



RESIDENTIAL POOL AND SPA INSTALLATION

THESE REQUIREMENTS APPLY TO SINGLE-FAMILY HOMES AND DUPLEXES WHERE BUILDING PERMITS
SUBMITTED ON OR AFTER JANUARY 1, 2023

PLANNING DIVISION REQUIREMENTS

A planning permit is not required for pools or spas, the standards listed below are reviewed with the building permit.

Setback Requirements

- Pools and spas that extend 18 inches or less above grade - no setback requirement.
- Pools and spas greater than 18 inches above grade - must meet the setbacks of the zoning district. For all residentially zoned properties, the minimum rear yard setback is 10 feet. For properties in the R-0, R-1.5 and R-2 Zoning Districts, the minimum side yard setback is 4 feet. All other residential zoning districts require a 6-foot minimum side yard setback. Pools and spas on corner lots must have a 9-foot setback along the longer street frontage. Zoning district information is available online at [City Zoning Map](#).
- Pool and spa equipment - must be set back 3 feet from any structure or property line.

Noise Requirements

All pool and spa equipment must meet the noise standards of Sunnyvale Municipal Code 19.42.030. Noise shall not exceed 50 dBA during the hours of 10:00 pm and 7:00 am or 60 dBA during 7:00 am and 10:00 pm at any point on adjacent residentially zoned property.

BUILDING DIVISION 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 2022 California Building Code, 2022 California Residential Code, 2022 California Electrical Code, and the Sunnyvale Municipal Code. This brochure is intended to provide general information, contact the Building Safety Division for any questions or additional information.

Drowning Prevention Features

In order to protect the occupants of the house and members of the public, drowning prevention safety features are required to restrict unauthorized access to the pool from the house and from the public sidewalk. All private swimming pools shall be equipped with at least two of the following safety features to limit access from both the house and from the public sidewalk (CBC 3109):

1. The pool shall be isolated by an enclosure that meets all of the following:
 - Gates shall open away from the swimming pool with opening devices placed a minimum of 60 inches above the ground. Gates shall be self-closing and self-latching;
 - Enclosure shall be a minimum of 60 inches high;
 - The clearance from the ground to the bottom of the enclosure shall be 2 inches maximum;
 - Gaps or voids in the enclosure are spaced so that a 4-inch sphere cannot pass through; and
 - The enclosure shall not have any protrusions, cavities, or other characteristics that would serve as hand/foot-holds that could enable a child to climb over.
2. The pool shall incorporate removable mesh pool fencing that meets ASTM Specifications F 2286 standards in conjunction with a gate that is self-closing and self-latching and can accommodate a key lockable device.
3. The pool shall be equipped with an approved safety pool cover that meets all requirements of the

One-Stop Permit Center at City Hall, 456 W. Olive Ave., 408-730-7444

Building and Planning hours are 8 a.m. – noon and 1 – 5 p.m.

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ASTM Specifications F1346.

4. All doors providing direct access from a home to the swimming pool shall be equipped with a self-closing, self-latching device with a release mechanism placed no lower than 54" above the floor. Additionally, a fence meeting the requirements of item #1 shall be provided to protect the public from the swimming pool (this can be the property line fence).
5. The house shall be equipped with exit alarms on all doors providing direct access to the pool. The exit alarm may cause either an alarm or noise or verbal warning such as a repeat notification "the door to the pool is open."
6. Swimming pool alarms that, when placed in pools, will sound upon detection of accidental or unauthorized entrance into the water. These pool alarms shall meet and be independently certified to the ASTM Standard F2208. For purposes of this article, "swimming pool alarms" shall not include swimming protection alarm devices designed for individual use, such as an alarm attached to a child that sounds when the child exceeds a certain distance or becomes submerged in water.

Electrical Requirements

- If the existing main electrical service is 100 amps or less, provide load calculations for all existing loads and the new pool to justify the service is adequate. (CEC 220)
- 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 680.9)
- 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 equipment grid 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. Perimeter bonding shall be structural reinforcing steel bonded together by steel tie wires. (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 high. (CEC 680.22)
- Lighting fixtures/outlets within 5 feet horizontally of the pool shall be installed at a height of not less than 12 feet. 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 shall be permitted where installed in RMC, IMC, PVC, RTRC, LFNC, LFMC, or Coated MC cable. Underground wiring shall not be permitted under the pool unless this wiring is necessary to supply pool equipment. (CEC 680.11)

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 extends 6 inch horizontally beyond raceway	6 inches
Other approved raceways	18 inches

Other Requirements

- All new and remodeled pools and spas shall have all suction outlets with an anti-entrapment cover meeting the current ASTM or ASME standards. (CBC 3109.2 and CRC Appendix AV)
- Glass within 5 feet horizontally from the pool edge and within 5 feet vertically of the walking surface shall be safety glazing. (CBC 2406.4.5 and CRC R308.4.5)
- Covers are required for all new pools and spas (SMC 19.48.090).

PERMIT PROCESS

Building Permit Review

Building permits for swimming pools and spas are available on-line at [Sunnyvale E-OneStop](#). Portable, above-ground spas qualify for immediate permit issuance.

Inspections

1. Portable, above ground spas require a rough electrical and a final inspection.
2. For in-ground pools and spas, the first inspection is for steel with subsequent inspections based on the method of construction. Consult the Building Division for specific information.

Building Permit Application Requirements

- ☐ An approval letter from the Homeowner's Association (if applicable).
- ☐ A completed [Building and Fire 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. The site plan must be reviewed and approved by PG&E before a permit can be issued. PG&E is located at 10900 N. Blaney Avenue, Cupertino, 95014 or (408)725-3325.
- ☐ An electrical plan showing all equipment and wiring to pool or spa. Provide electrical load calculations if the existing service panel is 100 amps or less.
- ☐ Structural details and calculations stamped and signed by the engineer (built-in pools/spas) or UL listing with installation requirements (for spas)