

CITY OF SACRAMENTO
1231 I Street, Sacramento, CA 95814

Permit No: 0519536
Insp Area: 3
Thos Bros: 318C5

Site Address: 7372 ROTELLA DR SAC
Parcel No: 038-0360-041

Sub-Type: NSFR
Housing (Y/N): N

CONTRACTOR
HOWARD A HY
919 PALM AVE
SAN GABRIEL, CA 91776

OWNER

ARCHITECT

Nature of Work: NEW SINGLE FAMILY 2703 SQ FT, W/ATTACHED GARAGE 495 SQ FT

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 B License Number 680979 Date 6-14-06 Contractor 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).

____ I am exempt under Sec. _____ B & PC for this reason: _____

Date _____ Owner Signature _____

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 6-14-06 Applicant/Agent 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 _____ Policy Number _____ Exp Date _____

____ (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 6-14-06 Applicant 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.

ENGEL INSULATION, INC.

CALIFORNIA CONTRACTOR'S LICENSE #745646

460 Roseville Road • Roseville, CA 95678

(916) 786-2088 / (916) 786-2064

THIS IS TO CERTIFY THAT INSULATION HAS BEEN INSTALLED IN CONFORMANCE WITH CURRENT ENERGY REGULATIONS, CALIFORNIA ADMINISTRATIVE CODE, TITLE 24, STATE OF CALIFORNIA, IN THE BUILDING LOCATED AT:

TRACT RD 0613788 LOT 5125

STREET U St CITY Sac

EXTERIOR WALLS: MANUFACTURER Ct THICKNESS 3 1/2 R-VALUE 13

CEILING AREA: BATTS MANUFACTURER Ct THICKNESS 12 R-VALUE 38

CEILINGS: BLOWN IN MANUFACTURER _____ THICKNESS _____ R-VALUE _____

SQUARE FOOTAGE _____ NUMBER OF BAGS USED _____

FLOOR AREA: MANUFACTURER _____ THICKNESS _____ R-VALUE _____

EXTERIOR KNEEWALL: MANUFACTURER Ct THICKNESS 3 1/2 R-VALUE 13

INTERIOR KNEEWALL: MANUFACTURER Ct THICKNESS 3 1/2 R-VALUE 13

APPLIED CAULK & SEALANT TO ALL EXTERIOR OPENINGS & PENETRATIONS

YES NO

GENERAL CONTRACTOR _____

CALIFORNIA CONTRACTORS LICENSE # _____ DATE _____

SIGNATURE _____ TITLE _____

INSULATION CONT. SIGNATURE _____ TITLE _____

DATE 12-22-06

DATE _____

Site Address 7372 Rotella Dr.

Permit Number 0519536

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; however, use of this form to provide the information is optional.) 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(b).

HVAC SYSTEMS:

Heating Equipment

Equip. Type (pkg. heat num)	CEC Certified Mfr Name and Model Number	# of Identical Systems	Efficiency (AFUE, etc.) ¹ [\geq CF-1R value]	Duct Location (attic, etc.)	Duct or Piping R-value	Heating Load (Btu/hr)	Heating Capacity (Btu/hr)
Split	Coleman A5FM4822A34T7V45		80%	attic	6	90,000	90,000

Cooling Equipment

Equip. Type (pkg. heat num)	CEC Certified Compressor Unit Mfr Name and Model Number	# of Identical Systems	Efficiency (SEER, etc.) ¹ [\geq CF-1R value]	Duct Location (attic, etc.)	Duct R-value	Cooling Load (Btu/hr)	Cooling Capacity (Btu/hr)
Split	Coleman ACD48X1322A		13	attic	6	48,000	48,000

1. \geq reads greater than or equal to.

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.

 4-30-07
Signature, Date

KINETIC DEVELOPMENT
Installing Subcontractor (Co. Name)
OR General Contractor (Co. Name) OR Owner

WATER HEATING SYSTEMS:

Heater Type	CEC Certified Mfr Name & Model Number	Distribution Type (Std. Point-of-Use)	If Recirculation, Control Type	# of Identical Systems	Rated ² Input (kW or Btu/hr)	Tank Volume (gallons)	Efficiency ² (EF, RE)	Standby ² Loss (%)	External Insulation R-value ³
gas	Guardian 22V50FI	std	N/A		22,000	50	62%		

- 2 For small gas storage (rated input of less than or equal to 75,000 Btu/hr), electric resistance and heat pump water heaters, list Energy Factor. For large gas storage water heaters (rated input of greater than 75,000 Btu/hr), list Recovery Efficiency, Standby Loss and Rated Input. For instantaneous gas water heaters, list Recovery Efficiency and Rated Input.
- 3. R-12 external insulation is mandatory for storage water heaters with an energy factor of less than 0.58.

