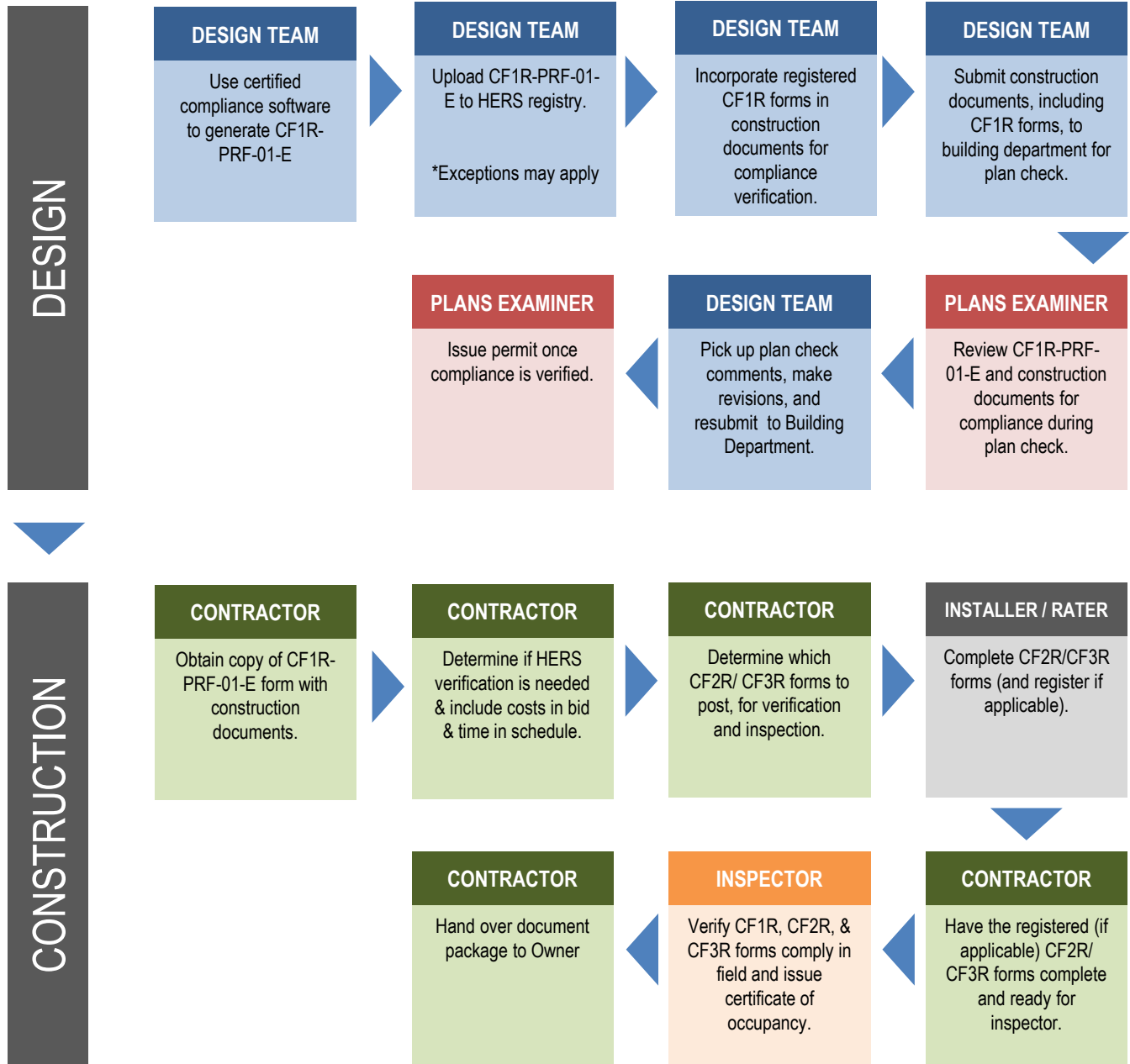


Residential Performance Flowchart





DESIGNER: Use compliance software to generate CF1R-PRF-01-E

1. Obtain CEC approved compliance software. CBECC-Res is a free resource, developed by the CEC. Approved software developed by third party vendors are also available for purchase.

[Click here for access to CEC approved compliance software.](#)

Tip: Be sure to use an approved version of each software tool! Check the column labeled “Approved versions usable for permit” in the table at the link above to confirm.



