



What to Check on a CF1R-PRF-01 for Building Departments (2022 Code Cycle)

Title of table shown as is on the CF1R

X	General Info	Notes
	Confirm watermark, registration date & registration number from CalCERTS or CHEERS match on all pages. Date stamps at bottom indicate when the model was run, when the project was registered in a HERS Registry, and when the report was generated	
	Confirm the following from the General Info table:	
	Box 08 Climate Zone- check against plan set & correct climate zone for the project address.	
	Box 12 Project Scope- check against permit scope (i.e. New Construction or Addition) <i>If it meets the Energy Code ADU definition, it'll be labeled an Addition</i>	
	Box 14 Addition Cond. Floor Area – see below but relevant to Addition scope projects	
	Box 18 Conditioned Floor Area- must be close to plans. Margin of error is up to Building Department to determine but Energy Modeling is supposed to use CFA to the exterior of wall, often creating a discrepancy between the architectural FA.	
	Box 11 (dwelling units), Box 13 (bedrooms), and Box 20 (ADU bedrooms) dictate ventilation requirements and are important- check against plan set	
	Box 15 Number of Stories- check against plan set	

X	Energy Design Rating	Notes
	Confirm the project complies	
	Minimum PV and kW DC size- check that the roof and/or electrical plan shows a system designed to meet said minimum kWdc.	
	Battery size (if applicable)- check with plan set	

X	Required Special Features and HERS Feature Summary (Many HERS features are not relevant at the plan check stage)	Notes
	Point of Use – Distance between WH and any fixture cannot exceed 15' for 3/8", 10' for 1/2", and 5' for 3/4". Does not require a HERS Verification but is required to be confirmed on the CF2R & CF3R	

To print additional forms, please visit: rebrand.ly/1beeb9

X	Opaque Surfaces	Notes
	Column 01 Wall Name - ignore, wall name is manually entered	
	Column 03 Assembly Construction Name - ignore	
	Column 04 Azimuth- Must match plans. Use best sampling practices to compare with site plans	
	Column 05 Orientation - ignore	
	Column 06 and 07 Wall and Window Area- Must match plans. Use best sampling practices to compare with plans, more difficult to confirm than floor area.	

X	Opaque Surfaces - Cathedral Ceiling	Notes
	Column 03 Construction – This references the Opaque Surface Constructions table further in the document. Only useful in associating areas to the construction assembly	
	Column 06 Area – must be close to plans. Margin of error is up to Building Department to determine, should match floor area.	
	Column 08 Roof Rise – if a steep sloped roof ($\geq 2:12$) is selected, confirm on plan set	
	Columns 09 and 10 Reflectance and Emittance – 0.1 reflectance and 0.85 emittance are default. If any other value, confirm CRRC specifications for cool roof	
	Column 11 Cool Roof – if yes, confirm with Cool Roof Rating Council material specifications and columns 09 and 10.	

X	Attic	Notes
	Column 02 Construction – Same as above, this references the Opaque Surface Constructions table. Only useful in associating areas to the construction assembly	
	Column 03 Type – Unventilated or Ventilated, confirm against plans.	
	Column 04 Roof Rise- if a steep sloped roof ($\geq 2:12$) is selected, confirm on plan set	
	Columns 05 and 06 Reflectance and Emittance - 0.1 reflectance and 0.85 emittance are default. If any other value, confirm CRRC specifications for cool roof	
	Column 07 Radiant Barrier – Confirm against plans if in project scope.	
	Column 08 Cool Roof- if yes, confirm with Cool Roof Rating Council material specifications and columns 05 and 06	

X	Fenestration/Glazing	Notes
	If wall azimuth from opaque surfaces was confirmed correct, then Columns 03-05 will be correct;	
	Columns 10 and 12 U-Factor and SHGC- SHGC > 0.5 and/or U-Factor < 0.2, is uncommon, confirm with window specifications a. U Factor should be less than or equal to what is reported. SHGC should be as close to listed value as possible. b. Inspectors - NFRC U-Factor needs to be ≤ the CF1R values. SHGC needs to be as close to CF1R value as possible	
	Column 09 – Area should match plans	

X	Opaque Doors	Notes
	Column 04 U-Factor- If ≤0.2 U-Factor, confirm with design specifications as insulated doors give credit.	