Faucets & Shower Heads:

All faucets and showerheads installed are certified to the Commission, pursuant to Title 24, Part 6, Section 111.

I, the undersigned, verify that equipment listed above my signature is: 1) 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.

 4-30-07
Signature, Date

KINETIC DEVELOPMENT
Installing Subcontractor (Co. Name) OR
General Contractor (Co. Name) OR Owner

COPY TO: Building Department
HERS Provider (if applicable)
Building Owner at Occupancy

Site Address 7372 Rotella Dr.

Permit Number 0519536


FENESTRATION/GLAZING:

Manufacturer/Brand Name (GROUP LIKE PRODUCTS)	Product U-Factor ¹ (≤ CF-1R value) ²	Product SHGC ¹ (≤ CF-1R value) ²	# of Panes	Total Quantity of Like Product (Optional)	Square Feet	Exterior Shading Device or Overhang	Comments/Location/Special Features
1. <u>JELD WEN</u>	<u>0.34</u>	<u>0.34</u>	—	—	<u>128</u>	<u>n/a</u>	<u>Front</u>
2. <u>JELD WEN</u>	<u>0.34</u>	<u>0.34</u>	—	—	<u>65</u>	<u>n/a</u>	<u>Left</u>
3. <u>JELD WEN</u>	<u>0.34</u>	<u>0.34</u>	—	—	<u>22</u>	<u>n/a</u>	<u>Right</u>
4. <u>JELD WEN</u>	<u>0.34</u>	<u>0.34</u>	—	—	<u>165</u>	<u>n/a</u>	<u>Back</u>
5. _____	_____	_____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____	_____	_____
9. _____	_____	_____	_____	_____	_____	_____	_____
10. _____	_____	_____	_____	_____	_____	_____	_____
11. _____	_____	_____	_____	_____	_____	_____	_____
12. _____	_____	_____	_____	_____	_____	_____	_____
13. _____	_____	_____	_____	_____	_____	_____	_____
14. _____	_____	_____	_____	_____	_____	_____	_____
15. _____	_____	_____	_____	_____	_____	_____	_____

¹ Manufactured fenestration products use the values from the product label. Field fabricated fenestration products use the default values from Section 116 of the Energy Efficiency Standards.

² Installed U-Factor must be less than or equal to values from CF-1R. Installed SHGC must be less than or equal to values from CF-1R, or a shading device (exterior or overhang) is installed as specified on the CF-1R. Alternatively, installed weighted average U-Factors for the total fenestration area are less than or equal to values from CF-1R.

I, the undersigned, verify that the fenestration/glazing listed above my signature: 1) is the actual fenestration product installed; 2) is equivalent to or has a lower U-Factor and lower SHGC than that specified in the certificate of compliance (Form CF-1R) submitted for compliance with the *Energy Efficiency Standards* for residential buildings; and 3) the product meets or exceeds the appropriate requirements for manufactured devices (from Part 6), where applicable.

Item #s (if applicable)	Signature, Date  <u>4-30-07</u>	<u>KINETIC DEVELOPMENT</u> Installing Subcontractor (Co. Name) OR General Contractor (Co. Name) OR Owner OR Window Distributor
Item #s (if applicable)	Signature, Date	Installing Subcontractor (Co. Name) OR General Contractor (Co. Name) OR Owner OR Window Distributor
Item #s (if applicable)	Signature, Date	Installing Subcontractor (Co. Name) OR General Contractor (Co. Name) OR Owner OR Window Distributor

COPY TO: Building Department
HERS Provider (if applicable)
Building Owner at Occupancy

Site Address 7372 Rotella Dr.

