

TUSTIN...



Proud of its Heritage, Preparing for its Future...

March 12, 2020

USER GUIDE FOR THE INSTALLATION OF SWIMMING POOLS and SPAS

Drowning is the leading cause of accidental death for children under five (5) years of age in California. Over 350 drowning and 2600 near-drowning incidents occur nationwide each year in private swimming pools. The use of effective residential swimming pool barriers in conjunction with adult supervision is the best way to minimize these accidents.

This user guide describes the City of Tustin's requirements for the construction or installation of swimming pools and spas. The guide is also designed to help you anticipate the procedures you will need to follow when you decide to build a swimming pool, spa or hot tub.

GENERAL REGULATIONS

Swimming Pool Safety Act (*HS Code, §§ 115920– 115929*) (California Building Code Section 3109.2) and its City of Tustin amendments are as follows:

115920. This act shall be known and may be cited as the Swimming Pool Safety Act. (Added by Stats. 1996, Ch. 925, Sec. 3.5. Effective January 1, 1997.)

115921. As used in this article the following terms have the following meanings:

(a) "Swimming pool" or "pool" means any structure intended for swimming or recreational bathing that contains water over 18 inches deep. "Swimming pool" includes in-ground and aboveground structures and includes, but is not limited to, hot tubs, spas, portable spas, and nonportable wading pools.

(b) "Public swimming pool" means a swimming pool operated for the use of the general public with or without charge, or for the use of the members and guests of a private club. Public swimming pool does not include a swimming pool located on the grounds of a private single-family home.

(c) "Enclosure" means a fence, wall, or other barrier that isolates a swimming pool from access to the home.

(d) "Approved safety pool cover" means a manually or power-operated safety pool cover that meets all of the performance standards of the American Society for Testing and Materials (ASTM), in compliance with standard F1346-91.

(e) "Exit alarms" means devices that make audible, continuous alarm sounds when any door or window, that permits access from the residence to the pool area that is without any intervening enclosure, is opened or is left ajar. Exit alarms may be battery operated or may be connected to the electrical wiring of the building.

(f) "ANSI/APSP performance standard" means a standard that is accredited by the American National Standards Institute (ANSI) and published by the Association of Pool and Spa Professionals (APSP).

(g) "Suction outlet" means a fitting or fixture typically located at the bottom or on the sides of a swimming pool that conducts water to a recirculating pump.

[Amended by Stats. 2012, Ch. 679, Sec. 1. (AB 2114) Effective January 1, 2013.]

115922.

(a) Except as provided in Section 115925, when a building permit is issued for the construction of a new swimming pool or spa or the remodeling of an existing swimming pool or spa, at a private, single-family home the respective swimming pool or spa shall be equipped with item #1 and, at least one additional 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. Any walls of the single-family structure or accessory structures used to complete the isolation enclosure must have door openings equipped with protection as required in item #4 or #5. Any such door protection device provided for this purpose may not be used to comply with the second drowning prevention feature.
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. The mesh fencing setback shall be not less than 20 inches from the water's edge.
3. An approved safety pool cover, as defined in subdivision (d) of Section 115921.
4. Exit alarms on the private single-family home's doors that provide direct access to the swimming pool or spa. The exit alarm may cause either an alarm noise or a verbal warning, such as repeating notification that "the door to the pool is open".
5. A self-closing, self-latching device with a release mechanism placed no lower than 54 inches (1372mm) above the floor on the private single-family home's doors providing direct access to the pool or spa.
6. An alarm that, when placed in a swimming pool or spa, 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 "Standard Safety 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 safety prevention feature.
7. Other means of protection, if the degree of protection afforded is equal to or greater than that afforded by any of the features 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 Testing Mechanical Engineers (ASME).

(b) Prior to the issuance of any final approval for the completion of permitted construction or remodeling work, the local building code official shall inspect the drowning safety prevention devices required by this act and if no violations are found, shall give final approval.

115923. An enclosure shall have all of the following characteristics:

- (a) Any access gates through the enclosure open away from the swimming pool, and are self-closing with a self-latching device placed no lower than 60 inches above the ground.
- (b) A minimum height of 60 inches.
- (c) A maximum vertical clearance from the ground to the bottom of the enclosure of two inches.
- (d) Gaps or voids, if any, do not allow passage of a sphere equal to or greater than four inches in diameter.
- (e) An outside surface free of protrusions, cavities, or other physical characteristics that would serve as handholds or footholds that could enable a child below the age of five years to climb over.
(Added by Stats. 1996, Ch. 925, Sec. 3.5. Effective January 1, 1997.)

115924.

(a) Any person entering into an agreement to build a swimming pool or spa, or to engage in permitted work on a pool or spa covered by this article, shall give the consumer notice of the requirements of this article.

