

**CITY OF SACRAMENTO**

New City Hall, 915 I St., 3rd Floor, Sacramento, CA 95814

Permit No: 0614707

Insp Area: 1

Thos Bros: 297H4

Site Address: 350 37TH ST SAC

Parcel No: 004-0174-006

Sub-Type: RES

Housing (Y/N): N

**CONTRACTOR**  
CLARKE & RUSH MECH  
4411 AUBURN BL  
SACRAMENTO CA 95841

**OWNER**  
PETERS JUNE  
350 37TH ST  
SACRAMENTO, CA 95816

**ARCHITECT**

**Nature of Work:** PAPERLESS, REPLACE SPLIT SYSTEM FURNACE & COIL-SMOKE DETECTORS ARE REQ'D PER 2001 CBC

**CONSTRUCTION LENDING AGENCY :** I hereby affirm under penalty of perjury that there is a construction lending agency for the performance of the work for which this permit is issued (Sec. 3097, Civ. C).

Lender's Name \_\_\_\_\_ Lender's Address \_\_\_\_\_

**LICENSED CONTRACTORS DECLARATION:** I hereby affirm under penalty of perjury that I am licensed under provisions of Chapter 9 (commencing with section 7000) of Division 3 of the Business and Professions Code and my license is in full force and effect.

License Class C-20 License Number 608005 Date 9-25-06 Contractor Signature [Signature]

**OWNER-BUILDER DECLARATION:** I hereby affirm under penalty of perjury that I am exempt from the contractors License Law for the following reason (Sec. 7031.5, Business and Professions Code; any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he or she is licensed pursuant to the provisions of the Contractors License Law (Chapter 9 (commencing with Section 7000) of Division 8 of the Business and Professions Code) or that he or she is exempt therefrom and 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 (\$500.00);

\_\_\_\_\_, I, as a 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 and Professional Code: The Contractors License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or herself or through his/her own employees, provided that such improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he/she did not build or improve for the purpose of sale.)

\_\_\_\_\_, I, as owner of the property, am exclusively contracting with licensed contractors to construct the project. (Sec. 7044, Business and Professions Code: The Contractors License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractors License Law).

**PAID**  
**CITY OF SACRAMENTO**

I am exempt under Sec. \_\_\_\_\_ B & PC for this reason: \_\_\_\_\_ **SEP 25 2006**

Date \_\_\_\_\_ Owner Signature \_\_\_\_\_

**NEW CITY HALL**

**IN ISSUING THIS BUILDING PERMIT,** the applicant represents, and the city relies on the representation of the applicant, that the applicant verified all measurements and locations shown on the application or accompanying drawings and that the improvement to be constructed does not violate any law or private agreement relating to permissible or prohibited locations for such improvements. This building permit does not authorize any illegal location of any improvement or the violation of any private agreement relating to location of improvements.

I certify that I have read this application and state that all information is correct. I agree to comply with all city and county ordinances and state laws relating to building construction and hereby authorize representative(s) of this city to enter upon the abovementioned property for inspection purposes.

Date 9-25-06 Applicant/Agent Signature [Signature]

**WORKER'S COMPENSATION DECLARATION:** I hereby affirm under penalty of perjury one of the following declarations:

\_\_\_\_\_, I have and will maintain a certificate of consent to self-insure for workers' compensation as provided for by Section 3700 of the Labor Code, for the performance of work for which the permit is issued.

I have and will maintain workers' compensation insurance, as required by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued. My workers' compensation insurance carrier and policy number are:

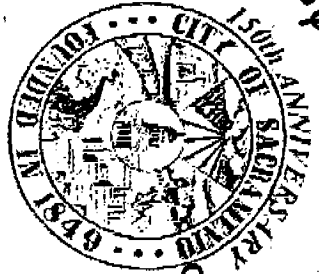
Carrier ZENITH INS CO Policy Number Z066385802 Exp Date 10/01/2006

\_\_\_\_\_, (This section need not be completed if the permit is for \$100 or less) 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 workers' compensation laws of California and agree that if I should become subject to the workers' compensation provisions of Section 3700 of the Labor Code, I shall forthwith comply with those provisions.

Date 9-25-06 Applicant Signature [Signature]

**WARNING:** FAILURE TO SECURE WORKER'S COMPENSATION COVERAGE IS UNLAWFUL AND SHALL SUBJECT AN EMPLOYER TO CRIMINAL PENALTIES AND CIVIL FINES UP TO ONE HUNDRED THOUSAND DOLLARS (\$100,000) IN ADDITION TO THE COST OF COMPENSATION, DAMAGES AS PROVIDED FOR IN SECTION 3706 OF THE LABOR CODE, INTEREST AND ATTORNEY'S FEE.

**THIS PERMIT SHALL EXPIRE BY LIMITATION IF WORK IS NOT COMMENCED WITHIN 180 DAYS.**



PAID

SEP 25 2006

NEW CITY HALL

Request must be received in this office by 3:00 p.m. to be processed the following work day. Note: Contractors must have a current certificate of Worker compensation insurance.

Note: Work started here a Building Permit is issued while subject to qualify

CITY OF SACRAMENTO  
DEVELOPMENT SERVICES DIVISION

FAXED PERMIT APPLICATION (certain strictions apply)

Fax # 916-264-1901

DATE: 9/18/06

06/14/07  
AREA 9

RESIDENTIAL

APARTMENTS (4+ units per building)

COMMERCIAL (limited)

IN ORDER TO PROCESS THIS REQUEST, ALL THE FOLLOWING INFORMATION MUST BE PROVIDED:

JOB ADDRESS: 350 37th ST.

CONTACT PERM: MARTHA BAELES

UNIT #

CONTACT PHON (916) 609-2618

CONTRACT PRICE \$ 4622.00

Property Owner: SUPERFENS

Contractor: CLARK & RUSH

Address: 4414 AUBURN BLVD

City/State/Zip: SACRAMENTO CA 95841

Phone: (916) 456-6027 FAX: (916) 609-2627

Address: 350 37th ST.

