



SWIMMING POOL **ELECTRICAL GUIDELINES**

For One, Two and Three Family Homes

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All requirements for swimming pools located at one, two, and three-family residential properties are based on the 2017 National Electric Code (NEC), Section 680. Please note, this guideline **does not** cover all possible requirements. Based on the type of installation, there may be additional electrical requirements per the 2017 NEC. Please call the Springboro Building Department at (937) 748-9791 if you have any questions.

RECEPTACLES: Where a pool is permanently installed, no less than one 125V, 15A or 20A general purpose receptacle shall be installed and shall be located no less than **6 feet** and not more than **20 feet** from the inside wall of the pool. This receptacle shall be located not more than **6 feet 6 inches** above the floor, deck, platform or grade level serving the pool. All 125V, 15A & 20A receptacles located within **20 feet** of the inside walls of a pool shall be protected by a ground-fault circuit interrupter (GFCI).

Receptacles that provide power to pool pumps or other loads directly related to the circulation and sanitation system for permanently installed pools shall not be permitted less than **6 feet** from the inside wall of the pool. Pool motor receptacles must be GFCI protected and be of the grounding type. Outlets supplying pool pump motors connected to single-phase, 120V through 240V branch circuits, rated 15A & 20A, whether by receptacle or by direct connection, shall be provided with GFCI protection for personnel.

LUMINAIRES, LIGHTING OUTLETS, AND CEILING SUSPENDED (PADDLE) FANS: In outdoor pool areas, luminaires, lighting outlets, and ceiling paddle fans installed above the pool and/or the area extending **5 feet** horizontally from the inside walls of the pool shall be a minimum of **12 feet** above the maximum water level. For areas **5 feet to 10 feet** measured horizontally from the inside edge of the pool, luminaires and lighting outlets shall be protected by a GFCI unless installed **5 feet or more** above the maximum water level and rigidly attached to the structure adjacent to or enclosing the pool. **Existing luminaires and lighting outlets** that are located less than **5 feet** horizontally from the inside edge of the pool are permitted provided they are not less than **5 feet** above the maximum water level, rigidly attached to the existing structure, and protected by a GFCI.

Dry-niche, no-niche, or wet-niche underwater luminaires operating at more than 15 V require GFCI protection.

SWITCHING DEVICES: Switching devices shall be located at least **5 feet** from the inside walls of a pool unless separated by a solid fence, wall, or other permanent barrier. Alternatively, a switch that is listed as being acceptable for use within **5 feet** shall be permitted.

DISCONNECTING MEANS: One or more means to simultaneously disconnect all ungrounded conductors shall be provided for all utilization equipment other than lighting. Disconnecting means shall be readily accessible and within sight from its equipment and shall be located at least **5 feet** horizontally from the inside walls of a pool, or hot tub unless separated from the water by a permanently installed barrier that provide a **5 feet** reach path or greater.

UNDERGROUND CONDUITS: Underground conduits shall be permitted where installed in rigid metal conduit, intermediate metal conduit, rigid polyvinyl chloride conduit, reinforced thermosetting resin conduit, or Type MC, suitable for the conditions subject to that location. Underground wiring shall not be permitted under the pool unless this wiring is necessary to supply pool equipment permitted by Article 680. Minimum cover depth shall be as given in Table 300.5.

OVERHEAD CONDUCTOR CLEARANCES: No overhead conductors shall be installed within **22.5 feet** in any direction from the maximum water level. The **22.5 feet** clearance in any direction shall also apply to all areas extending 10 feet horizontally from the pool edge. Wiring in any direction from diving structures, observation stands, towers, or platforms shall not be within **14.5 feet**.

BONDING: Equipotential bonding is required for **ALL** swimming pools and shall be installed per Section 680.26.

REQUIRED ELECTRICAL INSPECTIONS: Bonding (including potting compound), electric trench, and final electric.