(b) Pursuant to existing law, the Department of Health Services shall have available on the department's Web site, commencing January 1, 2007, approved pool safety information available for consumers to download. Pool contractors are encouraged to share this information with consumers regarding the potential dangers a pool or spa poses to toddlers. Additionally, pool contractors may provide the consumer with swimming pool safety materials produced from organizations

such as the United States Consumer Product Safety Commission, Drowning Prevention Foundation, California Coalition for Children's Safety & Health, Safe Kids Worldwide, Association of Pool and Spa Professionals, or the American Academy of Pediatrics.

(Amended by Stats. 2006, Ch. 478, Sec. 3. Effective January 1, 2007.)

115925. The requirements of this article do not apply to any of the following:

(a) Public swimming pools.

(b) An apartment complex, or any residential setting other than a single-family home.

[Amended by Stats. 2017, Ch. 670, Sec. 5. (SB 442) Effective January 1, 2018.]

115926. This article does not apply to any facility regulated by the State Department of Social Services even if the facility is also used as the private residence of the operator. Pool safety in those facilities shall be regulated pursuant to regulations adopted therefor by the State Department of Social Services.

(Added by Stats. 1996, Ch. 925, Sec. 3.5. Effective January 1, 1997.)

115927. Notwithstanding any other provision of law, this article shall not be subject to further modification or interpretation by any regulatory agency of the state, this authority being reserved exclusively to local jurisdictions, as provided for in subdivision (e) of Section 115922 and subdivision (c) of Section 115924.

(Added by Stats. 1996, Ch. 925, Sec. 3.5. Effective January 1, 1997.)

115928. Whenever a building permit is issued for the construction of a new swimming pool or spa, the pool or spa shall meet all of the following requirements:

(a)

(1) The suction outlets of the pool or spa for which the permit is issued shall be equipped to provide circulation throughout the pool or spa as prescribed in paragraphs (2) and (3).

(2) The swimming pool or spa shall either have at least two circulation suction outlets 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 between the suction outlets, or be designed to use alternatives to suction outlets, including, but not limited to, skimmers or perimeter overflow systems to conduct water to the recirculation pump.

(3) The circulation system shall have the capacity to provide a complete turnover of pool water, as specified in Section 3124B of Chapter 31B of the California Building Standards Code (Title 24 of the California Code of Regulations).

(b) Suction outlets shall be covered with anti-entrapment grates, as specified in the ANSI/APSP-16 performance standard or successor standard designated by the federal Consumer Product Safety Commission, 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.

(c) Any backup safety system that an owner of a new swimming pool or spa may choose to install in addition to the requirements set forth in subdivisions (a) and (b) shall meet the standards as published in the document, "Guidelines for Entrapment Hazards: Making Pools and Spas Safer," Publication Number 363, March 2005, United States Consumer Product Safety Commission.

[Amended by Stats. 2012, Ch. 679, Sec. 2. (AB 2114) Effective January 1, 2013.]

115928.5. Whenever a building permit is issued for the remodel or modification of an existing swimming pool, toddler pool, or spa, the permit shall require that the suction outlet or suction outlets of the existing swimming pool, toddler pool, or spa be upgraded so as to be equipped with anti-entrapment grates, as specified in the ANSI/APSP-16 performance standard or a successor standard designated by the federal Consumer Product Safety Commission.

[Amended by Stats. 2012, Ch. 679, Sec. 3. (AB 2114) Effective January 1, 2013.]

Withholding Approval- Pre-plaster inspection or approval to fill a pool or spa with water shall be withheld by the Building Official until there has been compliance with all pool safety requirements as stated in this guideline and a gunite report has been submitted to the Building Division.

EQUIPMENT REQUIREMENTS

All mechanical equipment shall be set on a concrete pad above grade. The manufacturer's installation instructions shall be available on the job site for inspection. Clearance to any building wall shall be per manufacturer's installation instructions and listings or a minimum of one foot (1').

All mechanical equipment must be installed in conformance with requirements of the 2019 California Mechanical Code. Mechanical equipment shall be screened from the public view through the use of walls, fencing and/or landscaping. Such equipment may be located within a required side or rear yard, subject to the following limits per the Tustin City Code.

1. The pump/filter may be located in a side yard, provided it is at least one foot (1') away from the dwelling exterior wall and at least ten feet (10') away from an existing dwelling window and/or enclosed patio located on the neighboring property. This provision is to attenuate noise to a reasonable level. Tustin City Code Section 8501et al.
2. The gas fuel fired water heater may be located within the side yard setback, provided it is located at least one foot (1') away from an exterior wall of the dwelling, and ten feet (10') from an HVAC air intake, window, greenhouse or enclosed patio on the neighboring property. A gas fuel fired water heater may be located within a rear yard area, provided that a minimum of one foot (1') is maintained to the property line. The heater shall be installed with clearance as listed by the American Gas Association or Underwriters' Laboratories. The minimum clearance is one foot (1') to any fence or wall.