Permit Number 0519536

DUCT LEAKAGE AND DESIGN DIAGNOSTICS

DUCT LEAKAGE REDUCTION n/a

Pressurization Test Results (CFM @ 25 PA)

Test Leakage (CFM) n/a

Fan Flow

If Fan Flow is Calculated as 400 cfm/ton x number of tons, or as 21.7 x Heating Capacity in Thousands of Btu/hr, enter calculated value here n/a

If fan flow is measured, enter measured value here n/a

Leakage Fraction = Test Leakage / (Measured or Calculated Fan Flow) = n/a

Pass if leakage fraction ≤ 0.06

Pass Fail

For AEROSOL TYPE SEALANTS ONLY - The following diagnostic testing was completed: n/a

Duct Fan Pressurization at rough-in measured leakage (CFM)

CHECK AFTER FINISHING WALL:

Yes No Pressure pan test or House pressurization test

Yes No Visual Inspection of Duct Connections

Pass Fail

THERMOSTATIC EXPANSION VALVE (TXV)

Yes No Thermostatic Expansion Valve is installed and Access is provided for inspection

Yes is a pass

Pass Fail

DUCT DESIGN

1. Yes No ACCA Manual D Design calculations have been completed, Duct Design is on the plans and duct installation matches plans.

2. Yes No TXV is installed or Fan flow has been verified. If no TXV, verified fan flow matches design from CF-1R.

Measured Fan Flow = _____

Yes for both 1 and 2 is a Pass

Pass Fail

I, the undersigned, verify that the above diagnostic test results and the work I performed associated with the test(s) is in conformance with the requirements for compliance credit. [The builder shall provide the HERS provider a copy of the CF-6R signed by the builder employees or sub-contractors certifying that diagnostic testing and installation meet the requirements for compliance credit.]

Tests Performed

Signature, Date

Installing Subcontractor (Co. Name) OR General Contractor (Co. Name)

COPY TO: Building Department
HERS Provider (if applicable)
Building Owner at Occupancy

 4-30-07

KINETIC DEVELOPMENT

Site Address 7372 Rotella Dr.

Permit Number 0519536

REFRIGERANT CHARGE AND AIRFLOW MEASUREMENT n/a

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

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

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

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 1) _____ °F
 Actual Superheat - Target Superheat _____ °F
 (System passes if between -5 and +5°F)

Temperature Split Method Calculations for Adequate Airflow

Actual Temperature Split = T return, db - Tsupply, db _____ °F
 Target Temperature Split (from Table 2) _____ °F
 Actual Temperature Split - Target Temperature Split _____ °F
 (System passes if between -3°F and +3°F or, upon remeasurement, if between +3°F and -25°F)

Standard Charge and Airflow Measurement Summary:

System shall pass both refrigerant charge and adequate airflow calculation criteria from the same measurements. If corrective actions were taken, both criteria must be remeasured and recalculated

System Passes _____ yes or _____ no

Site Address 7372 Rotella Dr.

Permit Number 0519536

Alternate Charge and Airflow Measurement (outdoor air dry-bulb below 55 °F):

Weigh-In Charging Method for Refrigerant Charge

Actual liquid line length: _____ ft.
Manufacturers Standard liquid line length: _____ ft.

Difference (Actual - Standard): _____ ft.

Manufacturers correction (ounces per foot) _____ x difference in length = _____ ounces
(+ = add) (- = remove)

Measured Airflow Method for Adequate Airflow

Airflow criterion: Cooling Capacity _____ X 0.032 = _____ CFM

Measured Airflow is _____ CFM and passes since it is greater than the criterion.

Alternate Charge and Airflow Measurement Summary:

System charge shall be corrected and it shall also pass measured adequate airflow criterion.

System Passes _____ yes or _____ no

INSTALLATION CERTIFICATE

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CF-6R

Site Address **7372 Rotella Dr.**

Permit Number **0519536**

Table K-1: Target Superheat (Suction Line Temperature - Evaporator Saturation Temperature) (continued)

