



SWIMMING POOL AND SPA PLAN SUBMITTAL REQUIREMENTS

Definition: From 2019 CBC section 202: 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 above-ground structures and includes, but is not limited to, hot tubs, spas, portable spas and non-portable wading pools. A building permit is required for the installation of all pools, spas, decorative ponds and fountains that contain water that is more than 18 inches deep.

Before Submittal please contact:

Contra Costa County Public Works Drainage Fees- Jeff Carlton jeff.carlton@pw.cccounty.us **925-646-1269** for properties wanting to build accessory structures, pools, residential units etc. Please have Jeff verify if any drainage fees are due or not and submit to the Building Department proof of contact with him at time of plan submittal.

Contra Costa Environmental Health 925-608-5500: Approval stamp is required for properties that have septic tanks. Copy of approval needs to be turned in to the Building Department at time of plan submittal.

Iron House Sanitary District ironhousesd@isd.us.com **925-625-2279** for any projects with new plumbing additions, kitchen, bathrooms, sinks etc... need to obtain approval from Iron house Sanitary and submit copy of their approval to the Building Department.

Plan requirements for swimming pools & spas:

After checking in with the above agencies and obtaining the necessary approvals, below are the requirements to follow to submit to the Building Department to obtain a Building permit.

1. **Preliminary Title Report:** A copy of the property's preliminary title report, usually available from your title company please make sure that the report is no more than 6 months old should be submitted along with the plans and permit application for all accessory structures.
2. **Plot Plan:** An aerial view of the existing property that shows the property lines, the existing house, other existing accessory structures, septic systems, easements, retaining walls, and the location of the proposed pools/spas. Show setbacks to property lines and the dimensions/floor area of all existing and proposed structures, the location of the pool equipment, and the location of electrical subpanels, disconnects, or receptacles that serve the pool equipment. The plot plan should also include the name and phone number of the property owner, the address of the project.

3231 Main St. Oakley, CA 94531 925-625-7005, 925-679-1707 (fax)

www.ci.oakley.ca.us

3. The permit and inspections for an in-ground pool will cover the entire pool structure, the equipment, the utility connections and all of the required safety measures. The permit and inspections for an above-ground pool or spa will cover mainly the electrical connections for the equipment, the location and pool setbacks, and the required safety measures. The plans for in-ground pools will also include the engineer's wet stamped and signed detail sheet (steel schedule) with the specific items that apply to the pool highlighted as well as form CEC-CF2R-PLB-03-E- pool and spa heating systems, this form is required by the State of California.

GENERAL REQUIREMENTS:

1. The setback requirement for all pools and spas is a minimum of 5' from the property line to the water's edge. Pool mechanical equipment must also be located at least 5' from the property line.
2. Glass that is located within 60" horizontally from the water's edge and that the lowest edge is not more than 60" above the walking surface shall be tempered glass as per 2019 CBC 2406.4.5.
3. Swimming pools or spas shall have at least two circulation drains per pump that are hydraulically balanced and symmetrically plumbed through one or more T fittings, and that are separated by a distance of at least three feet between the drains as per 2019 CBC 3109.2 (115928)(a)(2). Not required for above ground pools that drain only through a surface skimmer.

SAFETY FEATURES REQUIRED FOR ALL POOLS OR SPAS:

1. The pool or spa area shall be completely surrounded by a fence or enclosure that is at least 5' in height (the house may be part of the enclosure). The outside surface shall be free of protrusions 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. Two inch maximum clearance from the ground to the lower edge of the fence and maximum gaps or voids that do not allow the passage of a sphere greater than 4" as per 2019 CBC 3109.2 (115923).
2. Access gates (through the pool surround) shall be self closing and self latching and shall swing away from the pool area (swing in the egress direction) with latches located no lower than 60" above grade or finished floor per 2019 CBC 3109.2 (115923)(a). When the garage man door has direct access to the pool area it shall be self closing, self latching with a gate type latch located at least 60" above the floor **or** the door shall be equipped with an audible alarm as per bullet point #3 below.
3. All dwelling doors leading directly to the pool area shall be alarmed with an approved alarm. The audible alarm shall activate within 7 seconds, shall sound continuously for at least 30 seconds and shall automatically reset under all conditions. Alarms shall be equipped with a manual switch or touch pad that deactivates that alarm for a single opening; such deactivation shall not last more than 15 seconds. 2019 CBC 3109.2 (115923)(a)(4).

