconductor in addition to the insulation on the wires.

**(2) Other Communications Systems.** Network-powered broadband communications cables shall be installed so that there will be no unnecessary interference in the maintenance of the separate systems. In no case shall the conductors, cables, messenger strand, or equipment of one system cause abrasion to the conductors, cables, messenger strand, or equipment of any other system.

**(3) Protection from Damage.** Network-powered broadband communications cables attached to buildings or structures and located within 2.5 m (8 ft) of finished grade shall be protected by enclosures, raceways, or other approved means.

*Exception: A low-power network-powered broadband communications circuit that is equipped with a listed fault protection device, appropriate to the network-powered broadband communications cable used, and located on the network side of the network-powered broadband communications cable shall not be required to be additionally protected by enclosures, raceways, or other approved means.*

**830.47 Underground Network-Powered Broadband Communications Cables Entering Buildings.** Underground network-powered broadband communications cables entering buildings shall comply with 830.47(A) and (B).

**Δ (A) Protection from Physical Damage.** Direct-buried cable, conduit, or other raceways shall be installed to meet the minimum cover requirements of Table 830.47(A). In addition, direct-buried cables emerging from the ground shall be protected by enclosures, raceways, or other approved means extending from the minimum cover distance required by Table 830.47(A) below grade to a point at least 2.5 m (8 ft) above finished grade. In no case shall the protection be required to exceed 450 mm (18 in.) below finished grade. Types BMU and BLU direct-buried cables emerging from the ground shall be installed in rigid metal conduit (RMC), intermediate metal conduit (IMC), rigid nonmetallic conduit, or other approved means extending from the minimum cover distance required by Table 830.47(A) below grade to the point of entrance.

*Exception: Protection from physical damage shall not be required if a low-power network-powered broadband communications circuit is equipped with a listed fault protection device that is located on the network side of the network-powered broadband cable being protected and the device is appropriate to the network-powered broadband communications cable used.*

**(B) Pools.** Cables located under the pool or within the area extending 1.5 m (5 ft) horizontally from the inside wall of the pool shall meet those clearances and requirements specified in 680.11.