City/State/Zip: SACRAMENTO, CA 95816

Phone: (916) 456-6027

City/State/Zip: SACRAMENTO CA 95841

Phone: (916) 609-2627 FAX: (916) 609-2627

NATURE OF REQUEST: Indicate from the selections below & provide details under description of work.

<ul style="list-style-type: none"> <li>• REROOF (excluding tile)</li> <li>• TEAR-OFF</li> <li>• RESHIFT</li> <li>• HOUSE</li> <li>• GARAGE</li> <li>• #SQUARES</li> <li>Material:</li> <li>• SIDING             <ul style="list-style-type: none"> <li>• wood</li> <li>• T-111</li> <li>• Horiz</li> <li>• vinyl</li> </ul> </li> <li>• stucco</li> </ul>	<ul style="list-style-type: none"> <li>• HVAC INSTALLATIONS (residential ONLY)</li> <li>• CHANGE-OUT</li> <li>• NEW             <ul style="list-style-type: none"> <li>• Heat Pump</li> <li>• Package</li> <li>• Split system - <i>Furnace + coil</i></li> <li>• Roof mount</li> <li>• Cut-in</li> <li>• Heat pump or elect. unit to gas.</li> <li>• Wall furnace</li> <li>• Other (describe below)</li> </ul> </li> <li>• Dry rot or termite damage repair (Describe locations below)</li> </ul>	<ul style="list-style-type: none"> <li>• WATER HEATER (residential ONLY)</li> <li>• GAS</li> <li>• ELECTRIC</li> <li>• Change-out Electric to Gas Relocate New</li> </ul>	<ul style="list-style-type: none"> <li>• MINOR ELECTRIC and/or MINOR PLUMBING (residential ONLY)</li> <li>• Electric Sec Change # amps</li> <li>• New elec circuits</li> <li>• Re-wire</li> <li>• Water Ser Replacement</li> <li>• Sewer Sec Replacement</li> <li>• Gas Line placement</li> <li>• Re-plumb</li> <li>• Water Waste</li> </ul>	<ul style="list-style-type: none"> <li>• PUBLIC UTILITIES SAFETY INSPECTION (Residential and single apartment units ONLY)</li> <li>• SMUD</li> <li>• PGE</li> </ul> <p>*NOTE: Correction Notice item will require an additional building permit</p>
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Note: Design Review approval may be required in certain areas.

Note: Design Review approval may be required for rooftop units.

DESCRIPTION OF WORK:

REPLACE EXISTING FURNACE & EXHAUST COIL w/ new 37th unit & 80000 BTU 93% EFFICIENCY FURNACE (SAME)

fax permit from [rev online 3/10/00]

# ACORD CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)  
6/2/2006

<b>PRODUCER</b> (916) 231-1741 CA DOI LIC #0352275 11017 Cobblersrock Drive, Suite 100 Rancho Cordova, CA 95670	THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.
<b>INSURED</b> Clarke & Rush Mechanical Inc., Dba Berkan & Clark Heating & Air 4411 Auburn Blvd. Sacramento, CA 95841	<b>INSURERS AFFORDING COVERAGE</b> INSURER A: Lexington Insurance Company INSURER B: Transcontinental Insurance Company INSURER C: Zenith Insurance Company INSURER D: INSURER E:

**COVERAGES**

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED, NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR ANY OTHER POLICY. THE LIMITS OF COVERAGE UNDER THIS CERTIFICATE ARE SUBJECT TO THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR/ADD'L LTR. ISSRD	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YYYY)	POLICY EXPIRATION DATE (MM/DD/YYYY)	LIMITS
A	GENERAL LIABILITY <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJ. <input type="checkbox"/> LOC	B762042	6/1/2006	6/1/2007	EACH OCCURRENCE \$ 1,000,000
	DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 50,000 MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COM/PROP AGG \$ 1,000,000				
B	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> RENTED AUTOS <input type="checkbox"/> NON-OWNED AUTOS	C2077566140	6/1/2006	6/1/2007	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000
	GARAGE LIABILITY <input type="checkbox"/> ANY AUTO				BODILY INJURY (Per person) \$ PROPERTY DAMAGE (Per accident) \$ AUTO ONLY - EA ACCIDENT \$ OTHER THAN AUTO ONLY: EA ACC \$ AGG \$
	EXCESS/UMBRELLA LIABILITY <input type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS MADE DEDUCTIBLE \$ RETENTION \$				EACH OCCURRENCE \$ AGGREGATE \$ \$ \$
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? If yes, describe under SPECIAL PROVISIONS below OTHER	Z000005002	10/1/2005	10/1/2006	<input checked="" type="checkbox"/> WC STATUTORY LIMITS E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES / EXCLUSIONS ADDED BY ENDORSEMENT / SPECIAL PROVISIONS

Evidence of Insurance

**CERTIFICATE HOLDER**

Clarke & Rush Mechanical, Inc.,  
 Dba Berkan & Clark Heating & Air  
 4411 Auburn Blvd.  
 Sacramento, CA 95841

**CANCELLATION**

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE

*Tom T. Higgins*

**INSTALLATION CERTIFICATE** **(Page 3 of 12) CF-6R**

Site Address <b>350 37th St</b>	Permit Number <b>12345678</b>
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An installation certificate is required to be posted at the building site or made available for all appropriate inspections. (The information provided on this form is required) After completion of final inspection, a copy must be provided to the building department (upon request) and the building owner at occupancy, per Section 10-103(a).