ELECTRICAL REQUIREMENTS FOR ABOVE GROUND POOLS AND SPAS:

1. Most above ground pools have cord and plug type pumps with a maximum 3' long cord. Provide a 15 or 20 amp (check pump manufacturer's listing) GFCI protected receptacle located not closer than 6 ft. from the inside edge of the pool wall. The receptacle shall be a single outlet type, employ a locking configuration, have GFCI protection, and shall have a weather proof bubble type cover that can be closed when the plug is in the receptacle. If the previous conditions are not met the pump motor receptacle must be at least 10 feet from the wall of the pool. When electrical connections run across yards to the pool/receptacle location, the electrical conductors shall be approved for wet locations, shall be located in an underground conduit, and shall include a green insulated copper equipment grounding conductor not smaller than 12 AWG. Extension cords (other than the 3 ft. cord supplied with the motor) may not be used.
2. Spas rated at 240 volts shall have a disconnecting means that simultaneously disconnects all ungrounded conductors. The disconnecting means shall be readily accessible, within sight of the spa or hot tub, and located at least 5 ft. horizontally from the inside walls of the spa. The horizontal distance is to be measured from the water's edge along the shortest path required to reach the disconnect as per 2019 CEC 680.41. All spa circuits shall be GFCI protected unless the listed packaged spa equipment assembly includes integral ground-fault circuit-interrupter protection for all electrical parts within the unit or assembly.



CITY OF OAKLEY BUILDING PERMIT APPLICATION

JOB ADDRESS: _____ SUBDIV # _____ LOT # _____

PROJECT DESCRIPTION _____

PROJECT VALUATION: \$ _____ SEPTIC SYSTEM: YES NO

PERMIT TYPE: BUILDING MECHANICAL ELECTRICAL PLUMBING SIGN
SOLAR PANEL UPGRADE Y/N DEMO REROOF POOL/SPA -- Re-locate A/C Y/N

LIVING AREA SQ FT: _____ DECK/PORCHES SQ FT: _____ GARAGE SQ FT: _____

PROPERTY OWNER: _____

ADDRESS: _____

CITY, STATE, ZIP: _____ PHONE #: _____

CONTRACTOR: _____ STATE LIC #: _____

ADDRESS: _____

CITY, STATE, ZIP: _____ PHONE # _____

ARCH/ENGR: _____ LIC # _____ PHONE # _____

ADDRESS: _____

CITY, STATE, ZIP: _____

PROJECT MANAGER: _____ PHONE #: _____

Permitted work hours:

Operate or perform construction or repair (which creates noise) within or adjacent to a residential land use district except during the following hours:

1. Monday through Friday: 7:30 am to 7:00 pm
2. Saturdays, Sundays & holidays: 9:00 am to 7:00 pm

Initial: _____

ALL PERMITS REQUIRE A FINAL INSPECTION

ALL PERMITS HAVE AN EXPIRATION DATE, 365 DAYS FROM LAST VALID INSPECTION



CITY OF OAKLEY BUILDING PERMIT APPLICATION

LICENSED CONTRACTORS DECLARATION

I hereby affirm that I am licensed under the provisions of Chapter 9 (commencing with section 7000) of the Business & Professions Code, & my license is in full force & effective. Initial: _____

WORKMAN'S COMPENSATION

I hereby affirm that I have a certificate of consent to self-insure, or a certificate of Worker's Compensation Insurance, or a certified copy thereof (sec. 3800 lab C) Initial: _____

EXEMPTION FROM WORKER'S COMPENSATION INC

I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Worker's Comp Laws of California Initial: _____

NOTICE TO THE APPLICANT: *If after making this Certificate of Exemption, you should become subject to the Worker's Compensation provisions of the Labor Code, you must forthwith comply with such provisions or this permit shall be deemed revoked.*

OWNER-BUILDER DECLARATION

I hereby affirm that I am exempt from the Contractor's License Law for the following reason (Sec7031.5), Business & Professions Code: Any City or County which requires a permit to construct, altar, improve, demolish or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he is licensed pursuant to the provisions of the Contractor's License Law (Chapter 9(commencing with Section 7000) of Division 3 of the Business & Professions Code) or that he is exempt there from & the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars(\$500).