2. Close coordination with the project team is necessary to verify compliance using the software, including:
 1. Architect
 2. Energy consultant
 3. Owner
 4. Mechanical, Electrical and Plumbing Engineers (MEP)
 5. Lighting Designer

Tips & Tricks:



- *FREE* training on compliance software is offered statewide at regional Energy Education Centers run by the utilities. Check the Energy Code Ace training page for dates and locations.
[Click to go to the training page.](#)



- Modeling assumptions and protocols can be found in the Alternative Calculation Manual (ACM).
[Click to find the Title 24, Part 6 2013 ACM.](#)

Step 1 of 14





DESIGNER: Upload CF1R-PRF-01-E to the HERS registry.

1. Before applying for a building permit, the CF1R-PRF-01-E must be registered with a HERS Provider if the project requires HERS verification per the Standards (mandatory for all newly constructed buildings).

Once you register your CF1R, the watermark will disappear, and a registration number will be shown in the footer of the document you download to include on the plan set

Does your project require a HERS rater? Find out by using the HERS Measures Quick Reference Guide or the Forms Ace tool.



[Click HERE for the HERS Measures Quick Reference Guide](#) (coming soon)



[Click HERE to go to the Forms Ace tool](#)

If your project is an addition or alteration that does not require a HERS verification, include a CF1R without a watermark in construction documents. More detail on this can be found by going to the next step of this process.



2. If your project is required to be registered, you can find a HERS Provider by visiting the CEC's HERS Providers and Raters page. A fee may apply when registering the CF-1R.



[Click HERE to visit HERS Providers and Raters page](#)

3. If your project is a minor alteration that does not require building plans to be submitted, you may consider pursuing the prescriptive path instead of the performance path.

Tips & Tricks:



- *FREE* training on the HERS verification process is available [here](#). This 2-hour recorded Decoding Talk takes a deep dive into the HERS process for both Residential and Nonresidential 2013 code compliance.



- Confused about what the forms mean? Read this [Fact Sheet](#) about the Permit Process, which includes a key to forms names.

Step 2 of 14





DESIGNER: Incorporate any registered CF1R form into construction documents for compliance verification.

1. Make sure all relevant documents are included in the permit application package. Each building department has different requirements for application; if you're unsure of what your building department requires, contact them prior to submittal.
2. Building department permit fees vary, and many departments publish a Fee Schedule on their websites. Some jurisdictions may offer online permit options, which may result in fee reduction.
3. Incorporation of the CF1R forms into the documents can be done through a variety of methods. You can insert a PDF or JPEG file into the drawing set, but make sure it is readable. Many building departments state that 12 point is the smallest font size allowed.
4. Registered HERS documents should be "unlocked" for easier incorporation into CAD programs. Many free software services are available to convert a locked PDF to JPEG.
5. Building departments have access to all forms that have been uploaded to the HERS registry. To find project information, look on the footer of the forms. For example:



CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD				CF1R-PER-01
Project Name: 1 Story Example Home		Calculation Date/Time: 10:43 Mon, Dec 29, 2014		Page 1 of 9
Calculation Description: 2010 Prescriptive by C12.12		Input File Name: 1storyExample10 Cooling Load Sched.tbl		
GENERAL INFORMATION				
11	Project Name	1 Story Example Home		
12	Calculation Description	2010 Prescriptive by C12.12		
13	Project Location	San Diego, CA		
14	City	San Diego, CA	68	Standards Version
15	State	CA	67	Compliance Manager Version
16	Climate Zone	2-1B	68	Software Version
17	Building Type	Single Family	11	Project Orientation (deg/Compass)
18	Project Status	Final Compliance	12	Number of Building Zones
19	Total Cond. Floor Area (FT ²)	1700	19	Number of Zones
20	Slab Area (FT ²)	1700	17	Number of Stories
21	Attic Area (FT ²)	0	82	Number of Air Layers
22	Attic Size Area (FT ²)	0	81	Glazing Percentage (%)
COMPLIANCE RESULTS				
81	Building Does Not Comply			
82	This building incorporates features that require field testing and are eligible for a certified HERS rater under the supervision of a 2-CP approved HERS provider.			
83	This building incorporates one or more Special Features shown below.			

Registration Number: 214-ND067518A-00000000-0000
 CA Building Energy Efficiency Standards - 2013 Residential Compliance

Tips & Tricks:

- Maintain a good relationship with your Plans Examiners! Letting them know that you are willing to answer any questions or concerns to help the process go smoothly will go a long way. Including a cover letter with Title 24 documents about modeling issues, work-arounds, notes of concern or other important details, and your contact information is very helpful. The plans examiner may be able to simply call you with questions rather than requiring a re-submittal, saving everyone's time and money.





