TABLE 680.9(A) Overhead Conductor Clearances

Clearance Parameters	Insulated Cables, 0–750 Volts to Ground, Supported on and Cabled Together with a Solidly Grounded Bare Messenger or Solidly Grounded Neutral Conductor		All Other Conductors Voltage to Ground			
			0 through 15 kV		Over 15 through 50 kV	
	m	ft	m	ft	m	ft
A. Clearance in any direction to the water level, edge of water surface, base of diving platform, or permanently anchored raft	6.9	22.5	7.5	25	8.0	27
B. Clearance in any direction to the observation stand, tower, or diving platform	4.4	14.5	5.2	17	5.5	18
C. Horizontal limit of clearance measured from inside wall of the pool	This limit shall extend to the outer edge of the structures listed in A and B of this table but not less than 3 m (10 ft).					

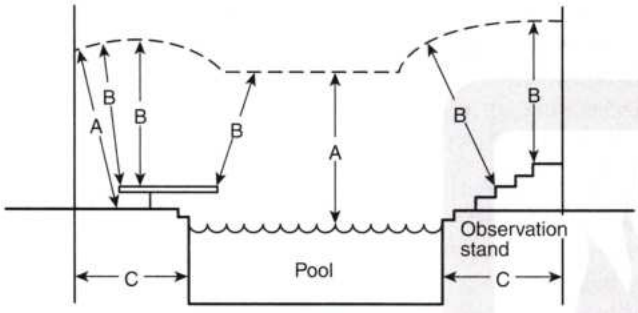

FIGURE 680.9(A) Clearances from Pool Structures.

Δ **(B) Communications Systems.** Communications, radio, and television coaxial cables within the scope of Chapter 8 shall be permitted at a height of not less than 3.0 m (10 ft) above the maximum water level of swimming and wading pools, and diving structures, observation stands, towers, or platforms.

(C) Network-Powered Broadband Communications Systems. The minimum clearances for overhead network-powered broadband communications systems conductors from pools or fountains shall comply with the provisions in Table 680.9(A) for conductors operating at 0 to 750 volts to ground.

These clearances consider factors such as the use of skimmers with aluminum handles. They are intended to provide sufficient separation between the conductors and the pool. The maximum water level (see definition in Article 100) of the body of water (i.e., pool, spa, hot tub, or other) is used to determine compliance with 680.9.

Δ **680.10 Electric Pool Water Heaters Incorporating Resistive Heating Elements and Electrically Powered Swimming Pool Heat Pumps and Chillers.**

N **(A) Electric Pool Water Heaters.** All electric pool water heaters incorporating resistive heating elements shall have the heating elements subdivided into loads not exceeding 48 amperes and protected at not over 60 amperes. The ampacity of the branch-circuit conductors and the rating or setting of overcurrent protective devices shall be 125 percent of the total nameplate-rated load or greater.

N **(B) Electrically Powered Swimming Pool Heat Pumps and Chillers.** Electrically powered swimming pool heat pumps and chillers using the circulating water system and providing heating, cooling, or both, shall be listed and rated for their intended use. The ampacity of the branch-circuit conductors and the rating or setting of overcurrent protective devices shall be sized to comply with the nameplate.

680.11 Underground Wiring. Underground wiring shall comply with 680.11(A) and (B).

(A) Underground Wiring. Underground wiring within 1.5 m (5 ft) horizontally from the inside wall of the pool shall be permitted. The following wiring methods shall be considered suitable for the conditions in these locations provided they are installed complete between outlets, junctions, or splicing points:

(1) Rigid metal conduit
(2) Intermediate metal conduit
(3) Rigid polyvinyl chloride conduit
(4) Reinforced thermosetting resin conduit
(5) Jacketed Type MC cable that is listed for burial use
(6) Liquidtight flexible nonmetallic conduit listed for direct burial use
(7) Liquidtight flexible metal conduit listed for direct burial use

(B) Wiring Under Pools. Underground wiring shall not be permitted under the pool unless this wiring is necessary to supply pool equipment permitted by this article.

Δ **680.12 Equipment Rooms, Vaults, and Pits.**

N **(A) Drainage.** Electrical equipment shall not be installed in rooms, vaults, or pits that do not have drainage that prevents water