

# CITY OF DANA POINT POOL STANDARD NOTES 2016 CBC

This project shall comply with the requirements of the 2016 series of the California Building Codes, which include the following:

- 2016 California Building Code
- 2016 California Residential Code
- 2016 California Mechanical Code
- 2016 California Plumbing Code
- 2016 California Electrical Code
- 2016 California Energy Efficiency Code
- 2016 California Green Building Standards Code and the City of Dana Point Municipal Ordinances

## NPDES INFORMATION

The discharge of pollutants to any storm drainage system is prohibited. No solid waste, petroleum byproducts, soil particulate, construction waste, or wash water generated on site or by construction activities shall be placed, conveyed, or discharged into the street, gutter, or storm drain system. The finish grade shall be sloped away from the building for drainage purposes.

## DEFINITIONS

**GRADE** is the underlying surface, such as earth or a walking surface.

**ENCLOSURE** means a fence, wall or other barrier that isolates a swimming pool from access to the home.

**EXIT DOOR 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 directly to the electrical wiring of the building.

**POOL BARRIER** includes the perimeter fence separating the pool/spa from the neighboring properties and the adjoining public area.

## GENERAL REQUIREMENTS

The sulfate content of most coastal soil is generally "severe" as categorized by the California Building Code section 18.

•Soils reports are required for all pools located at bluff top sites and along Beach Road.

•At all other sites, 4500 psi concrete (shotcrete) with a water/cement ratio of 0.45 and type V cement may be used in lieu of a soils report.

•Pools may be designed and built using less than 4500 psi concrete with a justifying soils report. A letter from a soils engineer, addressing the suitability of the site, the soil sulfides, the corresponding design parameters, and the soils report will be required at time of submittal.

• In all cases, deputy inspection and the appropriate reports are required for all shotcrete placements.

• Shotcrete concrete (wet or dry) shall conform to the following:

x Shall have an ultimate compressive strength of 4500 psi.

(Unless a soils report recommends an alternate strength).

x A water-cement ratio of 0.45.

x Type V cement

## SPECIAL REQUIREMENTS

•All sheets of the final plans and front sheet of the structural calculations, documents and soils reports prepared by a civil, structural or architect shall bear the signature and stamp of the professional engineer or architect, date of signing, and the expiration date of the registration.

•The Engineer of record shall review and approve the soils report.

Please note, Gunite is a registered trademark name for the dry process of shotcrete. The building code does not recognize "Gunite". All requirements for shotcrete per section 1908 apply to either application.

## SWIMMING POOL

Any structure intended for swimming or recreational bathing that contains water over 18 inches (610 mm) deep. This includes in-ground, aboveground and on-ground swimming pools, hot tubs, spas and fixed-in-place wading pools. CBC Section 3109.1 provisions apply to the design and construction of barriers for swimming pools located on the premises of Group R, Division 3 Occupancies. This includes a body of water over 18" deep where a drowning hazard exists. Ponds or fountains less than 18" deep are exempt from the barrier requirements.

## BARRIERS FOR SWIMMING POOLS, SPAS, AND HOT TUBS

Section 3109 of the 2016 California Building Code has been amended to read as follows:

Section 3109.4.1 The top of the barrier shall be at least 60 inches above grade measured on the side of the barrier, which faces away from the swimming pool. The maximum vertical clearance between grade and the bottom of the barrier shall be 2 inches measured on the side of the barrier that faces away from the swimming pool. Where the top of the pool structure is above grade level, such as an above ground pool, the barrier may be at ground level, such as the pool structure, the maximum vertical clearance between the top of the pool structure and the bottom of the barrier shall be 4 inches.

Section 3109.4.1.1 Openings in the barrier shall not allow passage of a 4 inch sphere.

Section 3109.4.1.2 Solid barriers which do not have openings, such as masonry or stone walls, shall not contain indentations or protrusions except for normal construction tolerances and tooled masonry joints.

Section 3109.4.1.3 Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal member is less than 45 inches, the horizontal members shall be located on the swimming pool side of the fence. Spacing between vertical members shall not exceed 1-3/4 inches in width. Where there are decorative cutouts within vertical member, spacing within the cutouts shall not exceed 1-3/4 inches in width.