ZONING REQUIREMENTS

1. Swimming pools in residential districts shall not be located closer than five (5) feet to any side or rear lot line, nor within those areas described by Section 9271i(1)(b) or 9271i(1)(c). (Ord. No.476; Ord. No.1367, Sec. II, 4-6-10)
2. Heater and filter units for swimming pools shall be located in the rear or side yard areas, and shall be screened from view. (Ord. No. 547)
3. Any lighting used to illuminate any swimming pool area shall be designed and shielded to confine all direct light rays to the subject property, minimizing spill-over light onto adjacent properties. (Ord. No. 770, Sec.8)

BUILDING PERMIT AND DESIGN REVIEW REQUIREMENTS

As part of the plan check process for obtaining a building permit, planning staff will complete design review of your project concurrent with the Building Division plan check. The following plans and information are needed by the Department of Community Development:

1. A completed permit application with required fees.
2. Three (3) copies of a plot plan with the following information noted is required:
 - a. Name of property owner.
 - b. Street address and county assessors parcel number (APN) of property involved.
 - c. Lot dimensions boundary lines and any easements on the property.
 - d. Yard setbacks, dimensions and location of proposed pool, spa or hot tub and necessary mechanical equipment.
 - e. The location, height, design and materials of required fencing, gates, pool and mechanical equipment screening, and a description of all pool safety features per **Swimming Pool Safety Act** selected for the project as stated above.
 - f. The location, height, type and intensity of exterior lighting, if any.
 - g. Footprint of the building showing the location of all windows and door openings into the pool enclosure. Additionally, show the location of all windows, doors and patios (onsite and offsite) within ten feet (10') of the pool pump and heater.

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- h. Foundation and pool construction design specifications, as required by the Building Official, (i.e.: footing details, reinforcement and engineering calculations) stamped and wet signed by the Engineer or Architect.
 - i. The site plan must bear the Engineer's or Architect's stamp and signature. It must identify slopes, elevations, retaining walls affecting or affected by the pool and setbacks to the pool/spa structure.
 - j. When substantial grading is evident or when the pool is within 15 feet of a descending slope, the following must be clearly noted on the site plan:

“The project Geotechnical Consultant shall examine the pool/spa subgrade after excavation and prior to reinforcement placement. The project Geotechnical Consultant shall certify that the modulus of subgrade reaction is uniform under all areas of the pool/spa structure and the pool/spa subgrade soil is capable of supporting the entire pool/spa without significant differential settlement. Further, the project Geotechnical Consultant shall certify that all geotechnical issues, including foundation setback from descending slopes are in conformance with applicable codes and good engineering practice.”

Clean-Up Bond – Prior to obtaining a permit for a pool, spa or hot tub you will be required to provide a bond to ensure that any public property is left clean and undamaged. The bond required for pool construction is \$3,000.00 and may be reduced to \$1,500.00 for a spa or hot tub construction.

CONSTRUCTION REQUIREMENTS

A. STRUCTURAL

1. All pool construction shall be in conformance with engineered design for expansive soils, unless a soil report by a registered engineer approved by the Building Official indicates otherwise.
2. Continuous inspection by a special inspector shall be required on all pools constructed of reinforced gunite, or reinforced cast-in-place concrete. The special inspector shall ensure all electrical bonding is properly installed; ensure all required reinforcing steel and diving board or slide anchor bolts are properly connected and collect concrete or gunite samples for strength testing.
3. The pool shall be constructed not less than seven feet (7') from the top of a slope and not less than five feet (5') from the toe (bottom) of a slope.
4. An approved gunite report that meets the engineered specified design will be required prior to pre-plaster inspection approval.

B. PLUMBING

1. Obtain permits from Public Works Department to bore curb for deck drainage systems. Provide a three-inch (3") P-trap for backwash of filter and connect to the house sewer line. Spas must have either a P-Trap, cartridge type filter or separation tank. A length of thirty-six inches (36") of PVC or copper plumbing from the heater output is required or per manufacturer's requirement, to allow for future addition of solar heating. PVC water and air lines must be painted or treated to protect them from ultraviolet rays.
2. Swimming pools shall be equipped with directional inlets which provide for adequate mixing of the pool water.
3. A time clock shall be installed on pool circulation pumps. The drain shall have anti-vortex or approved covers.
4. Waste Water Disposal: No direct or indirect connection shall be made between any storm drain, sewer, drainage system, seepage pit, underground leaching pit, or subsoil drainage line, or any line connected to a swimming pool, unless approved by the Building Official. Waste water from any filter, scum filter, scum gutter, overflow, pool emptying line or similar apparatus or appurtenance shall discharge into an approved type receptor by air gap and subsequently into the public sewer. The flood level rim of such receptor shall be at least six inches (6") above the flood level of the adjacent ground. Each such receptor, when permitted to be connected to any part of a drainage system, shall be provided with an approved three- inch (3") trap.