Condenser Air Dry-Bulb Temperature (°F)	Return Air Wet-Bulb Temperature (°F)																										
	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76
91	-	-	-	-	-	-	-	-	-	-	-	-	-	6.1	8.1	10.3	12.2	14.1	15.9	17.8	19.7	21.5	23.4	25.2	27.1	28.9	30.8
92	-	-	-	-	-	-	-	-	-	-	-	-	-	5.4	7.5	9.8	11.7	13.5	15.4	17.3	19.2	21.1	22.9	24.8	26.7	28.5	30.4
93	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.8	9.2	11.1	13.0	14.9	16.8	18.7	20.6	22.5	24.4	26.3	28.2	30.1
94	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.2	8.7	10.6	12.5	14.4	16.3	18.2	20.2	22.1	24.0	25.9	27.8
95	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.6	8.1	10.0	12.0	13.9	15.8	17.8	19.7	21.6	23.6	25.5	27.4	29.4
96	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.5	9.5	11.4	13.4	15.3	17.3	19.2	21.2	23.2	25.1	27.1	29.0
97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.0	8.9	10.9	12.9	14.9	16.8	18.8	20.8	22.7	24.7	26.7	28.7
98	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.4	8.4	10.4	12.4	14.4	16.4	18.3	20.3	22.3	24.3	26.3	28.3
99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.8	7.9	9.9	11.9	13.9	15.9	17.9	19.9	21.9	24.0	26.0	28.0
100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.3	7.3	9.3	11.4	13.4	15.4	17.5	19.5	21.5	23.6	25.6	27.7
101	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.8	8.8	10.9	12.9	15.0	17.0	19.1	21.1	23.2	25.3	27.3
102	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.2	8.3	10.4	12.4	14.5	16.6	18.6	20.7	22.8	24.9	27.0
103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.7	7.8	9.9	11.9	14.0	16.1	18.2	20.3	22.4	24.5	26.7
104	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.2	7.2	9.3	11.5	13.6	15.7	17.8	19.9	22.1	24.2	26.3
105	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.7	8.8	11.0	13.1	15.2	17.4	19.5	21.7	23.8	26.0
106	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.2	8.3	10.5	12.6	14.8	17.0	19.1	21.3	23.5	25.7
107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.7	7.9	10.0	12.2	14.4	16.6	18.7	21.0	23.2	25.4
108	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.2	7.4	9.5	11.7	13.9	16.1	18.4	20.6	22.8	25.1
109	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.9	9.1	11.3	13.5	15.7	18.0	20.2	22.5	24.7	27.0
110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.4	8.6	10.8	13.1	15.3	17.6	19.9	22.1	24.4	26.7
111	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.9	8.1	10.4	12.6	14.9	17.2	19.5	21.8	24.1	26.4
112	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.4	7.6	9.9	12.2	14.5	16.8	19.1	21.5	23.8	26.1
113	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.2	9.5	11.8	14.1	16.4	18.8	21.1	23.5	25.8
114	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.7	9.0	11.4	13.7	16.1	18.4	20.8	23.2	25.6
115	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.2	8.6	10.9	13.3	15.7	18.1	20.5	22.9	25.3

INSTALLATION CERTIFICATE

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CF-6R

Site Address **7372 Rotella Dr.**

Permit Number **0519536**

Table K-2: Target Temperature Split (Return Dry-Bulb – Supply Dry-Bulb)