X	Slab Floors	Notes
	Column 04 Perimeter- if abnormally small or 0 linear feet, confirm because this might be claiming a credit that isn't real. Rejection will require model to be rerun.	
	Column 08 Heated- if yes, verify hydronic system on plan set	
	Columns 05 & 06 Edge Insul. R-value and Depth – If the slab floor is heated, verify that slab insulation meets mandatory requirements	

X	Opaque Surfaces Construction	Notes
	Columns 04-06 Framing, Total Cavity R Value, and Interior/Exterior Continuous R Value- confirm with plan set	
	If time available: a. Column 03 - Confirm wood or metal building b. Column 02 - Confirm roof insulation locations, attics will have two entries for ceiling and below roof decking, check against plan set	

X	Opaque Surfaces HERS Verification Table	Notes
	This is a HERS “cheat sheet”. Required/not required are only options. If required, the correct HERS forms needs to be collected by inspector.	
	Inspectors - If QII is required, ensure inspection occurs before drywall installation	
	Inspectors – HERS Testing verification can also be helped by the Project Status Report document provided by CalCERTS.	

X	Water Heating Systems	Notes
	Column 03 Distribution System - if there is a recirculation system, confirm its control type on the plan set matches the selected type on the CF1R.	
	Column 05 Number of Units – confirm quantity is correct.	
	Column 07 Compact Distribution – If ‘Expanded’, requires HERS and linear takeoffs, should trigger a deeper investigation. The calculations need to be on the plan set, see Single Family Residential Compliance Manual Section 5.6.2.4.	

X	Water Heaters - NEEA Heat Pump	Notes
	Column 02 # of Units – Simple confirmation	
	Column 04 & 05 NEEA Brand and Model – Ideally the plan set shows the NEEA brand and model consistent with the T24 (CF2R should match what is installed).	
	Column 06, 07, 08 Tank and Duct Location - a unit located indoors vs garage vs outdoors will change the energy performance. Confirm system installation location, intake, and exhaust configuration on the plans is consistent with T24	

X	Water Heaters (Heat Pump, Gas Instantaneous, Electric Resistance)	Notes
	Column 02 Heating Element Type – Confirm Heat Pump, Gas Instant, Electric Resistance against plans.	
	Column 04 # of Units – Simple confirmation	
	Column 06 & 07 Efficiency Type and Efficiency – <ul style="list-style-type: none"> • <i>Heat Pump</i> - EF or UEF for a HPWH is misleading, the efficiency metric is actually COP and is expected to be in a range of 1.8-4.0. • <i>Gas</i> – EF or UEF, Anticipate between 0.8 and 0.97 • <i>Electric Resistance</i> – EF or UEF, should be 0.98 or less, the efficiency is limited since electric resistance has a efficiency of 1 maximum. 	
	Column 13 Tank Location – confirm the unit location on the plans is consistent with the T24 location	

X	Water Heating – Compact Distribution	Notes
	If selected a table will be present that shows the distance to fixtures in ft, this should be confirmed on the plans as it gives credit to the project.	

X	Water Heating - HERS Verification	Notes
	Parallel Piping – If required the project is utilizing a manifold and feeds use points with ½” or smaller lines.	
	Compact Distribution - is selected, confirm on plan set, as this is very difficult to achieve in single family residences. Requires a weighted distance calculation method that should be shown on plans.	
	Recirculation Control – If recirculation is included, the type of control needs to be confirmed. Non-controlled recirculation is heavily penalized.	
	Shower Drain Water Heater Recovery – New component that gives compliance credit if installed, if selected the component should be confirmed in plan.	

X	Space Conditioning Systems	Notes
	HVAC Specifications - all values need to be confirmed per plan set as soon as possible. Minimum values must be met and the HERS verification will confirm in-field changes/accuracy.	

X	HVAC Distribution Systems	Notes
	Columns 02 Type - Must be confirmed with plan set. Ducts in attic and Ducts in Conditioned Space are not the same thing	
	Column 03 Duct Design Verified- If yes, confirm the duct design in the plan set matches the T24 input design, as there is a credit available but difficult to achieve	
	HERS Verification not relevant at plan check stage	

X	HVAC Fan Systems	Notes
	Column 03 HERS Rater must verify watt/cfm rating, a mandatory requirement.	

X	IAQ Fans	Notes
	Column 02 IAQ CFM - Confirm that of the system design ventilation meets or exceeds the CFM Minimum shown here	
	Column 04 IAQ Fan Type- confirm if the proposed system is balanced or default (continuous exhaust). If balanced, confirm system with plan set	
	Column 06 IAQ Recovery Effectiveness- confirm with spec sheet. Anything above an 80% value should be double checked, as these systems are expensive and rarely used	