



# RESIDENTIAL POOL AND SPA

(revised 8.26.2020)

**PROJECT ASSISTANCE CENTER**  
**200 Civic Center Way, El Cajon, CA 92020**  
**Phone: 619.441.1742**

## RESIDENTIAL POOL AND SPA CORRECTIONS

**Project Address: BP-**

### GENERAL REQUIREMENTS

- Plans must be drawn to scale; 1/8" minimum and all information must be legible. Third party plans, i.e., landscape or building site plans that are produced by a registered design professional must have written permission from the architect for use **or** shall be wet stamped and signed by the architect. Minimum sheet size is 11" X 17"
- Provide a statement on the cover sheet of the plans that this project shall comply with the 2019 California Building Code, 2019 California Mechanical Code, 2019 California Plumbing Code, 2019 California Electrical Code, 2019 California Energy Efficiency Standards and the City of El Cajon Local adoptions and ordinances.
- Provide a data block on cover sheet of the plans:
  - Job street address.
  - Owner's name, address and telephone number.
  - Name, address and telephone number of person who prepared the plans.
  - Name, license number, address and phone number of the Pool Contractor.
  - Legal description (A.P.N.).
  - Size (in square feet), gallons and depth of the pool.
- All sheets of the final plans, and front sheet of the structural calculations, documents and reports prepared by a civil or structural engineer or architect shall bear the signature and stamp of the professional engineer or architect, date of signing, and the expiration date of the registration.
- All sheets prepared by the Design/Build Contractor must include the business name, address and license number of the contractor and be wet signed by the contractor and include the CSLB license number of the contractor. Digital signatures accepted for electronic uploads.
- A current soils report is required for an Engineered Site, Bluff Top lot, Sloped lot, Flood Plain locations, sites with a previously identified slope failure or any area designated as requiring a soils report by the Building Official. When a soils report is required, (2) copies are generally required. Where the report is submitted with the grading plan, provide an additional copy with the pool submittal to the Building

Division. Pools with soils report require the pool Engineer of Record (E.O.R.) to approve and document the approval of the report on the cover sheet.

- Any special conditions such as slopes, surcharged loads, bluff top location, or flood plain location, shall contain a stamp and signature *or* a statement with signature on the site plan thereby designating them. If special requirements are present, all requirements shall be identified and those sheets included. All sections and details must be referenced.
- The site plan shall show the site drainage provisions. Include the destination of the drainage. Drainage is not permitted to drain onto adjoining properties. When the equipment is located in a subterranean vault, additional drainage and/or sump pump is required.
- The architect or engineer of record shall list on the cover sheet, all special inspections where required. Note that Deputy Inspections and reports are required for all Shotcrete (Gunitite) applications.
- Note on the plan, **Shotcrete** concrete (wet or dry) shall conform to the following, unless approved master plan specifies other:
  - Shall have an ultimate compressive strength of **2500 psi**. (Unless a soils report recommends an alternate strength).
  - A water-cement ratio of 0.45.
  - Type V cement.
  - Deputy Inspection is required per CBC 1704 and per Master Plan from Engineer.
- Where applicable, the site plan shall show BBQ's, fire pit, patio covers locations and distances from property lines.
- Note on the site plan; ***"The discharge of pollutants to any storm drainage system is prohibited. No solid waste, petroleum byproducts, soil particulate, construction waste materials, or waste water generated on construction sites or by construction activities shall be placed, conveyed or discharged into the street, gutter or storm drain system."***
- When generic pool engineering is provided, the applicable details shall be notated on the pool-shell-wall site plan. All applicable data from generic tables shall be highlighted.
- Site plan must show the distance between house & water's edge. If any glass (doors and/or windows) are less than 5' from water's edge, then that glass needs to be tempered glass. Note this requirement on the plans. Show dimensions from the pool edge to any adjacent structures. Any structures closer than as prescribed to pool per CBC 1808.7 requires engineering for surcharge loads.
- Show on the site plan, the pool equipment distance from the property lines.

