

CERTIFICATE OF INSTALLATION

CF2R-ALT-05-E

(Page 15 of 15)

Prescriptive Residential Alterations That Do Not Require HERS Field Verification

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:

1. The information provided on this Certificate of Installation is true and correct.
2. I am 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 (responsible builder/installer), otherwise I am an authorized representative of the responsible builder/installer.
3. 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 plans and specifications approved by the enforcement agency.
4. I reviewed a copy of the Certificate of Compliance approved by the enforcement agency that identifies the specific requirements for the scope of construction or installation identified on this Certificate of Installation, and I have ensured that the requirements that apply to the construction or installation have been met.
5. 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:

For assistance or questions regarding the Energy Standards, contact the Energy Hotline at: 1-800-772-3300.

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U. 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.
 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.

02 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 feet per second and that the suction pipe flow rate does not exceed 6 feet per second.

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): _____

Required Min Return Pipe Diameter (inches)	08a	Required Min Suction Pipe Diameter (inches)	08b	Required Min Filter Area (ft ²)	08c	Required Max Pump Flow (gpm)	08d
09	Return Pipe Diameter (inches).						
10	Suction Pipe Diameter (inches).						
11	Filter Surface Area (ft ²).						
12	Max Pump Flow Rate (gallons per minute).						
13	Measured flow rate return line (feet per second)						
14	Measured flow rate suction line (feet per second)						
15	Compliance statement				U. 03 = Yes, U. 13 ≤ U. 08, and U. 14 ≤ U. 06		<input type="checkbox"/> Yes <input type="checkbox"/> No

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

V. 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.

W. 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.

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CF2R-ALT-05-E

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(Page 13 of 15)

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Pool and Spa

R. POOL AND SPA SYSTEM TYPE

01 Pool and Spa System Type

S. 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.

T. 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.

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CEC-CF2R-ALT-05-E (Revised 01/15)



CALIFORNIA ENERGY COMMISSION

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(Page 1 of 15)

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This compliance document is only applicable to simple alterations that do not require HERS verification for compliance. When HERS verification is required, a CF1R-ALT-01 shall first be registered with a HERS Provider Data Registry.

Alterations to Space Conditioning Systems that are exempt from HERS verification requirements may use the CF1R-ALT-05 and CF2R-ALT-05 Compliance Documents. Possible exemptions from duct leakage testing include: less than 40 ft of ducts were added or replaced; or the existing duct system was insulated with asbestos; or the existing duct system was previously tested and passed by a HERS Rater. If space conditioning systems are altered and are not exempt from HERS verification, then a CF1R-ALT-02 must be completed and registered with a HERS Provider Data Registry.

Alterations that utilize Closed Cell Spray Polyurethane Foam (ccSPF) with a density of 1.5 to less than 2.5 pounds per cubic foot having an R-value other than 5.8 per inch, or Open Cell Spray Polyurethane Foam (ocSPF) with a density of 0.4 to less than 1.5 pounds per cubic foot having an R-value of 3.6 per inch, shall complete and register a CF1R-ALT-01 with a HERS Provider Data Registry.

If more than one person has responsibility for installation of the items on this certificate, each person shall prepare and sign a certificate applicable to the portion of construction for which they are responsible. Alternatively, the person with chief responsibility for construction shall prepare and sign this certificate for the entire construction. All applicable Mandatory Measures shall be met. Temporary labels shall not be removed before verification by the building inspector.

A. GENERAL INFORMATION			
01	Project Name:	02	Date Prepared:
03	Project Location:	04	Building Front Orientation (deg):
05	CA City:	06	Number of Dwelling Units with Additions:
07	Zip Code:	08	Fuel Type:
09	Climate Zone:	10	Total Conditioned Floor Area (ft ²) (Addition):
11	Building Type	12	Slab Area (ft ²):
13	Project Scope:		