

TRANSMISSION VERIFICATION REPORT

TIME : 01/30/2006 11:33
 NAME : CITY OF SACRAMENTO
 FAX : 9168085543
 TEL : 9168085656
 SER.# : BROH4J832840

DATE, TIME	01/30 11:31
FAX NO./NAME	99208409
DURATION	00:02:47
PAGE(S)	05
RESULT	OK
MODE	STANDARD

Kleen Air

**CITY OF SACRAMENTO
 CASHIER'S WORKSHEET**

ISSUED
 CITY OF SACRAMENTO
 JAN 30 2006
 DOWNTOWN PERMIT
 CENTER

RECEIPT NUMBER: R0601617
 TRANSACTION DATE: 01/30/2006
 TRANSACTION AMOUNT: 194.80
 NOTATION:

APD #: **0601214**
 SITE ADDRESS: 2526 N ST SAC
 PARCEL: 007-0263-009

TYPE: Bldg Minor Permit
 SUB-TYPE: RES
 HOUSING: N
 STATUS: **ISSUED**

Mixed Income Housing
 Fee Program
 ??

TRANSACTION LIST

Type	Method	Description	Pymt Amount
Payment	Credit C	TEETER	194.80

RECEIPT ACCOUNT ITEM LIST

Class #	Description	Item #	Total fee	Prev Pymt	Current Pymt
200	Permit--Building-Res	1100	175.00	.00	175.00
206	City Business Oper Tax	1730	5.13	.00	5.13
213	General Plan Surcharge	1760	7.67	.00	7.67
259	Bldg-Technology Surcharg	1750	7.00	.00	7.00

Buss Depn Copy

Contractor Information															
Contractor Name	KLEEN AIR			Address	1657 SILICA AVENUE			City	SACRAMENTO	Zip	95815	Phone	916-922-3995	Fax	916-920-8409
Company Contact	EARL COX			Est Start	1/30/2006			Est Complete	1/31/2006			Job Number	SEARS-5321503		
Permit Number	0601214			Permit Number				License #	481974			Company ID #	40005		
Residential Project Information															
Owner's Name/ Project Title	DAVID FOULKES			Address	2526 N STREET			City	SACRAMENTO	Zip	95816	Phone	916-457-7355	Fax/ email	
County	SACRAMENTO			Bld Dept - Permit From	CITY OF SACRAMENTO			Utility	SMUD	Sample	7	Plan #	40005	Group #	5305
House #	1068			Building Information											
Multi Family	<input type="checkbox"/>			# of Dwellings	1			Front Orientation (N, S, E, W)	N			Heat Load	107,502 BTUs		
Single Family	<input checked="" type="checkbox"/>			Slab Floor	<input type="checkbox"/>			Number of Stories	2			Cool Load	68,757 BTUs		
Addition-new rm	<input type="checkbox"/>			Raised Floor	<input checked="" type="checkbox"/>			Conditioned Floor Area	2400 SF			Duct Location	UNDER HOUSE		
Alteration-change	<input checked="" type="checkbox"/>			Climate Zone	12			Maximum Ceiling Height	9 Ft			Duct -R value	R4		
Equipment Information															
Package Unit	<input type="checkbox"/>			Gas / Electric	<input checked="" type="checkbox"/>			AFUE	96.00			SEER	14		
Split System	<input checked="" type="checkbox"/>			Heat Pump	CARRIER			HSPF				EER			
Heat System Mfg	58MVP100-F-1-20			Condenser Sys Mfg	CARRIER			Model #	38TDB060-3			Coil System Mfg	CARRIER		
Model #	58MVP100-F-1-20			Model #	38TDB060-3			Model #	PS1660M215			Model #	PS1660M215		
Serial #	5805A09573			Serial #	38TDB060-3			Serial #	6005M42633			Serial #	6005M42633		

Title 24 requirements - contractor and HERS verification check list

CF6R forms on job site	_____	Permit #	_____
Furnace Mfg and model # documented	_____	Duct System - New or Exist	_____
Furnace serial # documented	_____	CFM Leakage	_____
Coil Mfg and model # documented	_____	Leakage pressure	_____
Coil serial # documented	_____	Equipment air flow in CFM	_____
Condenser Mfg and model # documented	_____	System % leakage	_____
Condenser serial # documented	_____	Test Date	_____
TXV verified on split system	_____	ARI #	_____
High EER verified on options	_____	Notes:	_____
Air distribution system fully ducted	_____		_____
Existing duct tape has draw bands and mastic	_____		_____
All Supply registers sealed for test	_____		_____
All Return grilles sealed for test	_____		_____
Duct blaster w/ rings installed correctly	_____		_____
Smoke required to pass test	_____		_____
All register & grille seals removed	_____		_____
Thermostat turned on after test	_____	Signature	_____

DAVID FOULKES

Project Title

2526 N STREET

Project Address

SACRAMENTO CA 95816

EARL COX

Documentation Author

916-922-3995

Telephone

Prescriptive

Compliance Method (Prescriptive)

12

Climate Zone

Date

Building Permit #

Plan Check Date

Field Check Date

Enforcement Agency Use Only

Alternative Component Package Method: (check one) C X D (Alternative)

Package C and Package D choices require HERS rater field verification and or diagnostic testing (see CF-1R page 3)

For Package D Alternative see Appendix B Table 151-C Footnotes 7-14

GENERAL INFORMATION

Total Conditioned Floor Area (CFA) 2400 ft2 Average Ceiling Height: 9 ft

Maximum Allowed West Facing Fenestration Products Per Table 151-B or 151-C ---- (5% X CFA) NA ft2

Maximum Allowed Total Fenestration Products Per Table 151-B or 151-C ---- (20% X CFA) NA ft2

Building Type: (check one or more) Single Family Multifamily Addition Alteration

(If adding fenestration fill out WS-4R, Fenestration Maximum Allowed Area Worksheet and see Section 8.3.2 for Additions and 8.3.3 for Alterations.)

Number of Stories: 2 Number of Dwelling Units: 1

Floor Construction Type: raised Slab Raised Floor (circle one or both)

Front Orientation: N North South East West All Orientations (input front orientation in degrees from True North and circle one).

RADIANT BARRIER (required in climate zones 2, 4, 8-15)

OPAQUE SURFACES INCLUDING OPAQUE DOORS

Component Type (Wall, