CITY OF RANCHO PALOS VERDES
SWIMMING POOL, SPAS AND HOT TUB GUIDELINES
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Inspection Requirements

1. **Overhead Wire Clearance**: Electrical service conductors and other open overhead wiring cannot cross over pools/spas within ten (10) feet horizontally or a special cable must be installed. Contact Southern California Edison Company for special cable installation.

2. **Main Drain and Circulation:** The swimming pool or spa ***shall have at least two circulation drains per pump that shall be hydraulically balanced and symmetrically plumbed through one or more "T" fittings, and that are separated by a distance of at least three feet in any dimension***. Suction outlets that are less than 12 inches across shall be covered with **Anti-Entrapment** grates that cannot be removed except with the use of tools. Slots or openings in the grates or similar protective devices shall be of a shape, area and arrangement that would prevent physical entrapment and would not pose any suction hazard to bathers. Covers listed as complying with ANSI / ASME Standard A112.19.8M meet the **Anti-Entrapment** criteria.

   The Swimming Pool and Spa Safety Act also that when a permit is issued to remodel an existing pool or spa, the permit shall require that the suction outlet(s) of the pool or spa shall be upgraded so as to be equipped with an **Anti-Entrapment** cover meeting current ASTM or ASME standards.

   Remodeling of an existing pool or spa includes structural modifications, additions, piping and equipment replacement.

   All circulating piping connected to the pool/spa system shall be pressure tested with a minimum of thirty-five (35) pounds constant pressure for 15 minutes.

   An approved hydrostatic relief device shall be installed on ***ALL*** proposed pools/spas. (Such as a minimum of eighteen inch by one and one half inch I.P.S. perforated tube into an eighteen by eighteen by twenty-four (18 x 18 x 24) inch gravel sump with three quarter (3/4) inch gravel.)

3. **Steel**: All reinforcing steel shall be deformed bars conforming to A.S.T.M. - A615 graded All pool construction shall conform to expansive soil details. Minimum clearance between earth and steel to be three (3) inches.

4. **Electrical Bonding**: All metallic parts of the pool structure, reinforcing steel, light fixture housings, metal ladders, diving boards, and any metal objects within five (5) feet of pool edge shall be bonded with a minimum of a number 8 gauge solid copper bond wire and approved clamp.

IMPORTANT: Upon completion and Inspector's Approval of the above items pool may be gunited.

5. **During Placement of Shotcrete**: All swimming pools and spas utilizing shotcrete (gunite) will require special inspection in accordance with Section 1701.5(12) UBC. The special inspector

shall demonstrate that he or she is qualified to inspect the work by submitting evidence of appropriate certifications prior to reporting to the job site. The special inspector shall be present during the taking of test specimens and placing of all shotcrete (gunite). The special inspector is required to provide continuous inspection of the placement of the reinforcement and shotcreting and shall submit a statement indicating compliance with the plans and specifications. Strength test reports shall be submitted prior to final inspection approval.

6. **Underground Electric**: Electrical conduit may be plastic PVC Sch 40 U. L. listed, eighteen (18) inches below grade. Above ground conduit shall be plastic PVC Sch 80 U. L. listed or rigid galvanized steel. Galvanized steel underground conduit shall be protected by at least a triple half overlap wrap of 40 mil. plastic tape (total 120 mil. cover) to a height of six (6) inches above grade.
   E.M.T. conduit is not allowed for exterior use. - H.B.M.C.

   All electrical boxes must be approved weatherproof outdoor type boxes. All Junction boxes and panels must be supported with rigid metal supports in addition to non-metallic conduits and be a minimum of eight (8) inches above the pool water line.

   Where a permanently installed pool/spa is installed, at least one 125 volt convenience receptacle shall be located a minimum of ten (10) feet from but not more than twenty (20) feet from the edge of the pool/spa. This receptacle shall be protected by a ground fault circuit interrupter (G.F.C.I.).

7. **Gas Piping/Test**: Gas lines must be pressurized to ten (10) pounds of pressure and hold constant for a minimum of fifteen (15) minutes.

   Underground piping may be factory coated steel pipe installed a minimum of twelve (12) inches below grade. All metal pipe and fittings shall be wrapped with approved 10 mil tape, half overlap double wrap to six (6) inches above grade (min. 40 mil cover).