Section 3109.4.1.4 Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is 45 inches or more, spacing between vertical members shall not exceed 4 inches. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1-3/4 inches in width.

Section 3109.4.1.5 Chain link dimensions. The maximum mesh size for chain link fence may be 2.25 inch square when the fence is provided with slats fastened at the top or bottom, which reduce the openings to no more than 1-3/4".

Section 3109.4.1.6 Where the barrier is composed of diagonal members, such as a chain link or lattice fence, the maximum opening found by the diagonal members shall be no more than 1-3/4 inches.

Section 3109.4.1.7 Access gates shall comply with the requirements of Sections 3109.4.1.1 through 3109.4.1.6 and be equipped to accommodate a locking device. Pedestrian-access gates shall open outward away from the pool and shall be self-closing and have a self-latching device. Gates other than pedestrian access gates shall have a self-latching device. Release mechanisms shall be in accordance with Sections 1008.1.8 and 1109.13. Where the release mechanism of the self-latching device is located less than 54 inches from the bottom of the gate, (1) the release mechanism shall be located on the pool side of the gate at least 3 inches below the top of the gate and (2) the gate barrier shall have no opening greater than Y, inch within 18 inches of the release mechanism.

Section 3109.4.1.8.1 Where a wall of a dwelling serves as part of the barrier, one of the following shall apply:

•All doors with direct access to the pool through that wall shall be equipped with an alarm that produces an audible warning when the door and its screen, if present, are opened. The alarm shall be listed in accordance with UL 2017. The audible alarm shall activate within 7 seconds and sound continuously for a minimum of 30 seconds immediately after the door is opened, and be capable of being heard throughout the house during normal household activities. The alarm shall automatically reset under all conditions. The alarm system shall be equipped with a manual means, such as a touchpad or switch, to temporarily deactivate the alarm for a single opening. Such deactivation shall last for not more than 15 seconds. The deactivation switch shall be located at least 54 inches above the threshold of the door. Other means of protection, such as self-closing doors with self-latching devices approved by the building official, shall be acceptable so long as the degree of protection afforded is not less than the protection afforded by the alarm system described above.

• The pool shall be equipped with a power safety cover that complies with ASTM F 1346

• Other means of protection, such as self-closing doors with self-latching devices, which are approved by the administrative authority, shall be accepted so long as the degree of protection afforded is not less than the protection afforded by Section 3109.4.1.8 items 1 and 2.

Section 3109.4.1.9 Where an above-ground pool structure is used as a barrier or where the barrier is mounted on top of the pool structure, and the means of access is a ladder or steps, then (1) the ladder or steps shall be capable of being secured, locked, or removed to prevent access or (2) the ladder or steps shall be surrounded by a barrier which meets the requirements of Sections 3109.4.1.1 through

3109.4.1.8 When the ladder or steps are secured, locked or removed, any opening created shall not allow the passage of a 4 inch diameter sphere.

Section 3109.4.2 Walls surrounding Indoor Swimming Pool shall not be required to comply with the requirements of Section 3109.4.1.8.

Section 309.4.3 Prohibited locations Barriers shall be located so as to prohibit permanent structures, equipment, or similar objects from being used to climb the barrier.

Section 3109.5 Entrapment avoidance. Suction outlets shall be designed to produce circulation throughout the pool or spa. Single outlet systems, such as automatic vacuum cleaning systems, or other such multiple suction outlets whether isolated by valves or otherwise shall be protected against user entrapment. (See the City of Dana Point Anti-entrapment handout-B084

Section 3109.6 Sound Attenuation. Filters, heating systems, and pumps installed to serve pool, spa, hot tub, waterfall, or any other body of water, shall be enclosed and soundproofed. An acoustical report prepared by a licensed or approved acoustical professional can be used to substitute for sound wall enclosures as long as the report demonstrates the compliance of the requirements specified in Chapter 11.10 of the Dana Point Municipal Code. Pool equipment located within 5 foot side yard setback may require a "Site Development Permit".