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5. **GAS LINES:** Buried plastic gas lines shall be eighteen inches (18") below grade with a minimum #14 AWG copper tracer wire. Plastic gas piping must be identified with the manufacturer's name or trademark and the words "Natural Gas". Transitions from plastic to metal screw pipe shall be made by using approved transition fittings only. (ASTM D 2513, Standard Specification for Thermoplastic Gas Pressure Pipe, Tubing, and Fittings, Category I transition fittings)

Before any appliances are connected to the system, an air pressure test and inspection at ten (10 lbs.) pounds for fifteen (15) minutes is required. Gas shut-off valve shall be within six feet (6') of equipment.

C. ELECTRICAL

1. **LIGHTS, RECEPTACLES AND SWITCHES:** Provide Ground Fault Circuit Interrupter (GFCI) for pool lights and receptacles. At least one receptacle shall be installed a minimum of ten feet (10') from and not more than twenty feet (20') from the inside wall of a permanently installed pool. All receptacles located within twenty feet (20') of the inside walls of a pool shall be protected by GFCI.

Electrical conduit (PVC) shall be eighteen inches (18") below finish grade and six inches (6") when below concrete. Above grade conduit may be schedule 80 PVC plastic or rigid galvanized steel. Wall switches must be located at least five feet (5') from the inside of walls of the pool, spa or hot tub.

2. **GROUNDING:** The following equipment shall be grounded:

- (a) Wet-niche underwater lighting fixtures;
- (b) Dry-niche underwater lighting fixtures;
- (c) All electric equipment located within five feet (5') of the inside wall of the pool;
- (d) All electric equipment associated with the recirculating system of the pool;
- (e) Junction boxes;
- (f) Transformer enclosures;
- (g) Ground Fault Circuit Interrupters (GFCI);
- (h) Panelboards that are not part of the service equipment and that supply any electric equipment associated with the pool.

Grounding must conform to all of the applicable code requirements of NEC Article 250.

3. **BONDING:** Bond all metal parts of the pool with pressure connectors and a bare copper #8 solid conductor, continue to the pool pad and connect to all pool pad motors and equipment. Cast brass or bronze ground clamps shall be used to connect copper conductors to metal parts.

The following parts shall be bonded together:

- (a) All metallic parts of the pool structure, including the reinforcing metal of the pool shell, coping stones, and deck.
- (b) All forming shells and metal screens.
- (c) The perimeter surfaces that extend 3' horizontally beyond the inside walls of the pool.
- (d) All metal fittings within or attached to the pool structure.
- (e) Metal parts of electric equipment associated with the pool water circulating system, including pump motors.
- (f) Metal parts of equipment associated with pool covers including electric motors.

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- (g) Metal-sheathed cables and raceways, metal piping, and all fixed metal parts that are within five feet (5') horizontally of the inside walls of the pool, and within twelve feet (12') above the maximum water level of the pool, or any observation stands, towers or platforms, or from any diving structures, and that are not separated from the pool by a permanent barrier.

ADDITIONAL INFORMATION

1. Prior to installing or constructing a pool, spa or hot tub, you should request verification from the Tustin Community Development Department of all yard setbacks and code requirements. Please contact the Planning Department for specific zoning setbacks and the Building Division for code requirements. Requests should be submitted to the department with a sketch of the boundary lines of the property and the proposed location of the pool, spa or hot tub and including dimensions of yard setbacks. The plan should also show location of proposed mechanical equipment along with its planned setback from property lines and adjacent walls.
2. If a contractor is doing the work: Verify that a building permit was obtained; be sure the contractor has a current contractors' license, Workers Compensation Insurance and a City business license.
3. If you live in an area with a Homeowner's Association, the Association may also require you to obtain their approval.

For additional information or staff assistance, we invite you to contact:

City of Tustin
Community Development Department
300 Centennial Way
Tustin, California 92780
PLANNING – (714) 573-3140
BUILDING - (714) 573-3131 or 573-3132

Staff is available to answer your questions during office hours between 7:30 a.m. and 5:30 p.m. Monday through Thursday and 8:00 a.m. to 5:00 p.m. on Fridays.

OTHER USER GUIDES AVAILABLE

Signs
Pools and Spas
Residential Room Additions
Temporary Use Permits
Gazebos and Patio Covers
Reroofing
Furnaces
Water Heaters
Wood & Metal Fences
Masonry Fences & Walls
Patio Slabs & Walkways
Built-in Outdoor Barbecues
Suspended Ceilings
Drywall Installation