

Required Inspections For Swimming Pools

Handout No. 3-3
Published: 8/21/00
Page 1 of 3
Revised 5-21-08

Typical swimming pool inspections include the following seven inspections:

1. **Underground Electrical Inspection** - This inspection occurs after the underground electrical conduits have been installed. All work shall be left completely exposed until after the inspection has been approved.
2. **Underground Plumbing Inspection** - This inspection occurs after gas and/or water lines are installed and prior to backfill. When gas lines are installed, they shall be tested with air. Gas piping test shall hold a minimum 10 psi for 15 minutes using a test gauge with 1/10 lb. increments. Ferrous gas pipe shall be factory coated and all joints shall be protected per UPC Installation Standards for Protectively Coated Pipe. Plastic gas pipe shall be installed per UPC Installation Standards for Polyethylene (PE) For Gas Yard Piping. No gas piping shall be installed in or on the ground under any structure. See 2007 CPC section 1211.1.6 for complete details and exceptions.
3. **Pre-Gunite Inspection** - This inspection occurs after the pool has been excavated and all reinforcement steel has been installed. Setbacks are checked at this time. Also, forming shells of light niche fixtures with extended raceway shall be installed and shall be bonded to the reinforcement steel at this inspection. All bond tails to be installed, including bonds to forming shells and the deck grid. A preliminary check of overhead wire clearances is made at this time.
4. **Potting Inspection** - This inspection occurs after the pool is gunited. Light fixtures shall be placed on top of the pool deck coving. A No. 8 copper insulated ground wire is required at all light fixtures and shall terminate at the inside of the forming shell. The ground terminal on the light fixture shell shall be coated with a UL *listed* potting compound. The potting compound package shall be left next to the light fixture so the inspector can verify that the compound used is an appropriate type.
5. **Pre-Deck Inspection** - This inspection occurs after the deck reinforcing steel has been installed and prior to pavers or concrete placement of the pool deck. The pool deck steel reinforcement must be tied together with tie wires at all rebar intersections and ties shall be wrapped tightly. Reinforcing steel or metal wire mesh shall be bonded to bond coil originating from the forming shell.

Note: The code requires that all metal within 5 feet of the water's edge be bonded together unless separated by a permanent barrier. Examples of items that are required to be bonded are: pool equipment motors, metallic pool equipment (such as filter housing), steel reinforcement (rebar), deck steel (rebar), forming shells (housing light fixtures), diving boards, slides, ladders, pool cover motors, metallic fences, etc. Bonding clamps must be installed per their listing. Bonding clamps for direct burial or concrete encasement shall be brass, copper, or copper alloy.

Note: New to the 2007 CEC is the requirement for an Equipotential Bonding Grid to extend under paved walking surfaces for 3' horizontally beyond the inside walls of the pool. The acceptable grids around the perimeter of the pool shall be permitted to be any of the following:

- Structural reinforcing steel rods in the deck shall be minimum #3 rebar in an 18"X18" pattern at least 3ft. around the pool. The deck reinforcing steel rods shall be bonded to the pool reinforcing steel with at least one (1) #8 solid copper bonding jumper.
- Wire mesh at least 3ft. wide around the perimeter of the pool. The wire mesh shall be in the deck and bonded to the pool reinforcing steel with a #8 solid copper conductor at a minimum of four (4) points uniformly spaced around the perimeter of the pool.
- A #8 AWG bare solid copper conductor grid at least 3ft. wide around the perimeter of the pool, arranged in a 12"X12" pattern. The below-grade grid shall be secured within or under the deck media. The deck copper grid structure shall be bonded to the pool reinforcing steel with at least one (1) #8 solid copper bonding jumper.

Note: *The prime reason for grounding metal parts is to bring all metal parts around the pool to ground potential and thus reduce the threat of shock hazard.*

6. **Pre-Plaster Inspection** – This inspection verifies that all safety features of the pool, including the required enclosure, are complete before the pool is plastered and ready for water. If the pool project is complete (except for plastering) at this inspection, this will be the Final Inspection (see below), the permit will be approved as Final and the inspection process will be complete.
7. **Final Inspection** (may be concurrent with Pre-Plaster Inspection, see above) - This inspection occurs after all other required inspections have been signed off. The following items will be verified:
 1. Safety Enclosure is mandatory and must be installed per city requirements.
Note: A handout is available at the Building Division Permit Center, which describes pool fence enclosure requirements. Please follow it carefully.
 2. Pool re-fill piping (if installed) must have appropriate back flow device per 2007 CPC section 603.4.5, table 6-2 and 6-3.
 3. Glass in windows and doors within 5 feet of the edge of the pool must be safety glazing.
 4. At least one electrical receptacle shall be installed outdoors between ten and twenty feet of the pool's edge. This receptacle shall be protected with a Ground Fault Circuit Interrupter (GFCI). Also, no electrical outlets are allowed less than 10 feet from the pool.
 5. GFCI protection of required lights, receptacles and hot tubs.
 6. Junction box clearances - min. 8 inches above water; min. 4 inches above the deck; min. 4 feet from the water's edge.

7. Pool equipment subpanel listed and installed per the listing and code.
8. Pool equipment to be bonded.
9. Main electric panel checked for sizing adequacy.
Note: Load calculations may be required if the main electric panel is rated for 100 amps or less and there is a spa and A/C unit.
10. Overhead wire clearances - Per the Electric Code.
11. Issue Gas Meter Release for "Capacity Change".
12. Pool and Spa Heating Systems meet California Energy Requirements. The following five items are mandatory per the Energy Code:
 - A. At least 36 inches of pipe between filter & heater for future solar heating.
 - B. Cover for heated outdoor pools and outdoor spas.
 - C. Heating System is certified with 78% thermal efficiency; has on/off switch; and weatherproof operating instructions.
Note: Electric Resistance Heating and gas pilot lights are not allowed.
 - D. Directional inlets that adequately mix the pool water.
 - E. Circulation pump must have a time switch.

Note: Swimming pool plumbing systems are closed systems and are not regulated in the Plumbing Code and, therefore, are not inspected by the Building Division. However, when a water pipe inlet is installed to re-fill a pool, it must comply with backflow requirements per the Plumbing Code (UPC).

Note: For public swimming pools, contact the Santa Clara County Health Department at 1556 Berger Dr. Ste. 300 for additional requirements. Phone number (408) 918-3400, Fax 258-5891. www.ehinfo.org

Additional information can be obtained by visiting our website at www.sanjoseca.gov/building/ or by calling our Information Inspector's voice mail at (408) 535-3555 and leaving a detailed message. In addition you may visit the Building Division in City Hall at 200 East Santa Clara St. Our hours are 9:00 a.m. to 4:00 p.m. with limited service between 12:00 p.m. and 1:00 p.m.