**HVAC SYSTEMS:**  
*Heating Equipment*

Equip Type (pkg. heat pump)	CEC Certified Mfr. Name and Model Number	# of Identical Systems	Efficiency (AFUE, etc.) <sup>1</sup> (≥CF-1R value)	Duct Location (attic, etc.)	Duct or Piping R-value	Heating Load (Btu/hr)	Heating Capacity (Btu/hr)
<b>Split Furnace</b>	<b>[REDACTED]</b>	<b>1</b>	<b>[REDACTED]</b>	<b>Attic</b>	<b>11.0</b>	<b>12000</b>	<b>60</b>

*Cooling Equipment*

Equip Type (pkg. heat pump)	CEC Certified Mfr. Name and Model Number	# of Identical Systems	Efficiency (SEER or EER) <sup>1</sup> (≥CF-1R value)	Duct Location (attic, etc.)	Duct R-value	Cooling Load (Btu/hr)	Cooling Capacity (Btu/hr)
<b>Split Furnace</b>	<b>[REDACTED]</b>	<b>1</b>	<b>[REDACTED]</b>	<b>Attic</b>	<b>11.0</b>	<b>0</b>	<b>0</b>

1. ≥ symbol reads *greater than or equal to what is indicated on the CF-1R value.*  
 Include both SEER and EER if compliance credit for high EER air conditioner is claimed.

✓  I, the undersigned, verify that equipment listed above is: 1) is the actual equipment installed, 2) equivalent to or more efficient than that specified in the certificate of compliance (Form CF-1R) submitted for compliance with the *Energy Efficiency Standards for residential buildings*, and 3) equipment that meets or exceeds the appropriate requirements for manufactured devices (from the *Appliance Efficiency Regulations* or Part 6), where applicable.

Installing Subcontractor (Co. Name) OR General Contractor (Co. Name) OR Owner <b>[REDACTED]</b>	<b>[REDACTED]</b>
Signature: <i>E. J. [REDACTED]</i>	Date: <b>[REDACTED]</b>

Copies to: BUILDING DEPARTMENT, HERS RATER (IF APPLICABLE) BUILDING OWNER AT OCCUPANCY

Site Address 350 37th St	Permit Number [REDACTED]
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**INSTALLER COMPLIANCE STATEMENT FOR DUCT LEAKAGE**

**INSTALLER COMPLIANCE STATEMENT**

The building was:  Tested at Final  Tested at Rough-in

**INSTALLER VISUAL INSPECTION AT FINAL CONSTRUCTION STAGE:**


- Remove at least one supply and one return register, and verify that the spaces between the register boot and the interior finishing wall are properly sealed.
- If the house rough-in duct leakage test was conducted without an air handler installed, inspect the connection points between the air handler and the supply and return plenums to verify that the connection points are properly sealed.
- Inspect all joints to ensure that no cloth backed rubber adhesive duct tape is used
- New Distribution system is fully ducted (i.e., does not use building cavities as plenums or platforms returns in lieu of ducts).

**DUCT LEAKAGE REDUCTION**

*Procedures for field verification and diagnostic testing of air distribution systems are available in RACM, Appendix RC4.3*

NEW CONSTRUCTION:			
	Duct Pressurization Test Results (CFM @ 25 Pa)	Measured Values	
1	Enter Tested Leakage Flow in CFM:		
2	Fan Flow: Calculated (Nominal: <input checked="" type="checkbox"/> Cooling <input checked="" type="checkbox"/> Heating) or <input checked="" type="checkbox"/> Measured If Fan Flow is Calculated as 400 cfm/ton x number of tons or as 21.7 cfm/(kBtu/hr) x Heating Capacity in Thousands of Btu/hr output, enter total calculated or measured fan flow in CFM here:	14735	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
3	Pass if Leakage Percentage ≤ 6% for Final or ≤ 4% at Rough-in: [100 x [ (Line # 1) / (Line # 2) ]]		<input type="checkbox"/> Pass <input type="checkbox"/> Fail
ALTERATIONS: Duct System and/or HVAC Equipment Change-Out			
4	Enter Tested Leakage Flow in CFM from Pre-Test of Existing Duct System Prior to Duct System Alteration and/or Equipment Change-Out.		
5	Enter Tested Leakage Flow in CFM from Final Test of New Duct System or Altered Duct System for Duct System Alteration and/or Equipment Change-Out.	200	
6	Enter Reduction in Leakage for Altered Duct System [ (Line # 4) Minus (Line # 5) ] - (Only if Applicable)		
7	Enter Tested Leakage Flow in CFM to Outside (Only if Applicable)		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
8	Entire New Duct System - Pass if Leakage Percentage ≤ 6% for Final [100 x [ (Line # 5) / (Line # 2) ]]		<input type="checkbox"/> Pass <input type="checkbox"/> Fail
TEST OR VERIFICATION STANDARDS: For Altered Duct System and/or HVAC Equipment Change-Out Use one of the following four Test or Verification Standards for compliance:			
9	Pass if Leakage Percentage ≤ 15% [100 x [ (Line # 5) / (Line # 2) ]]	11.5	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail
10	Pass if Leakage to Outside Percentage ≤ 10% [100 x [ (Line # 7) / (Line # 2) ]]		<input type="checkbox"/> Pass <input type="checkbox"/> Fail
11	Pass if Leakage Reduction Percentage ≥ 60% [100 x [ (Line # 6) / (Line # 4) ]] and Verification by Smoke Test and Visual Inspection		<input type="checkbox"/> Pass <input type="checkbox"/> Fail
12	Pass if Sealing of all Accessible Leaks and Verification by Smoke Test and Visual Inspection		<input type="checkbox"/> Pass <input type="checkbox"/> Fail
<b>Pass if One of Lines # 9 through # 12 pass</b>			<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail

I, the undersigned, verify that the above diagnostic test results were performed in conformance with the requirements for compliance credit. I, the undersigned, also certify that the newly installed or retrofit Air-Distribution System Ducts, Plenums and Fans comply with Mandatory requirements specified in Section 150 (m) of the 2005 Building Energy Efficiency standards.