- I, as owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business & Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, &who does such work himself or through his own employees. Provided that such improvements are not intended or offered for sale. If, however, the building improvement is sold within one year of completion, the owner/builder will have the burden of proving that he did not build or improve for the purpose of sale)
- I, as the owner of the property, am exclusively contracting with licensed contractors to construct the project (Sec 7044 Business & Professions Code: The Contractor's License Law does not apply to an owner of property who builds/improves thereon, & who contracts for such project with a contactor(s) licensed pursuant to the Contractor's License Law)
- I am exempt under Sec. _____ Business & Professions Code for this reason.
Applicant:_____

NOTICE TO APPLICANT I certify that I have read this application & state that the information on the permit is correct. I agree to comply with all City and County ordinances and state laws relating to building construction and hereby authorize representatives of this city to enter upon the above mentioned property for inspection purposes.

SECTION 106.4.4 UNIFORM BUILDING CODE

Expiration: Every permit issued by the Building Official under the provisions of this code shall expire by limitation and become null & void, if the building or work authorized by such permit is not commenced with 180 days from the date of such permit, or if the building or work authorized by such permit is suspended or abandoned at any time after the work is commenced for a period of 180 days.

APPLICANT/AGENT _____

DATE: _____

POOL AND SPA HEATING SYSTEMS

CEC-CF2R-PLB-03-E (Revised 01/20)

CALIFORNIA ENERGY COMMISSION



CERTIFICATE OF INSTALLATION		CF2R-PLB-03-E
Pool And Spa Heating Systems - For Non-HERS Registered Projects (Page 1 of 3)		
Project Name:	Enforcement Agency:	Permit Number:
Dwelling Address:	City:	Zip Code:

A. Pool and Spa System Type

01	Pool and Spa System Type	
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B. Pool and Spa Systems and Equipment Requirements (Section 110.4(a) and 110.5)

01	Heater has a thermal efficiency that complies with the Appliance Efficiency Regulations.
02	A readily accessible on-off switch is mounted on the outside of the heater, which allows the heater to be shut off without the user adjusting the thermostat setting.
03	A weatherproof plate or card containing instructions for the energy-efficient operation of the pool or spa heater is permanently mounted.
04	No electric resistance heating except for listed package units that have fully insulated enclosures and tight fitting covers that are insulated to at least R-6. Or if documentation is provided that at least 60% of the annual heating energy is from site solar energy or recovered energy.
05	Heating system has no pilot light.

The responsible person's signature on this compliance document affirms that all applicable requirements in this table have been met.

C. Pool and Spa System Installation Requirements (Section 110.4(b))

01	To allow for the future addition of solar heating equipment, at least 36" of pipe is installed between the filter and heater, or dedicated suction and return lines are installed, or built-in, or built-up, connections for future solar heating are provided.
02	A cover is provided for outdoor pools or spas that have a heat pump or gas heater.
03	Pool system has directional inlets to adequately mix the pool water.
04	Pool system has a time switch that allows the pump to be set or programmed to run during off-peak periods only.

The responsible person's signature on this compliance document affirms that all applicable requirements in this table have been met.