- Detail the provisions for expansive soil. See Special Requirements for in-ground swimming pools and spas. Note on the plans the field memo requirements.
- Detail any additional code requirements such as those for steps, handrails, and/or guardrails if applicable. If conditions dictate, note on plans that compliance with current 2019 CBC requirements is required. For example, handrails will be required for a water slide into the pool.
- Detail the 2019 CEES Title 24 requirements on the cover sheet. Note the 3' length of pipe for solar and directional water outlets.
- Note on plans: If heated, a pool cover is required for both pools and spas, cut to size.
- Note on the cover sheet, a Title 24 Certification Form is required at the time of inspection for the pool heater installation. (CEC-CF2R-PLB-03-E Revised 01/20)
- Note on the plans that anti-siphon devices are required on hose bibs within the pool area.
- Provide an enlarged plan view layout of the pool equipment area detailing the working clearances required for the pool pumps, heater, and pool sub-panel. A 30" minimum working clear space is required for the pool panel.
- Detail on the plans, when the pool deck or walking surface of the surrounding pool area is located more than 30" above the adjoining surface; a minimum 42" high guard rail system is required.
- Detail on the plans, when stairs consisting of more than 3 risers, require a minimum of one (1) handrail installed between 34" and 38" above the nosing of the stair; included as part of the pool/pool deck construction.

## **PLUMBING**

- Provide and show the locations, including the supply and destination of the underground gas lines.
- Show on plans the manufacturer, model, BTU's and approval number from a recognized testing agency for the Pool Heater.
- Show location of the 3" minimum P-Trap. When a cartridge type filter is used, the P-Trap may be reduced to 1-1/2" for drainage. Provide the manufacturer, model and approval number from a recognized testing agency for the Cartridge Filter.

- If applicable, detail and show the sleeve and venting requirements for underground gas installed beneath any structures per CPC section 1210.1.6.1.
- If applicable, detail and show on the plumbing plan, the sump pump system including the size, manufacturer, model number and electrical requirements.

### **GAS PIPING**

- Show the routing and size of the gas piping.
- Specify on the plan the type of piping and specify a Tracer wire if non-metallic piping. Note that a minimum metallic transition piping of 30" horizontal is required.
- Specify on the plan the gas line minimum burial depth of 18". Where a minimum depth is not achievable, detail the minimum 2" concrete cap protection.
- When metallic pipe is used below ground, specify on the plan that an additional field wrapping of 2 layers of 10 mil PVC plumbers tape is required for factory coated pipe **or** specify the use of an approved pipe primer and an additional field wrapping of 4 layers of 10 mil PVC plumbers tape for non-coated pipe, nipples and fittings.

### **ELECTRICAL**

- Show on the site plan, the size and location of the electrical service. Note that space and capacity must be available in the service panel for the additional loads of the pool equipment. For services less than 200 amps, electrical load calculations are required.
- Show on the site plan, the routing and size of the Underground electrical conduit and overhead power lines must be minimum of 22.5 feet above water.
- Note on the plan ***"No non-pool equipment related UG wiring is permitted within 5 ft. of the pool shell edge"*** per CEC section 680.10.
- Note on the plan, ***"No low voltage direct burial wiring is permitted within 10 ft. of the pool shell edge"*** per CEC section 411.5(B).
- Note on the plan: A Minimum #8 AWG bare copper bonding conductor is required.

- Show the location and size, in amperage, of the pool sub-panel.
- Show and note all 15 or 20 ampere single phase outlets supplying pool pumps require GFCI protection, weather supplied by a receptacle and cord connection **or** hard-wired to the branch circuit per CEC section 680.22(B).
- Show the required 30" minimum working clearances at the pool sub-panel board.
- Show and note a minimum of one (1) GFCI protected general-purpose outlet, listed as weather-resistant, shall be located no less than 6 feet from and no more than 20 feet away from the inside wall of the pool, with a weather tight cover per CEC section 680.22(A)(3).
- Note that a 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. Maximum length of cord is 3 feet.
- Show and notate that no luminaries, lighting outlets or ceiling-suspended fans located within 5 ft. measured horizontally from the inside wall of the pool shall be installed and no less than 12 feet above the water level of the pool per CEC section 680.22(B)(1).
- Show and notate on the plan that no electrical switching devices shall be located within 5 ft. of the pool edge per CEC section 680.22(D).

#### **BONDING GRID SYSTEM**

- Provide and show equipotential bonding where structural reinforcing steel is not available or encapsulated, at least one #8 AWG solid copper conductor, secured within or under the perimeter surface, shall be installed 18" to 24", measured horizontally from the inside walls of the pool per CEC section 680.26(B)(2)(b).
- Equipotential Bonding Grid: Information regarding bonding must be on the plans. Note: Perimeter surfaces shall extend (3 ft) horizontally beyond the inside walls of the pool and shall include unpaved surfaces as well as poured concrete and other types of paving. Note: reinforcing steel and copper conductor grids are required to be attached to the pool structure at minimum of (4) points uniformly spaced around the perimeter of the pool.
- Provide and show, where the water is isolated by an insulated pool shell and there are no conductive elements (vinyl pool with no rebar) in contact with the pool water, an intentional bond of a minimum conductive surface of 9 square inches shall be installed in contact with the pool water and bonded to the equipment bonding grid with a minimum #8 AWG solid copper conductor per CEC section 680.26(C).

- Notate on the plan, all metallic items within 5 ft. of the pool edge shall be effectively grounded. This includes, but not limited to:
  - a. Pool Steel including the deck reinforcing steel.
  - b. Metallic fencing within 5 feet of the inside edge of the pool.
  - c. Diving board and Handrail bases.
  - d. Motorized pool cover housings.
  - e. Exposed patio cover/deck post bases within 5 feet of the inside edge of the pool.
  - f. All metallic piping and electrical conduit within 5 feet of the inside edge of the pool.
  - g. Pump motors, water heaters, wet niche lighting, filters (If Metallic and/or electronic controlled) and any other metallic or electrically controlled pool and spa related equipment.

### **POOL BARRIER**

- Detail on the plan, a minimum of two safety features as required per CBC 3109.
- Provide and show details of the pool barrier, including but not limited to:
  - 5 ft. high (measured from the outside).
  - Non-climbable (<45" horizontal spacing).
  - No openings greater than 4" with the under the fence clearance (2" if earth / 4" if hard surface).
  - Chain link is 11 gauge minimum and 1-3/4" maximum opening. (Chain link fencing requires a separate Planning Division approval).
- Provide and show details of the pool barrier compliant gate(s), including, but not limited to:
  - Same dimensional requirements as pool barriers.
  - Shall swing away from the pool area (except garage door).
  - Self-closing and self-latching with the latch height of 54" Minimum.
- Provide and show permanently installed door alarm(s) (from residence to pool area). Alarms are required to provide **all** of the following:
  - Sound a 30 sec. Continuous sound with a maximum 7 sec. delay;
  - Alarm shall provide an 85 dba. alarm @ a 10 ft. distance with an automatic reset;
  - Have a maximum temporary manual deactivation period of 15 seconds;
  - Be located at a minimum of 54" height above the finished floor; **or**
  - If the door is self-closing, self-latching with the latch located at a minimum of 54" height above the finished floor, an alarm is not required.

- Provide and show a listed, locking spa cover is used in lieu of the above fence and gate. The plans shall show compliance with ASTM F1346-91. Attach a Manufacturers specification sheet for the proposed cover.
  
- Other types of alarms, i.e.; sonar, motion, etc. require a written request to the Building Official for approval on a case by case basis.

In lieu of resubmittal, signature by owner or contractor agrees to all above requirements listed and plans can be approved and permit issued.

If you have any questions please contact our office.

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