Installing Subcontractor (Co. Name) OR General Contractor (Co. Name) OR Owner	[REDACTED]
Signature: 	Date: [REDACTED]

Copies to: BUILDING DEPARTMENT, HERS RATER (IF APPLICABLE) BUILDING OWNER AT OCCUPANCY

Site Address <b>360 37th St</b>	Permit Number <b>123456789</b>
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**THERMOSTATIC EXPANSION VALVE (TXV)**

*Procedures for field verification of thermostatic expansion valves are available in RACM, Appendix RI.*

✓	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Access is provided for inspection. The procedure shall consist of visual verification that the TXV is installed on the system and installation of the specific equipment shall be verified.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Yes is a pass	Pass	Fail

**REFRIGERANT CHARGE MEASUREMENT**

Verification for Required Refrigerant Charge and Adequate Airflow for Split System Space Cooling Systems without Thermostatic Expansion Valves

Outdoor Unit Serial #	
Location	
Outdoor Unit Make	
Outdoor Unit Model	
Cooling Capacity	Btu/hr
Date of Verification	
Date of Refrigerant Gauge Calibration	(must be checked monthly)
Date of Thermocouple Calibration	(must be checked monthly)

**Standard Charge Measurement Procedure (outdoor air dry-bulb 55°F and above):**

*Procedures for Determining Refrigerant Charge using the Standard Method are available in RACM, Appendix RD2.*

Note: The system should be installed and charged in accordance with the manufacturer's specifications before starting this procedure.

**Measured Temperatures**

Supply (evaporator leaving) air dry-bulb temperature (Tsupply, db)		°F
Return (evaporator entering) air dry-bulb temperature (Treturn, db)		°F
Return (evaporator entering) air wet-bulb temperature (Treturn, wb)		°F
Evaporator saturation temperature (Tevaporator, sat)		°F
Suction line temperature (Tsuction, db)		°F
Condenser (entering) air dry-bulb temperature (Tcondenser, db)		°F

**Superheat Charge Method Calculations for Refrigerant Charge**

Actual Superheat = Tsuction, db - Tevaporator, sat		°F
Target Superheat (from Table RD-2)		°F
Actual Superheat - Target Superheat (System passes if between -5 and +5°F)		°F

**Temperature Split Method Calculations for Adequate Airflow**

*Split Method Calculation is not necessary if Adequate Airflow credit is taken*

Actual Temperature Split = T return, db - Tsupply, db		°F
Target Temperature Split (from Table RD3)		°F
Actual Temperature Split - Target Temperature Split (System passes if between -3°F and +3°F or, upon remeasurement, if between -3°F and -10°F)		°F

**Standard Charge Measurement Summary:**  
 System shall pass both refrigerant charge and adequate air flow calculation criteria from the same measurements. If corrective actions were taken, both criteria must be remeasured and recalculated.

<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	System Passes
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**Alternate Charge Measurement Procedure (outdoor air dry-bulb below 55 °F)**  
 Note: The system should be installed and charged in accordance with the manufacturer's specifications and installer verification shall be documented on CF-6R before starting this procedure. If outdoor air dry-bulb is 55 °F or above, installer shall use the Standard Charge Measure Procedure:

*Procedures for Determining Refrigerant Charge using the Alternate Method are available in RACM, Appendix RD3.*  
**Weigh-In Charging Method for Refrigerant Charge**

Actual liquid line length:		ft
Manufacturer's Standard liquid line length:		ft
Difference (Actual - Standard):		ft
Manufacturer's correction (ounces per foot) _____ x difference in length = _____ ounces (+ = add) (- = remove)		

*Measured Airflow Method for Adequate Airflow Verification available in RACM, Appendix RD2.6*

Calculated Airflow: Cooling Capacity (Btu/hr) _____ X 0.033 (cfm/Btu-hr) = _____ CFM
Measured Airflow is _____ CFM (Measured air flow must be greater than the calculated air flow).

**Alternate Charge Measurement Summary:**  
 System shall pass both refrigerant charge and adequate air flow calculation criteria from the same measurements. If corrective actions were taken, both criteria must be remeasured and recalculated.

<input checked="" type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	System Passes
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Installing Subcontractor (Co. Name) OR General Contractor (Co. Name) OR Owner	
Signature:	Date: <b>10/10/05</b>

Copies to: BUILDING DEPARTMENT, HERS RATER (IF APPLICABLE) BUILDING OWNER AT OCCUPANCY

**1000000000**

CERTIFICATE OF FIELD VERIFICATION & DIAGNOSTIC TESTING (Page 1 of 8)		CF-4R
Project Address 350 [REDACTED]	Builder Name	
Builder Contact [REDACTED]	Telephone [REDACTED]	Plan Number
HERS Rater Herve [REDACTED]	Telephone [REDACTED]	Sample Group Number 1
Compliance Method (Prescriptive)		Climate Zone 12
Certifying Signature <i>[Signature]</i> (Electronically signed)	Date [REDACTED]	Sample House Number 3878
Firm Enabayo [REDACTED]		HERS Provider IBRCA
Street Address: 250 [REDACTED]		City/State/Zip: [REDACTED] CA 92234

Copies to: BUILDER, HERS PROVIDER AND BUILDING DEPARTMENT

### HERS RATER COMPLIANCE STATEMENT

The house was:  Tested  Approved as part of sample testing, but was not tested

As the HERS rater providing diagnostic testing and field verification, I certify that the house identified on this form complies with the diagnostic tested compliance requirements as checked  on this form. The HERS rater must check and verify that the new distribution system is fully ducted and correct tape is used before a CP-4R may be released on every tested building. The HERS rater must not release the CP-4R until a properly completed and signed CP-6R has been received for the sample and tested buildings.

- The installer has provided a copy of CP-6R (Installation Certificate).
- New Distribution system is fully ducted (i.e., does not use building cavities as plenums or platform returns in lieu of ducts).
- New systems where cloth backed, rubber adhesive duct tape is installed, mastic and draw bands are used in combination with cloth backed, rubber adhesive duct tape to seal leaks at duct connections.

### MINIMUM REQUIREMENTS FOR DUCT LEAKAGE REDUCTION COMPLIANCE CREDIT

Procedures for field verification and diagnostic testing of air distribution systems are available in RACM, Appendix RC.3.