   A shut off valve must be installed within three (3) foot of the heater. A flex gas line may not be used inside of the heater. Black steel iron pipe above grade must be painted to protect the pipe from corrosion.

   A) **Receptor**: All pool/spas shall dispose of swimming pool waste water into a three (3) inch P-trap connected to the house sewer. The receptor shall be a minimum six (6) inches above grade. Cleanouts are required and a strainer must be provided on the inlet. Backwash drain lines shall not be less than one and one-half (1 1/2) inch in size and provide a two (2) inch minimum air gap. Exception: Spas less than 750 gallons need not discharge into a sewer system.

   B) **Decking**: All pool/spa decks shall be designed and constructed for expansive soil conditions and have a minimum sand base with expansion joints every 100 square feet of deck. All reinforcing steel mesh or rebar shall be bonded with common no. 8 gauge bare copper bond wire and approved clamp.

IMPORTANT: ABOVE INSPECTIONS MUST BE APPROVED BY THE INSPECTOR PRIOR TO COVERING OR INSTALLATION OF A DECK

   C) **Equipment Foundations**: All mechanical equipment and pump motors shall be set on a concrete base or slab a minimum of two (2) inches above grade. All heating and electrical equipment shall be approved for outdoor use. Clearances for gas appliance and electrical panels must be per Code. All motors shall be secured to the pad/foundation.

Electrical Final:

No plug receptacles shall be installed within ten (10) feet of the inside face of the walls of the pool, one GFCI protected receptacle shall be within (20) feet of the pool. No receptacle shall be installed less than (5) feet from a spa, one GFCI protected receptacle shall be located within (10) feet of the spa. All lighting fixtures within five (5) feet horizontally and five (5) feet vertically of water edge must be G.F.C.I. protected.
(When the pool and spa are integral creating a conflict in the receptacle placement location, the pool placement dimension may apply)

All ground wires shall be properly connected to junction boxes. Motors and heaters are to be hooked up along with being properly grounded and bonded.

All pump motors, blowers and lighting shall have separate circuits. Disconnects shall be identified for each. Lighting shall be protected by G.F.C.I. circuits.

Pool/Spa light must function properly. Junction boxes must be listed by Underwriter's Laboratories for installation of swimming pools. They must have grounding screws in the box with means of independently terminating not less than two grounding conductors.

All 120v and 240v portable spas will be protected by a ground-fault circuit interrupter (G.F.C.I.).

Electric pool covers shall be protected by (G.F.C.I.).

All electrical breakers installed for pool/spas shall be certified as to manufacturers installed torque requirements by a licensed electrician or be torqued in the presence of the inspector.

Time clocks are required for all pool/spa circulation. Pumps then can be set to run in off-peak electric demand period (unless required to operate an active solar pool heating system) and for the minimum time necessary to maintain water in a clean and sanitary condition.

Safety Barrier:

****IMPORTANT NOTICE****

The Swimming Pool and Spa Safety Act of 2006 (amended 2017) provides that:

Commencing January 1, 2018, whenever a building permit is issued for that construction of a new swimming pool or spa, or any building permit is issued for remodeling of an existing pool or spa, including at a private, single-family home, it shall be equipped with **at least two of the following seven drowning prevention safety features**:

1. The pool shall be isolated from the home by a barrier conforming to Section 17.76.030 of the RPVMC.

   A) **60 inches high minimum** for pool or spa barrier
   B) without openings that allow a 4-inch sphere to pass through
   C) no configuration--allowing ladder like access
   D) access gates shall be self-closing, self-latching with the release device located **60 inches minimum** above grade and shall open outward away from the swimming pool or spa.

2. The pool shall incorporate removable mesh pool fencing that meets American Society for Testing and Materials (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 ASTM Specifications F 1346.

4. The residence shall be equipped with exit alarms on those doors providing direct access to the pool.

5. All doors providing direct access from the home to the swimming pool shall be equipped with a self-closing, self-latching device with a release mechanism placed no lower than **54 inches** above the floor.

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 F 2208 "Standards Specification for Pool Alarms" which includes surface motion, pressure, sonar, laser, and infrared type alarms. 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.

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 have 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).

