



RESIDENTIAL POOL AND SPA INSTALLATION

These requirements apply to building permits submitted on or after January 1, 2017.

PLANNING DIVISION REQUIREMENTS

In ground pools or spas shall be located 5' minimum from side and rear property lines to water's edge. Above ground pools or spas may have greater setbacks and may require administrative review. Please call or ask planning staff for specifics based on lot zoning and orientation.

BUILDING INSPECTION REQUIREMENTS

A building permit is required for all pool and spa installations and shall be obtained prior to start of installation. The following is a listing of the general requirements for permit applications based on the [2016 California Building Code](#), [2016 California Residential Code](#), [2016 California Electrical Code](#), and [Contra Costa County Municipal Code](#). This brochure is intended to provide general information, contact the Building Inspection Division for any questions or additional information.

Drowning Prevention Safety Features

Health and Safety Code 115922

- A. Except as provided in Section 115925, whenever a building permit is issued for construction of a new swimming pool or spa or the remodeling of an existing pool or spa at a private single-family home, the respective pool or spa shall be equipped with **at least two** of the following seven drowning prevention safety features:
- (1) An enclosure that meets the requirements of Section 115923 and isolates the swimming pool or spa from the private single-family home.
 - (2) Removable mesh pool fencing that meets American Society for Testing and Materials (ASTM) Specifications F2286 standards in conjunction with a gate that is self-closing and self-latching and can accommodate a key lockable device.
 - (3) An approved safety pool cover that meets all the requirements of ASTM standard F1346-91.
 - (4) Exit alarms on the private single-family home's doors that provide direct access to the pool.
 - (5) A self-closing, self-latching device with a release mechanism placed no lower than 54" above the floor or each door providing direct access to the swimming pool or spa.
 - (6) An alarm that, when placed in a swimming pool, will sound upon detection of accidental or unauthorized entrance into the water. The alarm shall meet and be independently certified to the ASTM Standard F2208 "Standard Specification for Residential Pool Alarms" which includes surface motion, pressure, sonar, laser, and infrared type alarms. A swimming protection alarm feature designed for individual use, including an alarm attached to a child that sounds when the child exceeds a certain distance or becomes submerged in water, is not a qualifying drowning prevention safety device.
 - (7) Other means of protection, if the degree of protection afforded is equal to or greater than that afforded by any of the devices set forth above, and has been independently verified by an approved testing laboratory as meeting standards for those devices established by the ASTM or the American Society of Mechanical Engineers (ASME).

Electrical Requirements

- Overhead electrical conductors/wires located over the pool/spa and within 10 feet horizontally of the pool/spa shall be a minimum of 22½ feet above the maximum water level and 14½ feet above any diving platform. (CEC 680.8),
- All fixed metal parts, including underwater lighting, fittings, electrical equipment, piping, awnings, fences, etc. within 5 feet of the inside of the pool wall shall be bonded to the pool reinforcing steel with a #8AWG copper conductor. Bonding clamps for direct burial or concrete encasement shall be brass, copper, copper alloy, or other listed material.

Where none of the bonded parts is in direct connection with the pool water, the pool water shall be in direct contact with an approved corrosion-resistant conductive surface that exposes a minimum of nine square inches of surface area to the pool water at all times. The conductive surface shall be located where it is not exposed to physical damage or dislodgement during usual pool activities and it shall be bonded as noted above. (CEC 680.26),

- The perimeter surface within 3 feet of the inside wall of the pool (including unpaved, paved, concrete surfaces, etc.) shall be bonded and attached to the pool reinforcing steel or copper conductor grid at a minimum of four points spaced uniformly around the pool. (CEC 680.26)
- Junction boxes shall be a minimum vertical distance of 8 inches above the water or 4 inches above the deck, whichever provides the greater elevation. Junction boxes shall be a minimum horizontal distance of 4 feet from the inside wall of the pool (unless separated by a solid wall, fence, or other permanent barrier). (CEC 680.24),
- At least one GFCI receptacle shall be located between 6 feet and 20 feet from the inside wall of the pool. The receptacle shall be a maximum of 6 feet 6 inches above the level of the pool. (CEC 680.22),
- Lighting fixtures/outlets above or within 5 feet horizontally of the pool shall be installed at a height of not less than 12 feet above the pool. Lighting fixtures installed between 5 feet and 10 feet from the pool and less than 5 feet in height shall be GFCI protected. (CEC 680.22),
- Underground wiring within 5 feet of the pool edge shall meet the following burial depth requirements (CEC Table 680.10)

MINIMUM BURIAL DEPTHS	
Wiring Method	Minimum Burial
Rigid metal conduit	6 inches
Intermediate metal conduit	6 inches
Nonmetallic raceways listed for direct burial without concrete encasement	18 inches
Nonmetallic raceways listed for direct burial with minimum 4 inch concrete coverage that extend 6 inches horizontally beyond raceway	6 inches
Other approved raceways	18 inches

Other Requirements

- All new and remodeled pools and spas shall have anti-entrapment features or devices meeting standards per HSC 115928 & 115928.5
- Glass within 5 feet horizontally from the pool edge and within 5 feet vertically of the walking surface shall be safety glazing. (CRC R308).

PERMIT PROCESS

Building Permit Review

1. Building permit applications can be obtained on-line at www.cccounty.us/apc or they can be obtained at our Application and Permit Centre.

Inspections

2. Portable, above ground spas require a rough electrical and a final inspection.
3. For in-ground pools and spas, the first inspection is for pre-gunite and includes underground conduit, water and gas piping. Subsequent inspections based on the method of construction. Consult the Building Inspection Division for specific information.

Building Permit Application Requirements

(3 copies of each item)

- An approval letter from the Homeowner's Association (if applicable).
- A completed Building Permit application
- Site plan showing the existing house, and other structures, overhead/underground utilities, easements, proposed location of the pool/spa, equipment location, and setback distances from all property lines.
- Sanitary or Environmental Health approval prior to issuance of a building permit.
- Structural details and calculations stamped and signed by the engineer (built-in pools/spas) or UL listing with installation requirements (for portable, above ground spas).

Remember, Kids Aren't Drown Proof

Drowning is quick and silent. A child can drown in less than one minute in as little as one inch of water. There is usually no warning, such as screams or splashing. Take [preventative steps](#) so no kids drown and read [*Children Drown in Silence*](#).