	Return Air Wet-Bulb (°F) (T _{return, wb})																										
	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76
70	20.9	20.7	20.6	20.4	20.1	19.9	19.5	19.1	18.7	18.2	17.7	17.2	16.5	15.9	15.2	14.4	13.7	12.8	11.9	11.0	10.0	9.0	7.9	6.8	5.7	4.5	3.2
71	21.4	21.3	21.1	20.9	20.7	20.4	20.1	19.7	19.3	18.8	18.3	17.7	17.1	16.4	15.7	15.0	14.2	13.4	12.5	11.5	10.6	9.5	8.5	7.4	6.2	5.0	3.8
72	21.9	21.8	21.7	21.5	21.2	20.9	20.6	20.2	19.8	19.3	18.8	18.2	17.6	17.0	16.3	15.5	14.7	13.9	13.0	12.1	11.1	10.1	9.0	7.9	6.8	5.6	4.3
73	22.5	22.4	22.2	22.0	21.8	21.5	21.2	20.8	20.3	19.9	19.4	18.8	18.2	17.5	16.8	16.1	15.3	14.4	13.6	12.6	11.7	10.6	9.6	8.5	7.3	6.1	4.8
74	23.0	22.9	22.8	22.6	22.3	22.0	21.7	21.3	20.9	20.4	19.9	19.3	18.7	18.1	17.4	16.6	15.8	15.0	14.1	13.2	12.2	11.2	10.1	9.0	7.8	6.6	5.4
75	23.6	23.5	23.3	23.1	22.9	22.6	22.2	21.9	21.4	21.0	20.4	19.9	19.3	18.6	17.9	17.2	16.4	15.5	14.7	13.7	12.7	11.7	10.7	9.5	8.4	7.2	5.9
76	24.1	24.0	23.9	23.7	23.4	23.1	22.8	22.4	22.0	21.5	21.0	20.4	19.7	19.0	18.3	17.5	16.6	15.7	14.8	13.8	12.8	11.7	10.6	9.5	8.3	7.0	5.7
77	-	24.6	24.4	24.2	24.0	23.7	23.3	22.9	22.5	22.0	21.5	21.0	20.4	19.7	19.0	18.3	17.5	16.6	15.7	14.8	13.8	12.8	11.7	10.6	9.5	8.3	7.0
78	-	-	-	24.7	24.5	24.2	23.9	23.5	23.1	22.6	22.1	21.5	20.9	20.2	19.5	18.8	18.0	17.2	16.3	15.4	14.4	13.4	12.3	11.2	10.0	8.8	7.6
79	-	-	-	-	24.8	24.4	24.0	23.6	23.1	22.6	22.1	21.4	20.8	20.1	19.3	18.5	17.7	16.8	15.9	14.9	13.9	12.8	11.7	10.6	9.4	8.1	6.9
80	-	-	-	-	-	25.0	24.6	24.2	23.7	23.2	22.6	22.0	21.3	20.6	19.9	19.1	18.3	17.4	16.4	15.5	14.4	13.4	12.3	11.1	9.9	8.7	7.5
81	-	-	-	-	-	-	25.1	24.7	24.2	23.7	23.1	22.5	21.9	21.2	20.4	19.6	18.8	17.9	17.0	16.0	15.0	13.9	12.8	11.7	10.4	9.2	8.0
82	-	-	-	-	-	-	-	25.2	24.8	24.2	23.7	23.1	22.4	21.7	21.0	20.2	19.3	18.5	17.5	16.6	15.5	14.5	13.4	12.2	11.0	9.7	8.5
83	-	-	-	-	-	-	-	-	25.3	24.8	24.2	23.6	23.0	22.3	21.5	20.7	19.9	19.0	18.1	17.1	16.1	15.0	13.9	12.7	11.5	10.3	9.1
84	-	-	-	-	-	-	-	-	-	25.9	25.3	24.8	24.2	23.5	22.8	22.1	21.3	20.4	19.5	18.6	17.6	16.6	15.6	14.4	13.3	12.1	10.8

Return Air Dry-Bulb (°F) (T_{return, db})

Site Address 7372 Rotella Dr.

Permit Number 0519536

DUCT LOCATION AND AREA REDUCTION DIAGNOSTICS

DUCT IN CONDITIONED SPACE n/a

Yes No Duct in conditioned space criteria matches CF-1R

Yes is a Pass Pass Fail

REDUCED DUCT SURFACE AREA n/a

Measured duct exterior surface area in the following unconditioned duct locations (square feet):

Attics _____

Crawlspace _____

Basements _____

Other (e.g., garages, etc.) _____

Yes No Duct surface area matches CF-1R?

Yes is a Pass Pass Fail

I, the undersigned, verify that the duct surface area and duct locations claimed for duct surface area reductions and duct location improvements beyond those covered by default assumptions match those on the plans. [The builder shall provide the HERS provider a copy of the CF-6R signed by the builder employees or sub-contractors certifying that diagnostic testing and installation meet the requirements for compliance credit.]

Tests Performed
COPY TO:

Signature, Date

Building Department
HERS Provider (if applicable)
Building Owner at Occupancy

Installing Subcontractor (Co. Name) OR
General Contractor (Co. Name)

Site Address 7372 Rotella Dr.

Permit Number 0519536

BUILDING ENVELOPE LEAKAGE DIAGNOSTICS

ENVELOPE SEALING INFILTRATION REDUCTION n/a

Diagnostic Testing Results

Building Envelope Leakage (CFM @ 50 Pa) as measured by Rater

- 1. Yes No Is measured envelope leakage less than or equal to the required level from CF-1R?
- 2. Yes No Is Mechanical Ventilation shown as required on the CF-1R?
- 2a. Yes No If Mechanical Ventilation is required on the CF-1R (Yes in line 2), has it been installed?
- 2b. Yes No Check this box yes if mechanical ventilation is required (Yes in line 2) and ventilation fan watts are no greater than shown on CF-1R. Measured Watts = _____
- 3. Yes 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 CF-1R (If this box is checked no, mechanical ventilation is required.)
- 4. Yes 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 CF-1R, mechanical ventilation is installed and house pressure is greater than minus 5 Pascal with all exhaust fans operating.