CERTIFICATE OF INSTALLATION		CF2R-PLB-03-E
Pool And Spa Heating Systems - For Non-HERS Registered Projects		(Page 2 of 3)
Project Name:	Enforcement Agency:	Permit Number:
Dwelling Address:	City:	Zip Code:

D. Pool Pump Sizing and Flow Rate Specification (Section 150.0(p))			
01	The pool pump specified is listed in the CEC database of certified pool pumps.		
02	The pool pump flow rate shall not exceed the maximum pump flow rate calculated based on pool sizing in the table below. The return pipe diameter, suction pipe diameter, and filter area shall be at least as large as the required minimums shown in the table. Alternatively, a flow calculation or flow test result shall be provided to demonstrate that the pump flow rate is less than 6 hour filtration turnover, and the return pipe flow rate does not exceed 8 fps and that the suction pipe flow rate does not exceed 6 fps.		
03	An alternative compliance calculation or a flow test result is provided for this pool or spa use (must attach flow calculation or flow test result to this form)		
04	The pump is capable of operating at 2 or more speeds (not applicable if pump is less than 1 horsepower).		
05	Each auxiliary pool load is served by either a separate pump, or the system is served by a multi-speed pump.		
06	Volume of Pool (gallons)		
07	Filter Type (Cartridge, Sand, DE)		
	08a Required Min Return Pipe Diameter (inches)	08b Required Min Suction Pipe Diameter (inches)	08c Required Min Filter Area (ft ²)
			08d Required Max Pump Flow (gpm)
09	Return Pipe Diameter (inches)		
10	Suction Pipe Diameter (inches)		
11	Filter Surface Area (ft ²)		
12	Max Pump Flow Rate (gpm)		
13	Measured Flow Rate Return Line (fps)		
14	Measured Flow Rate Suction Line (fps)		
15	Compliance Statement:		
The responsible person's signature on this compliance document affirms that all applicable requirements in this table have been met.			

E. Pool System Piping (Section 150.0(p)2)	
01	The suction side pipe is straight for at least 4 pipe diameters before entering the pump (See table below for the required straight run lengths for various pipe sizes).
02	All elbows are sweep elbows, or an elbow type that has a pressure drop that is less than the pressure drop of a straight pipe with a length of 30 pipe diameters.
The responsible person's signature on this compliance document affirms that all applicable requirements in this table have been met.	

F. Pool Filters and Valves (Section 150.0(p)3 and 4)	
01	If a filter is used in a pool intended for public use: The size of the filter is at least the size specified in NSF/ANSI 50.
02	If a backwash valve is used: The diameter of the backwash valve is at least 2 inches, or the diameter of the return pipe, whichever is greater.
The responsible person's signature on this compliance document affirms that all applicable requirements in this table have been met.	



CERTIFICATE OF INSTALLATION		CF2R-PLB-03-E
Pool And Spa Heating Systems - For Non-HERS Registered Projects		(Page 3 of 3)
Project Name:	Enforcement Agency:	Permit Number:
Dwelling Address:	City:	Zip Code:

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

1. I certify that this Certificate of Installation documentation is accurate and complete.

Documentation Author Name:	Documentation Author Signature:
Documentation Author Company Name:	Date Signed:
Address:	CEA/HERS Certification Identification (If applicable):
City/State/Zip:	Phone:

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

- The information provided on this Certificate of Installation is true and correct.
- I am either: a) a responsible person eligible under Division 3 of the Business and Professions Code in the applicable classification to accept responsibility for the system design, construction, or installation of features, materials, components, or manufactured devices for the scope of work identified on this Certificate of Installation, and attest to the declarations in this statement, or b) I am an authorized representative of the responsible person and attest to the declarations in this statement on the responsible person's behalf.
- The constructed or installed features, materials, components or manufactured devices (the installation) identified on this Certificate of Installation conforms to all applicable codes and regulations and the installation conforms to the requirements given on the Certificate of Compliance, plans, and specifications approved by the enforcement agency.
- I will ensure that a registered copy of this Certificate of Installation shall be posted or made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a registered copy of this Certificate of Installation is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Builder/Installer Name:	Responsible Builder/Installer Signature:	
Company Name: (Installing Subcontractor or General Contractor or Builder/Owner)	Position With Company (Title):	
Address:	CSLB License:	
City/State/Zip:	Phone:	Date Signed:

CF2R-PLB-03-E User Instructions**A. Pool and Spa System Type**

Pick from Pool only, Spa only, or Pool and Spa

B. Pool and Spa Systems and Equipment Requirements (Section 110.4(a) and 110.5)

Before any pool or spa heating system or equipment may be installed, the manufacturer must certify to the Energy Commission that the system or equipment complies with §110.4 and §110.5. The requirements include minimum heating efficiency according to Appliance Efficiency Regulations, an on-off switch outside the heater, permanent and weatherproof operating instructions, no continuous pilot light, and no electric resistance heating.