#### Duct Diagnostic Leakage Testing Results

NEW CONSTRUCTION:			
	Duct Pressurization Test Results (CFM @ 25 Pa)	Measured Values	
1	Enter Tested Leakage Flow in CFM:		
2	Ran Flow: Calculated (Nominal: <input type="checkbox"/> Cooling <input checked="" type="checkbox"/> Heating) or <input checked="" type="checkbox"/> Measured Enter Total Ran Flow in CFM:	1738	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
3	Pass if Leakage Percentage $\leq 6\%$ $[100 \times [ \text{Line # 1} ] / \text{Line # 2} ]$		<input type="checkbox"/> Pass <input type="checkbox"/> Fail
ALTERATIONS: Duct System and/or HVAC Equipment Change-Out			
4	Enter Tested Leakage Flow in CFM from CP-6R: Pre-Test of Existing Duct System Prior to Duct System Alteration and/or Equipment Change-Out.		
5	Enter Tested Leakage Flow in CFM: Final Test of New Duct System or Altered Duct System for Duct System Alteration and/or Equipment Change-Out.	200	
6	Enter Reduction in Leakage for Altered Duct System $[ \text{Line # 4} ]$ Minus $[ \text{Line # 5} ]$ (Only if Applicable)		
7	Enter Tested Leakage Flow in CFM to Outside (Only if Applicable)		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
8	Entire New Duct System - Pass if Leakage Percentage $\leq 6\%$ $[100 \times [ \text{Line # 5} ] / \text{Line # 2} ]$		<input type="checkbox"/> Pass <input type="checkbox"/> Fail
TEST OR VERIFICATION STANDARDS: For Altered Duct System and/or HVAC Equipment Change-Out			
Use one of the following four Test or Verification Standards for compliance:			
9	Pass if Leakage Percentage $\leq 15\%$ $[100 \times [ \text{Line # 5} ] / \text{Line # 2} ]$	11.5	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail
10	Pass if Leakage to Outside Percentage $\leq 10\%$ $[100 \times [ \text{Line # 7} ] / \text{Line # 2} ]$		<input type="checkbox"/> Pass <input type="checkbox"/> Fail
11	Pass if Leakage Reduction Percentage $\geq 60\%$ $[100 \times [ \text{Line # 6} ] / \text{Line # 4} ]$ and Verification by Smoke Test and Visual Inspection		<input type="checkbox"/> Pass <input type="checkbox"/> Fail
12	Pass if Sealing of all Accessible Leaks and Verification by Smoke Test and Visual Inspection		<input type="checkbox"/> Pass <input type="checkbox"/> Fail
	Pass if One of Lines #9 through #12 pass		<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail



**CERTIFICATE OF FIELD VERIFICATION & DIAGNOSTIC TESTING (Page 2 of 8) CF-4R**

Project Address <b>350 37th St</b>	Builders Name <b>XXXXXXXXXX</b>
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Copies to: BUILDER, HERS PROVIDER AND BUILDING DEPARTMENT

- DIAGNOSTIC SUPPLY DUCT LOCATION, SURFACE AREA AND R-VALUE**  
*Procedures for field verification and diagnostic testing for this group compliance credits are available in RACM, Appendix RC, RE & RH.*
- LESS THAN 12 LINEAL FEET OF SUPPLY DUCT OUTSIDE OF CONDITIONED SPACE COMPLIANCE CREDIT**

<input checked="" type="checkbox"/> <input type="checkbox"/> Yes	<input type="checkbox"/> No	Less than 12 lineal feet of supply duct outside of conditioned space.
Yes to this compliance credit is a pass		
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Pass
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Fail

- SUPPLY DUCTS LOCATED IN CONDITIONED SPACE COMPLIANCE CREDIT**

<input checked="" type="checkbox"/> <input type="checkbox"/> Yes	<input type="checkbox"/> No	Ducts are located within the conditioned volume of building.
Yes to this compliance credit is a pass		
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Pass
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Fail

Duct System Design verification is required for a compliance credit for the following:

1. Supply duct surface area reduction
2. Buried supply ducts on the ceiling
3. Deeply buried supply ducts

- DUCT SYSTEM DESIGN VERIFICATION**

<input checked="" type="checkbox"/> <input type="checkbox"/> Yes	<input type="checkbox"/> No	Adequate airflow verified
<input checked="" type="checkbox"/> <input type="checkbox"/> Yes	<input type="checkbox"/> No	The duct system design plan meets the requirements specified in RACM, Appendix RE, Section RE.4.2
<input checked="" type="checkbox"/> <input type="checkbox"/> Yes	<input type="checkbox"/> No	The duct system design plan exists on building plans
<input checked="" type="checkbox"/> <input type="checkbox"/> Yes	<input type="checkbox"/> No	Duct sizes, duct system layout and locations of supply & return registers match the duct system design plan
Yes to all is a pass		
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Pass
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Fail

- SUPPLY DUCTS SURFACE AREA REDUCTION COMPLIANCE CREDIT**

Attic	Crawl Space	Basement	Covered	Deeply Covered	Other	Duct Diameter	R-4.2 Surface Area	R-6.0 Surface Area	R-8.0 Surface Area
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Total Surface Area for Each R-Value =									
<input checked="" type="checkbox"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Duct Surface Area matches Performance's CR-IR?					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Yes to all is a pass							<input type="checkbox"/>	<input type="checkbox"/> Pass	<input type="checkbox"/> Fail

- BURIED DUCTS ON THE CEILING COMPLIANCE CREDIT**

<input checked="" type="checkbox"/> <input type="checkbox"/> Yes	<input type="checkbox"/> No	Buried Ducts on the Ceiling
<input checked="" type="checkbox"/> <input type="checkbox"/> Yes	<input type="checkbox"/> No	Verified High Insulation Installation Quality
Yes to duct system design, supply duct surface area reduction and this compliance credit is a pass		
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Pass
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Fail

- DEEPLY BURIED DUCTS COMPLIANCE CREDIT**

<input checked="" type="checkbox"/> <input type="checkbox"/> Yes	<input type="checkbox"/> No	Deeply Buried Ducts
<input checked="" type="checkbox"/> <input type="checkbox"/> Yes	<input type="checkbox"/> No	Verified High Insulation Installation Quality
Yes to duct system design, supply duct surface area reduction and this compliance credit is a pass		
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Pass
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Fail