Pass Fail

Pass if:

- d. Yes in line 1 and line 3, or
- e. Yes in line 1 and line 2, 2a, and 2b, or
- f. Yes in line 1 and Yes in line 4.

Otherwise fail.

I, the undersigned, verify that the building envelope leakage meets the requirements claimed for building leakage reduction below default assumptions as used for compliance on the CF-1R. This is to certify that the above diagnostic test results and the work I performed associated with the test(s) is in conformance with the requirements for compliance credit. [The builder shall provide the HERS provider a copy of the CF-6R signed by the builder employees or sub-contractors certifying that diagnostic testing and installation meet the requirements for compliance credit.]

Test Performed	Signature	Date	Testing Subcontractor (Co. Name) OR General Contractor (Co. Name)
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COPY TO: Building Department
HERS Provider (if applicable)
Building Owner at Occupancy

Site Address 7372 Rotella Dr.

Permit Number 0519536

The following is an explanation of many of the input values required on this form:

HVAC SYSTEMS

Heating Equipment Type must be one of the following:

Furnace:	Gas (including Liquefied Petroleum Gases) or oil-fired central furnace & space heater
Boiler:	Gas or oil-fired boiler
PckgHeatPump:	Packaged central heat pump
SplitHeatPump:	Split central heat pump
RoomHeatPump:	Room heat pump
LgPkgHeatPump:	Large packaged heat pump (≥ 65,000 Btu/hr output)
Electric:	Electric resistance heating (fixed HSPF = 3.413); radiant electric resistance (fixed HSPF = 3.55)
CombinedHydro:	Reference water heater under water heating systems below

CEC Certified Manufacturer Name & Model Number from applicable Commission approved appliance directory.
 # of Identical Systems is for those systems with the same efficiency, duct location, duct R-value and capacity.
 Efficiency from applicable Commission certified appliance directory.
 Duct (or Piping) Location is attic, crawl space, CVC crawl space, conditioned space, unconditioned space or none.
 Duct (or Piping) R-Value from Directory of Certified Insulation Materials and/or manufacturer's data.
 Heating/Cooling Load refer to Commission approved load calculation procedure.
 Heating/Cooling Capacity from the applicable Commission certified appliance directory. Note: location elevations over 2,000 ft above sea level require a derating of output capacity (refer to manufacturer's literature).

Cooling Equipment Type must be one of the following:

SplitAirCond:	Split system air conditioner
PckgAirCond:	Packaged air conditioner
Split Heat Pump:	Split system heat pump
PckgHeatPump:	Packaged heat pump
RoomHeatPump:	Room heat pump
LgPkgHeatPump:	Large packaged heat pump (≥ 65,000 Btu/hr output). Substitute EER for SEER when SEER is not available
RoomAirCond:	Room air conditioner. Minimum SEER varies*
LgPkgAirCond:	Large packaged air conditioner (≥ 65,000 Btu/hr output). Substitute EER for SEER when SEER is not available
EvapDirect:	Direct evaporative cooling system. For compliance calculation purposes, fixed values: SEER = 11.0; duct location = attic; duct insulation R-value = 4.2
EvapIndirect:	Indirect evaporative cooling system. For compliance calculation purposes, fixed values: SEER = 13.0; duct location = attic; duct insulation R-value = 4.2

*Refer to Energy Commission publication *Appliance Efficiency Regulations*, P400-92-029

Site Address 7372 Rotella Dr.

Permit Number 0519536

The following is an explanation of many of the input values required on this form:

WATER HEATING SYSTEMS

Distribution Systems Refer to *Residential Manual* for more details:

Standard:	Standard – Supply pressure based system, no pumps
Pipe Insulation:	Pipe Insulation on all 3/4-inch pipes
POU/HWR:	Point of Use/Hot Water Recovery System
Recirc/NoControl:	Recirculation loop with no controls
Recirc/Timer:	Recirculation loop with a timer
Recirc/Temp:	Recirculation loop with temperature control
Recirc/Time+Temp:	Recirculation loop with a timer and temperature control
Recirc/Demand:	Recirculation loop with demand control

Water Heater Type

	Information Needed			
	Energy Factor	Recovery Efficiency	Standby Loss	Rated Input
Storage Gas, Oil or Electric	Yes	No	No	No
Heat Pump	Yes	No	No	No
Instantaneous Gas	No	Yes	No	No
Instantaneous Electric	Yes	No	No	No
Large Storage Gas	No	Yes	Yes	Yes
Indirect Gas (Boiler)	No	Yes (AFUE)	No	Yes