C. Pool and Spa System Installation Requirements (Section 110.4(b))

A time switch or similar control mechanism must be installed as part of the pool water circulation control system that will allow all pumps to be set or programmed to run only during the off-peak electric demand period and for the minimum time necessary to maintain the water in the condition required by applicable public health standards.

D. Pool Pump Sizing and Flow Rate Specification (Section 150.0(p))

The pool filtration flow rate may not be greater than the rate needed to turn over the pool water volume in 6 hours or 36 gpm, whichever is greater. Calculate Max Flow Rate using the following equation:

$$\text{Max Flow Rate (gpm)} = \frac{\text{Pool Volume (gallons)}}{360\text{min.}}$$

Pool piping must be sized according to the maximum flow rate needed for all auxiliary loads. Show work to calculate return and suction line flow rate, minimum filter area, and the maximum pump flow rate correspond to the pool volume in accordance to section 150.0(p), or refer to Table C below for the prescriptive values. The maximum velocity allowed is 8 fps in the return line and 6 fps in the suction line, and the maximum pump flow rate is less than 6 hour filtration turnover.

03 Select whether the alternative calculation is used.

06 Enter the Pool Volume (gal).

07 Enter Filter Type (Cartridge, Sand, DE).

08a Enter the Required Minimum Return Pipe Diameter (inches).

08b Enter the Required Minimum Suction Pipe Diameter (inches).

08c Enter the Required Minimum Filter Area (ft²).

08d Enter the Required Maximum Pump Flow (gpm).

09 Enter Return Pipe Diameter (inches).

10 Enter Suction Pipe Diameter (inches).

11 Enter Filter Surface Area (ft²).

12 Enter the Maximum Pump Flow Rate (gpm).

13 Enter the Measured Flow Rate of the Return Line in fps. This is only used if the alternative calculation is used.

14 Enter the Measured Flow Rate of the Return Line in fps. This is only used if the alternative calculation is used.

15 Automatically completed Compliance Statement.

E. Pool System Piping (Section 150.0(p)2)

There must be a length of straight pipe that is greater than or equal to at least 4 inches pipe diameters installed before the pump. Refer to Table D below for the required pipe length. Traditional hard 90° elbows are not allowed. All elbows must be sweep elbows or a type of elbow that has a pressure drop less than the pressure drop of straight pipe with a length of 30 pipe diameters.

F. Pool Filters and Valves (Section 150.0(p)3 and 4)

Backwash valves must be sized to the diameter of the return pipe or 2 inches, whichever is greater. Multiport backwash valves have a high pressure drop and are discouraged.

Table C
Pool sizing (Values are based on a maximum allowable turnover rate of 6- hours)
 Note: For pumps greater than 1 hp. The maximum Pump Flow is the lowest speed default filtration

Max Pool Volume (gallons)	Min Pipe D or Greater (inches)		Min Filter Area or more (square feet)			Max Pump Flow (gpm)
	Return	Suction	Cartridge	Sand	DE	
13,000	1.5	1.5	100	2.4	20	36
17,000	1.5	2	130	3.1	25	47
21,000	2	2	160	3.9	30	58
28,000	2	2.5	210	5.2	40	78
42,000	2.5	3	320	7.8	60	117
48,000	3	3	360	8.9	70	133

Table D
Pipe Diameter/Pipe Length

Pipe Diameter (inch)	Required Pipe Length leading into pump (inch)
1.5	6
2	8
2.5	10
3	12