DESIGNER: Submit construction documents, including CF1R forms, to Building Department for plan check.

1. The Plans Examiner reviews construction documents and the CF1R forms, for Title 24, Part 6 energy code compliance.

Many resources are available to assist the design team in proper preparation of documents, as well as for Plans Examiners to refer to as they review them.



- Quick access to the Title 24, Part 6 Standards is available through the [Reference Ace](#).



- Fact and Trigger Sheets about Title 24, Part 6 are available in the [Resources](#) section of the [Energy Code Ace website](#).

- Checklists to document compliance are also available on the Energy Code Ace website [here](#).

Tips & Tricks:



- Turnaround times vary widely among jurisdictions, anywhere from weeks to months. Inquire ahead of time in order to incorporate sufficient time into the project schedule.

Step 4 of 14





Plans Examiner: Review CF1R PRF-01-E and construction documents for compliance during plan check.

1. The Plans Examiner reviews construction documents and the CF1R forms for Title 24, Part 6 energy code compliance.

Many resources are available to assist the design team in proper preparation of documents, as well as for Plans Examiners to refer to as they review them.



- Quick access to the Title 24, Part 6 Standards is available through the [Reference Ace](#).
- Fact and Trigger Sheets about Title 24, Part 6 are available in the [Resources](#) section of the Energy Code Ace website.



- Checklists to ensure compliance are also available on the Energy Code Ace website [here](#).

2. Plans examiners often have questions or comments about verification which will require either a response and/or resubmittal of documents. Fees may apply; contact your local building department to confirm.
3. If revisions to the energy model are required based on plan check comments, documents may need to be resubmitted to the HERS registry as well.

Step 5 of 14





DESIGNER: Picks up plan check comments, makes revisions if necessary, and resubmits to the Building Department.

1. Plans examiners often have questions or comments about verification which will require either a response and/or resubmittal of documents. Fees may apply; contact your local building department to confirm.
2. If revisions to the energy model are required based on plan check comments, documents may need to be resubmitted to the HERS registry as well.

Tips & Tricks:

- Experience matters! The first few times going through this process may be a learning experience, but establishing a positive relationship with your local building department and taking note of lessons learned will ease the process over time.

Step 6 of 14





Plans Examiner: Issue permit once compliance is verified.



1. Team Coordination: the builder and any subcontractors will need to be invited to the project within the HERS registry, and new users will need to register on registry site.

Tip: It is important to note that when any subcontractor or installer changes during the project, forms must be registered to the HERS registry. This will include members of the design team and even installers or contractors who have finished their scope of work. Anticipate continued participation in the registry for the duration of the project and incorporate it into the budget and schedule!

2. The design team will turn over construction documents including CF1R forms and building permit to the general contractor. Be sure that any HERS measures or other Title 24, Part 6 specific information is clearly spelled out on the construction documents.

Step 7 of 14





Contractor: obtain copy of CF1R-PRF-01-E form along with other construction documents..

1. The general contractor should confirm that all information on the compliance forms is incorporated into the schedule as well as cost estimates.



2. Team Coordination:

- Contact the designer with questions about the construction documents.
- It may be helpful to request a copy of the Forms Ace output and/or a list of forms from the designer including which CF2R and CF3R forms are applicable.

[Click HERE to go to the Forms Ace tool](#)



1. Building permit and other relevant documents should remain posted onsite for the duration of the project. These requirements can vary among departments, check with your jurisdiction to confirm what's required.

Tips & Tricks:

- The CF2R forms are considered “Installation” forms, and documents what was installed. The installer of a feature will complete the applicable form. For instance, an insulation installer would complete the CF-2R-ENV-03-E, Insulation Certificate of Installation.
- The CF3R forms are considered “Verification” forms, and documents what was verified in the field. A HERS Rater will complete these forms.

Step 8 of 14





Contractor: determine if HERS verification is needed and includes costs in bid as well as time in schedule.

1. Identify whether HERS verification is needed by checking the CF1R-PRF-01-E to see if the form is registered with a HERS registration number. The registration number can be found in the footer of the completed form, which is included in the construction document package from the designer.

Registration Number: 214-N0067518A-00000000-0000
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2. If HERS verification is required, coordinate with a HERS Rater as early as possible to understand fees and schedule impacts, and build these into the project bid. Ask the designer if a HERS Rater was engaged during the design process. If not, a list of CEC approved HERS Providers can be found by clicking the following link, and may be able to lead you to a Rater.