CERTIFICATE OF FIELD VERIFICATION & DIAGNOSTIC TESTING (Page 3 of 8)		CF-4R
Project Address 360 [REDACTED]	Builder Name	
Builder Contact	Telephone	Plan Number
HERS Rater Home [REDACTED]	Telephone [REDACTED]	Sample Group Number 1
Compliance Method (Prescriptive)		Climate Zone 12
Certifying Signature (Electronically signed) [Signature]	Date [REDACTED]	Sample House Number 3679
Firm Envelope [REDACTED]		HERS Provider [REDACTED]
Street Address: 260 [REDACTED]		City/State/Zip: [REDACTED] CA 92301

Copies to: BUILDER, HERS PROVIDER AND BUILDING DEPARTMENT

### HERS RATER COMPLIANCE STATEMENT

The house was:  Tested       Approved as part of sample testing, but was not tested

As the HERS rater providing diagnostic testing and field verification, I certify that the house identified on this form complies with the diagnostic tested compliance requirements as checked on this form.

The installer has provided a copy of CP-6R (Installation Certificate).

### THERMOSTATIC EXPANSION VALVE (TXV)

Procedures for field verification of thermostatic expansion valves are available in RACM, Appendix R1.

<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Access is provided for inspection. The procedure shall consist of visual verification that the TXV is installed on the system and installation of the specific equipment shall be verified.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
			Yes is a pass	Pass	Fail

### REFRIGERANT CHARGE MEASUREMENT

Verification for Required Refrigerant Charge for Split System Space Cooling Systems without Thermostatic Expansion Valves

Outdoor Unit Serial #	[REDACTED]
Location	[REDACTED]
Outdoor Unit Make	[REDACTED]
Outdoor Unit Model	[REDACTED]
Cooling Capacity	[REDACTED] Btu/hr
Date of Verification	[REDACTED]
Date of Refrigerant Gauge Calibration	[REDACTED] (must be checked monthly)
Date of Thermocouple Calibration	[REDACTED] (must be checked monthly)

Standard Charge Measurement (outdoor air dry-bulb 55 °F and above):

Note: The system should be installed and charged in accordance with the manufacturer's specifications and installer verification shall be documented on CP-6R before starting this procedure. If outdoor air dry-bulb is below 55 °F rater shall use the Alternative Charge Measure Procedure.

Procedures for Determining Refrigerant Charge using the Standard Method are available in RACM, Appendix RD2.

<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	A copy of CP-6R (Installation Certificate) has been provided with refrigerant charge measurement documented.
---	--	--

**CERTIFICATE OF FIELD VERIFICATION & DIAGNOSTIC TESTING (Page 4 of 8) CF-4R**

Project Address <b>350 37th Street</b>	Builders Name <b>XXXXXXXXXX</b>
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Copies to: BUILDER, HERS PROVIDER AND BUILDING DEPARTMENT

**Measured Temperatures**

Supply (evaporator leaving) air dry-bulb temperature (Tsupply, db)		°F
Return (evaporator entering) air dry-bulb temperature (Treturn, db)		°F
Return (evaporator entering) air wet-bulb temperature (Treturn, wb)		°F
Evaporator saturation temperature (Tevaporator, sat)		°F
Suction line temperature (Tsuction, db)		°F
Condenser (entering) air dry-bulb temperature (Tcondenser, db)		°F

**Superheat Charge Method Calculations for Refrigerant Charge**

Actual Superheat = Tsuction, db - Tevaporator, sat		°F
Target Superheat (from Table RD-2)		°F
Actual Superheat - Target Superheat (System passes if between -5 and +5°F)		°F

**Temperature Split Method Calculations for Adequate Airflow**

*Split Method Calculation is not necessary if Adequate Airflow credit is taken*

Actual Temperature Split = Treturn, db - Tsupply, db		°F
Target Temperature Split (from Table RD3)		°F
Actual Temperature Split - Target Temperature Split (System passes if between -3°F and +3°F or, upon re-measurement, if between -3°F and -100°F)		°F

**Standard Charge Measurement Summary:**

System shall pass both refrigerant charge and adequate air flow calculation criteria from the same measurements. If corrective actions were taken, both criteria must be re-measured and recalculated.

<input checked="" type="checkbox"/> <input type="checkbox"/> Yes <input type="checkbox"/> No	System Passes
--	---------------

**Alternative Charge Measurement (outdoor air dry-bulb below 55 °F)**

Note: The system should be installed and charged in accordance with the manufacturer's specifications and installer verification shall be documented on CF-6R before starting this procedure. If outdoor air dry-bulb is 55 °F or above, rater shall use the Standard Charge Measure Procedure.

*Procedures for Determining Refrigerant Charge using the Alternative Method are available in RACM, Appendix RD3.*

<input checked="" type="checkbox"/> <input type="checkbox"/> Yes <input type="checkbox"/> No	A copy of CF-6R (Installation Certificate) has been provided with refrigerant charge measurement documented.
--	--

**Weigh-In Charging Method for Refrigerant Charge**

Actual liquid line length:		ft
Manufacturer's Standard liquid line length:		ft
Difference (Actual - Standard):		ft

Manufacturer's correction (ounces per foot) _____ x difference in length = _____ ounces (*+ = add ounces) (*- = remove ounces)
---

**Alternative Charge Measurement Summary:**

System shall pass both refrigerant charge and adequate air flow calculation criteria from the same measurements. If corrective actions were taken, both criteria must be re-measured and recalculated.