The Swimming Pool and Spa Safety Act also requires that when a permit is issued to remodel an existing pool or spa, the permit shall require that the suction outlet(s) of the pool or spa be upgraded so as to be equipped with an **Anti-Entrapment** cover meeting current ASTM or ASME standards.

Remodeling a swimming pool or spa consist of **ANY** structural modifications, additions, piping and equipment replacement.
When a permit is issued for remodeling an existing pool or spa, it shall be indicated on the plans, if any, and in the permit description:

A) Listed **Anti-Entrapment** covers are required on all suction outlets.
B) Provide which of the seven drowning prevention measures is being utilized.

These provisions are in addition to the barrier required to protect access to the swimming pool or spa from adjacent properties or the public right of way (see Safety Fences).

Safety Fences:

All self-closing and self-latching devices required by this section, shall be installed and in proper working order before any water is placed in the pool, and must be inspected and approved by the Building Inspector.

All swimming pool, hot tub, spa or similar outdoor body of water intended for swimming or recreational bathing, 18 inches or more in depth, shall contain an enclosure or barrier to conform to the following requirements:

(Exception: Spas and Hot tubs of less than 750 gallons may have a rigid lockable cover)

1. A dwelling or appurtenant structure may be used as a part of the required enclosure.

2. The top of the barrier shall be at least sixty (60) inches above grade measured on the side of the barrier, which faces away from the swimming pool.

3. Openings in the barrier shall not allow passage of a four (4) inch diameter sphere. Shrubs, trees, or landscape materials cannot be considered as part of the barrier.

4. Solid barriers, such as masonry or concrete, or stone walls shall not contain indentations, protrusions or plants closer than forty-five (45) inches apart vertically, horizontally, or from top of wall, except for tooled masonry Joints.

5. Any configuration providing ladder-like access allowing illegal entry to the pool area shall be prohibited. Ladder-like access shall mean any method or action such as climbing, crawling, pushing, jumping or other means to gain access to a pool or spa area.

6. Where the barrier is composed of horizontal and vertical members, the distance between the tops of the horizontal members shall be forty-five (45) inches or more. Openings between vertical members shall not exceed four (4) inches.

7. Maximum mesh size for chain link fences shall be a 1-3/4 inch square unless the fence is provided with slats fastened at the top or the bottom which reduces the openings to no more than 1-3/4 inches, the wire shall not be less than nine (9) gauge.

8. Where the barrier is composed of diagonal members, such as a lattice fence, the maximum opening formed by the diagonal members shall be no more than 1-3/4 inches.

9. All required pool fence and gate enclosures shall extend to within two (2) inches of firm soil or pavement. All access gates shall be constructed in compliance with all requirements stipulated for pool fences in items 1 through 7 above, and shall be equipped to accommodate a locking device. Access gates shall open outward away from the pool, spa, or hot tub and shall be self-closing and have a self-latching device. The release mechanism of the self-latching device is to be located not less than sixty (60) inches from the bottom of the gate or adjoining grade.

10. The barriers and all self-closing and self-latching devices required by this section shall be installed and in proper working order before any water is placed in the pool.

IMPORTANT: UPON COMPLETION OF ABOVE AND BUILDING INSPECTOR'S APPROVAL,
FINISH PLASTER MAY BE APPLIED

Plumbing/Mechanical Final:

All hose bibs must be protected with anti-siphon devices.

A length of plumbing (36" minimum) between the filter and the fossil fuel heater must be provided to allow for the future addition of solar heating equipment.

All new pools shall be equipped with directional inlets for good mixing of the pool water.

Gas pool heaters shall have an on-off switch mounted on the outside of the heater for easy access to allow shutting off the operation of the heater without adjusting the thermostat setting.

A permanent weatherproof plate or card must be provided that provides instructions for the energy efficient operation of the swimming pool and for the proper care of swimming pool water when swimming pools cover is used.

Any new or replacement fossil-fueled swimming pool heater must have a thermal efficiency of at least 75% and must be so identified on the plan and the heater.

Outdoor pools equipped with a fossil fuel or electric heater must also be equipped with a pool cover.

All water piping exposed to sunlight must be painted for protection from ultra violet sunrays.

******IMPORTANT******

HOMEOWNER OR POOL COMPANY <u>MUST NOTIFY THE BUILDING DEPARTMENT</u> for a final inspection and approval.