[Click HERE to visit the CEC HERS Providers and Raters page](#)

1. HERS verification requirements should be carefully reviewed with the HERS rater to ensure all impacts to schedule and project costs are considered, including:
 - Sequencing installation to coincide with access required for testing
 - Scheduling site visits well in advance
 - Understanding general contractor, installer, and HERS rater roles and responsibilities

Step 9 of 14





Contractor: determine which CF2R/ CF3R forms will be needed when inspector arrives.

1. The general contractor and all subcontractors on the construction team must join the project on the HERS registry if HERS verification is required.



It is important to note that changes to the project can trigger resubmittal of the CF2R and CF3R forms on the HERS registry, and may require signatures from various members of the team. It is the general contractor's responsibility to ensure forms are accurate and signatures are current.

Triggers may include:

- Installed equipment is changed from specification
- Installer or subcontractor changes from the original signatory

2. Applicable CF2R and CF3R forms may be required to be posted onsite during construction and inspections. The HERS registry can provide a list of necessary HERS related forms, and the Forms Ace can provide a complete list of all Part 6 forms.



[Click HERE to go to the Forms Ace tool](#)

3. Inspection requirements vary by jurisdiction. Check with your local building department to find out what needs to be inspected and when, as well as whether additional forms are required to be posted onsite.



Tips & Tricks:

- Maintaining a good relationship with local building inspectors will ease the inspection process. Becoming familiar with a jurisdiction's scheduling availability, access requirements for specific building details, and understanding which documents to have available will help inspections to go smoothly the first time.



Step 10 of 14





Installer and/or HERS Rater: completes CF2R/ CF3R forms (and register if applicable).



1. Coordination with the general contractor is necessary to access the project within the registry if HERS verification is required. The installer will complete applicable CF2R forms within the registry, and keep hard copies onsite. If HERS verification is not required, CF2R forms may be filled out by hand and kept onsite.
2. The HERS Rater will complete applicable CF3R forms within the HERS registry. Check with your local jurisdiction to find out if hard copies are required onsite for the inspector.
3. Building inspectors have access to all projects on the HERS registry, and can locate a project by finding the registration number in the footer of the completed forms.

GENERAL INFORMATION	
01	Project Name: 1 Story Example Home
02	Calculation Description: 1 Story R-100 Prototype with 60 roof
03	Project Location: 100 Main St
04	City: Sacramento, CA
05	Zip: 95814
06	Climate Zone: 2C12
07	Building Type: Single Family
08	Project Stage: Construction
09	Total Cond. Floor Area (FT ²): 100
10	Unsh. Area (FT ²): 100
11	Number of Stories: 1
12	Additional Cond. Floor Area (FT ²): N/A
13	Additional Unsh. Area (FT ²): N/A
14	Number of Stories: 1
15	Glazing Percentage (%): 20.0%

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Registration Number: 214-N0067518A-00000000-0000
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4. The Installation Ace tool includes pictures of compliant (and sometimes not compliant) installations related to Part 6. This tool is formatted to be printed and put into a binder as a guide that can be used in the field.

[Click HERE to go to the Installation Ace tool](#)





Contractor: have the registered (if applicable) CF2R/ CF3R forms complete and ready for inspector.



1. Keep a hard copy of completed CF2R and CF3R forms posted onsite for the duration of the project.
2. The inspector will verify the compliance forms onsite. Not having these forms available may require rescheduling the inspection. Often the inspector will visit the site multiple times per project. Coordinate with the local building department to confirm when specific forms should be posted.
3. Although jurisdictions aren't required to collect forms, some may take them.

Step 12 of 14





Building Inspector: Verify CF1R, CF2R, & CF3R forms comply in field and issue certificate of occupancy.

1. Inspector verifies that registered CF1R, 2R and 3R forms are current with what's installed.
2. Although jurisdictions aren't required to collect forms, some may take them.
3. Building inspectors have access to all projects on the HERS registry, and can locate a project by finding the registration number in the footer of the completed forms.

Not useable for compliance

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4. The Installation Ace tool includes pictures of compliant (and sometimes not compliant) installations related to Part 6. This tool is formatted to be printed and put into a binder as a guide that can be used in the field.



[Click HERE to go to the Installation Ace tool](#)





Contractor: hand over document package to the owner.

1. Upon project completion, the general contractor or design team is required to leave Certificates of Compliance, Installation, Acceptance, and Field and Diagnostic Testing with the building owner per Section §10-103(b) of the Standards.

[Click HERE to read the exact code language in the Reference Ace](#)

Step 14 of 14