## 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 the standard F 1346-91.

## ELECTRICAL REQUIREMENTS - Excerpts below taken from Art. 680.

•"No non-pool equipment related UG wiring within 5 ft. of the pool shell edge (CEC 680.10)". No low voltage direct burial wiring within 10 ft. (CEC 411.5(B))

•A Minimum #8 AWG bare solid copper bonding conductor is required.

•No luminaries, lighting outlets or ceiling-suspended fans shall be located within 5 ft.

horizontally and not less than 12 ft. above the water level of the pool. CEC 680.22(b)(1)

•No electrical switching devices shall be located within 5 ft. of the pool edge. CEC 680.22(C)

•Where structural reinforcing steel is not available or encapsulated, at least one #8 AWG solid copper conductor secured within or under the perimeter surface and installed 18" to 24", measured horizontally from the inside walls of the pool. Section 680.26(B)(2)(b).

•Where the water is isolated by an insulated pool shell and there are no conductive elements in contact with the pool water, an intentional bond of a minimum conductive surface of 9 square inches installed in contact with the pool water and bonded to the equipment bonding grid wait a minimum #8 AWG solid copper conductor. Section 680.26(C).

•All 15 or 20 ampere single phase outlets supplying pool pumps require GFCI protection whether supplied by a receptacle cord connection or hard-wired to the branch circuit. Section 680.21(C)

•Cord connected pool filter pump shall be provided with a Ground Fault Circuit Interrupter that is integral part of the attachment plug or located in the power supply cord within 12 inches of the attachment plug only for storable pools. Section 680.31

•Pool/Spa lights which are low voltage will require 9 sq. in of bonding fitting in the recirculating piping.

•All metallic items within 5 ft. of the pool edge shall be effectively grounded. This includes, but not limited to:

Pool steel.

Metallic fencing within 5 ft.

Handrail bases.

Exposed patio cover/deck post bases within 5 ft. Pump motors. Filters

If Metallic and/or electronic controlled

Deck reinforcing steel.

Diving board bases.

Motorized pool cover housing.

All metallic piping and conduit within 5 ft. Pool heaters; ozonaters

## PLUMBING REQUIREMENTS

•PVC pipe shall be painted for UV protection.

•Anti-siphon devices are required on all hose bibs within the pool area.

•The gas line minimum burial depth of 18". Where protected from damage, the minimum cover shall be 12". When the minimum cover cannot be maintained the gas piping shall be installed in conduit or bridged (shielded) CPC 1211.1.2 A.

•If metallic pipe, specify an additional field wrapping of 2 layers of 10 mil PVC plumbers tape for factory coated and 4 layers for non-coated pipe.)

## ENERGY AND SAFETY REQUIREMENTS

A Pool/Spa solar blanket required. If heater used.

Glass within 5 feet of the pool edge shall be tempered or laminated safety glass. (CBC 2406.3) A completed installation certificate CF-2R-ALT-05E and CF-2R-PIB-03 is required at the time of final inspection.

## POOL DEMOLITION REQUIREMENTS

•The bottom shall be removed for drainage. I.e. several holes punched through the bottom.

•When the pool coping is removed, it shall be removed to a depth of 18" below the finished grade. (Removal of the coping is not a requirement).

•Removal of any above ground pool plumbing including pumps and heaters.

•When the electrical sub-panel is removed, the electrical sub-feed conductors shall be removed back to the electric service supply location.

•Conversion of the existing pool electrical system to any other use will require a separate permit and approval. An electrical inspection is required to determine if electrically safe. I.e. knock outs and breaker space(s) filled).

•The permit is based on the valuation of the work being done,

•Inspection is required before the pool/spa is filled in.

•The pool/spa must be filled in with sand (type SE25), dirt (compacted to 90%) or gravel.

•If the site will be built on, a certified compaction report from a recognized Soils reports lab is necessary.

FINISH GRADE AROUND THE STRUCTURE SHALL BE SLOPED 2% AWAY FROM THE BUILDING FOR DRAINAGE PURPOSES.

POOL & SPA STANDARD NOTES

2016 CBC

CODE CYCLE

B087- POOL NOTES

FORM NAME

CITY OF DANA POINT

COMMUNITY DEVELOPMENT, BUILDING and SAFETY DIVISION

33282 GOLDEN LANTER SUITE 209 DANA POINT, CA 92629