<input checked="" type="checkbox"/> <input type="checkbox"/> Yes <input type="checkbox"/> No	System Passes
--	---------------

**CERTIFICATE OF FIELD VERIFICATION & DIAGNOSTIC TESTING (Page 5 of 8) CF-4R**

Project Address <b>350 [REDACTED]</b>		Builder Name	
Builder Contact		Telephone	Plan Number
HERS Rater		Telephone	Sample Group Number
Certifying Signature (Electronics) <i>[Signature]</i>		Installation Date	Sample House Number <b>3679</b>
Firm <b>Enclaw [REDACTED]</b>		HERS Provider <b>[REDACTED] CA</b>	
Street Address: <b>250 [REDACTED]</b>		City/State/Zip: <b>[REDACTED] CA 92231</b>	

Copies to: BUILDER, HERS PROVIDER AND BUILDING DEPARTMENT

**HERS RATER COMPLIANCE STATEMENT**

The house was:  Tested  Approved as part of sample testing, but was not tested

As the HERS rater providing diagnostic testing and field verification, I certify that the house identified on this form complies with the diagnostic tested compliance requirements as checked on this form.

The installer has provided a copy of CP-6R (Installation Certificate).

**ADEQUATE AIRFLOW VERIFICATION**

Procedures for field verification and diagnostic testing of adequate airflow are available in RACM, Appendix RB.1.

Method For Airflow Measurement		Measured Airflow:	Total CFM
<input checked="" type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No	Duct design exists on plans	
<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No	RB4.1.1 Diagnostic Fan Flow Using Flow Capture Hood	
<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No	RB4.1.2 Diagnostic Fan Flow Using Plenum Pressure Matching	
<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No	RB4.1.3 Diagnostic Fan Flow Using Flow Grid Measurement	
		Rated Tons	cfm/ton
<input checked="" type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No	Measured airflow is greater than the criteria in Table RB-2	<input type="checkbox"/> <input type="checkbox"/>
		Yes is a pass	Pass Fail

**MAXIMUM COOLING CAPACITY**

Procedures for determining maximum cooling load capacity are available in RACM, Appendix RF3.

1	<input checked="" type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No	Adequate airflow verified (see adequate airflow credit)							
2	<input checked="" type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No	Refrigerant charge or TXV							
3	<input checked="" type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No	Duct leakage reduction credit verified							
4	<input checked="" type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No	Cooling capacities of installed systems are ≤ to maximum cooling capacity indicated on the Performance's CP-1R and RP-3.							
5	<input checked="" type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No	If the cooling capacities of installed systems are > than maximum cooling capacity in the CP-1R, then the electrical input for the installed systems must be ≤ to electrical input in the CP-1R.							
Yes to 1, 2, and 3; and Yes to either 4 or 5 is a pass				<table border="1"> <tr> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>Pass</td> <td>Fail</td> </tr> </table>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pass	Fail
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>									
<input type="checkbox"/>	<input type="checkbox"/>									
Pass	Fail									

**HIGH EER AIR CONDITIONER**

Procedures for verification are available in RACM, Appendix RI.

1	<input checked="" type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No	EER values of installed systems match the CP-1R							
2	<input checked="" type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No	For split system, indoor coil is matched to outdoor coil							
3	<input checked="" type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No	Time Delay Relay Verified (If Required)							
Yes to 1 and 2; and 3 (If Required) is a pass				<table border="1"> <tr> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>Pass</td> <td>Fail</td> </tr> </table>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pass	Fail
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>									
<input type="checkbox"/>	<input type="checkbox"/>									
Pass	Fail									

CERTIFICATE OF FIELD VERIFICATION & DIAGNOSTIC TESTING (Page 6 of 8)		CF-4R
Project Address <b>350 37th</b>	Builder Name	
Builder Contact	Telephone	Plan Number
HERS Rater <b>Home Energy</b>	Telephone <b>925-255-3000</b>	Sample Group Number
Certifying Signature <i>(Electronically signed)</i> <b>E. J. [Signature]</b>	Date <b>08/08/08</b>	Sample House Number <b>1</b>
Firm <b>EnergyScape</b>	HERS Provider <b>ESCA</b>	
Street Address <b>250 [Redacted]</b>	City/State/Zip <b>San Jose CA 95128</b>	

Copies to: BUILDER, HERS PROVIDER AND BUILDING DEPARTMENT

**HERS RATER COMPLIANCE STATEMENT**

The house was:  Tested  Approved as part of sample testing, but was not tested  
 As the HERS rater providing diagnostic testing and field verification, I certify that the house identified on this form complies with the diagnostic tested compliance requirements as checked on this form.  
 The installer has provided a copy of CP-6R (Installation Certificate).

**FAN WATT DRAW**

Procedures for measuring the air handler watt draw are available in RACM, Appendix RE3.2.

<input checked="" type="checkbox"/> Method For Fan Watt Draw Measurement			
<input type="checkbox"/>	RE3.2.1	Portable Watt Meter Measurement	
<input type="checkbox"/>	RE3.2.2	Utility Revenue Meter Measurement	
Measured Fan watt Draw: (enter watts here)			Watts
Measured Fan Flow (Enter total cfm from air flow verification)			cfm
Enter results of Watts/cfm:			Watts/cfm
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Calculated fan watt/cfm is equal to or lower than the fan watt/cfm draw documented in CP-1R	<input type="checkbox"/> <input type="checkbox"/>
		Yes is a pass	Pass Fail

**HERS RATER COMPLIANCE STATEMENT**

The house was:  Tested  Approved as part of sample testing, but was not tested  
 As the HERS rater providing diagnostic testing and field verification, I certify that the house identified on this form complies with the diagnostic tested compliance requirements as checked on this form.  
 The installer has provided a copy of CP-6R (Installation Certificate).

**MINIMUM REQUIREMENTS FOR INFILTRATION REDUCTION COMPLIANCE CREDIT**

Procedures for field verification and diagnostic testing of infiltration reduction are available in RACM Section 3.5.