FENESTRATION/GLAZING

Fenestration:	Windows, sliding glass doors, French doors, skylights, garden windows, and any door with more than one square foot of glass
Operator Type:	Slider, hinged, fixed
U-Factor:	Installed U-Factor must be less than or equal to value from CF-1R OR Installed weighted average U-Factor for the total fenestration area is less than or equal to value from CF-1R
SHGC:	Installed SHGC must be less than or equal to value from CF-1R OR Installed weighted SHGC for the total fenestration area is less than or equal to value from CF-1R OR An interior shading device, overhang, or exterior shading device is installed consistent with the CF-1R
Shading Device:	Include when the building complied using an <i>exterior</i> shading device: woven sunscreen, louvered sunscreen, low sun angle sunscreen, roll-down awning, roll-down blinds or slats (do not list bug screen), or an overhang (include depth in feet)

Site Address **7372 Rotella Dr.**

Permit Number **0519536**

The following is an explanation of many of the input values required on the Diagnostic portion of this form (page 3 of 6):

TYPE OF CREDIT

Refer to *Residential Manual* Chapters 4 and 5 for more details:

Reduced Duct Surface Area:	Calculated as the outside area of the duct. Areas must be measured and verified by a HERS rater.
Improved Duct Location:	Supply duct located in other than attic, as verified by location of registers (does not require HERS rater verification).
Catastrophic Leakage:	Pressure pan test readings must be less than 1.5 Pascal at a house pressure of 25 Pascal.
TXV:	Access cover required to facilitate verification.
Infiltration Reduction:	Infiltration is measured without mechanical ventilation operating. Mechanical ventilation is required for very tight house construction when credits for infiltration reduction using diagnostic testing are being used for achieving compliance. These very tight houses are defined as those with SLA of less than 1.5. The compliance documentation (CF-1R) will contain the measured CFM target value from a blower door test at 50 Pascal pressure difference that represents this SLA of 1.5. Mechanical ventilation is also required if the builder chooses to design the building to use mechanical ventilation and claims a credit for infiltration below an SLA of 3.0. The compliance documentation (CF-1R) will contain the measured CFM target value that represents this 3.0 SLA. If the builder claims credit in a design for infiltration reduction that is at an SLA of 3.0 or higher, and the actual measured SLA is 1.5 or greater, then mechanical ventilation is not required. If the SLA in this case were below 1.5, then mitigation (such as mechanical ventilation) would be required.

INSULATION CERTIFICATE

THIS IS TO CERTIFY THAT INSULATION HAS BEEN INSTALLED IN CONFORMANCE WITH THE CURRENT ENERGY REGULATIONS, CALIFORNIA ADMINISTRATION CODE, TITLE 24, STATE OF CALIFORNIA, IN THE BUILDING LOCATED AT:

SITE ADDRESS _____ LOT 5 ROTELLA _____ SACRAMENTO _____ CA _____
NUMBER CITY STATE

CEILINGS:

BLOW:	MANUFACTURER	<u>GREENFIBER</u>	THICKNESS	<u>10.3"</u>	R/VALUE	<u>38</u>
	MANUFACTURER	<u>GREENFIBER</u>	THICKNESS		R/VALUE	
BATTS:	MANUFACTURER	<u>KNAUF</u>	THICKNESS	<u>13"</u>		<u>38</u>
		<u>KNAUF</u>		<u>6.25"</u>		<u>19</u>

EXTERIOR WALLS:

	MANUFACTURER	<u>KNAUF</u>	THICKNESS	<u>3.5"</u>	R/VALUE	<u>13</u>
		<u>KNAUF</u>		<u>6.25"</u>		<u>19</u>

FLOOR INSULATION:

	MANUFACTURER	<u>KNAUF</u>	THICKNESS	<u>6.25"</u>	R/VALUE	<u>19</u>
		<u>KNAUF</u>				

AIR INFILTRATION: (TITLE 24)

YES XXX NO _____

OTHER: _____

GENERAL CONTRACTOR: KINETIC DEVELOPMENT LICENSE # _____

BY: _____ TITLE _____ DATE _____

INSULATION CONTRACTOR: WESTERN INSULATION LP LICENSE # 794484

BY: Becky Gutherz TITLE AUTH. AGENT DATE 3/14/2007
BECKY GUTHERZ