		Diagnostic Testing Results		Building Envelope Leakage (CFM @ 50 Pa) as measured by Rater:	
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
1.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Is measured envelope leakage less than or equal to the required level from CP-1R?		
2.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Is Mechanical Ventilation shown as required on the CP-1R?		
2a.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	If Mechanical Ventilation is required on the CP-1R (Yes in line 2), has it been installed?		
2b.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Check this box yes if mechanical ventilation is required (Yes in line 2) and ventilation fan watts are no greater than shown on CP-1R.		
3.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Check this box yes if measured building infiltration (CFM @ 50 Pa) is greater than the CFM @ 50 values shown for an SLA of 1.5 on CP-1R (If this box is checked no, mechanical ventilation is required.)		
4.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Check this box yes if measured building infiltration (CFM @ 50 Pa) is less than the CFM @ 50 values shown for an SLA of 1.5 on CP-1R, mechanical ventilation is installed and house pressure is greater than minus 5 Pascal with all exhaust fans operating.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Pass if: a) Yes in line 1 and line 3, or b) Yes in line 1 and line 2, 2a, and 2b, or c) Yes in line 1 and line 4, Otherwise Fail.				<input type="checkbox"/>	<input type="checkbox"/>
				Pass	Fail

CERTIFICATE OF FIELD VERIFICATION & DIAGNOSTIC TESTING (Page 7 of 8) CF-4R	
Project Address 350 37th	Builder Name
Builder Contact	Telephone
HERS Rater Home Energy	Telephone
Certifying Signature (Electronically signed) <i>E. J. L.</i>	Approval Date
Firm Energy Group	HERS Provider BEP/CA
Street Address 250 Camp	City/State/Zip Berkeley CA 94701
Builder Contact	Plan Number
HERS Rater	Sample Group Number 1
Certifying Signature	Sample House Number 3879

Copies to: BUILDER, HERS PROVIDER AND BUILDING DEPARTMENT

### HERS RATER COMPLIANCE STATEMENT

The house was:  Tested  Approved as part of sample testing, but was not tested

As the HERS rater providing diagnostic testing and field verification, I certify that the house identified on this form complies with all applicable requirements of the "High Quality Installation of Insulation" protocols as specified in the Residential ACM, Appendix RH and as checked on this form. Note that to PASS and receive compliance credit, NONE of the BOXES below may be checked "No" and the first three boxes also must be checked. Check "NA" only if the item is not part of the design of the building (i.e., single story buildings do not have rim joints or there may be no recessed can lights installed, etc.).

#### REQUIREMENTS FOR "HIGH QUALITY INSTALLATION OF INSULATION" COMPLIANCE CREDIT

- The building is wood frame construction with wall stud cavities, ceilings, and roof assemblies insulated with mineral fiber or cellulose insulation in low-rise residential buildings.
- Description of insulation, (CF-6R, formerly IC-1) signed by the installer stating: insulation manufacturer's name, material identification, installed R-value, and for loose-fill insulation: minimum weight per square foot and minimum inches.
- Installation Certificate, (CF-6R) signed by the installer certifying that the installation meets all applicable requirements as specified in the High Quality Insulation Installation Procedures (ACM, Appendix RH).

#### FLOOR

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All floor joint cavity insulation installed to uniformly fit the cavity side-to-side and end-to-end
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Insulation in contact with the subfloor or rim joints insulated
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Insulation properly supported to avoid gaps, voids, and compression
Yes	No	NA	
<input checked="" type="checkbox"/> WALLS			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Wall stud cavity insulation uniformly fills the cavity side-to-side, top-to-bottom, and front-to-back
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No gaps
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No voids over 1/2" deep or more than 10% of the batt surface area.
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hard to access wall stud cavities such as: corner channels, wall intersections, and behind tub/shower enclosures insulated to proper R-Value.
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Small spaces filled
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Rim-joints insulated
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Wall stud cavities caulked or foamed to provide an air tight envelope
Yes	No	NA	

**CERTIFICATE OF FIELD VERIFICATION & DIAGNOSTIC TESTING (Page 8 of 8) CF-4R**

Project Address 350 37th Street	Builder Name [REDACTED]
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✓ ROOF/CEILING PREPARATION			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All draft stops in place to form a continuous ceiling and wall air barrier
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All drops covered with hard covers
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All draft stops and hard covers caulked or foamed to provide an air tight envelope
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All recessed light fixtures IC and air tight (AT) rated and sealed with a gasket or caulk between the housing and the ceiling
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Floor cavities on multiple-story buildings have air tight draft stops to all adjoining attics
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Eave vents prepared for blown insulation - maintain net free-ventilation area
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Knee walls insulated or prepared for blown insulation
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Area under equipment platforms and cat-walks insulated or accessible for blown insulation
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Attic rafter installed
Yes	No	NA	

✓ ROOF/CEILING BATTS			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No gaps
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No voids over 1/2 in. deep or more than 10% of the batt surface area
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Insulation in contact with the air-barrier
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Recessed light fixtures covered
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Net free-ventilation area maintained at eave vents
Yes	No	NA	

✓ ROOF/CEILING LOOSE-FILL			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Insulation uniformly covers the entire ceiling (or roof) area from the outside of all exterior walls
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Baffle installed at eave vents or soffit vents - maintain net free-ventilation area of eave vent
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Attic access insulated
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Recessed light fixtures covered
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Insulation at proper depth - insulation rafter visible and indicating proper depth and R-value
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Loose-fill mineral fiber insulation meets or exceeds manufacturer's minimum weight and thickness requirement for the target R-value. Target R-value _____ Manufacturer's minimum required weight for the target R-value _____ (pounds-per-square foot). Sample weight _____ (pounds per square foot).
Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Manufacturer's minimum required thickness at time of installation _____ (inches) Manufacturer's minimum required settled thickness _____ (inches). Number of days since loose-fill insulation was installed _____ (days). At the time of installation, the insulation shall be greater than or equal to the manufacturer's minimum initial insulation thickness. If the HERS rater does not verify the insulation at the time of installation, and if the loose-fill insulation has been in place less than seven days the thickness shall be greater than the manufacturer's minimum required thickness at the time of installation less 1/2 inch to account for settling. If the insulation has been in place for seven days or longer the insulation thickness shall be greater than or equal to the manufacturer's minimum required settled thickness. Minimum thickness measured (inches).
Yes	No	NA	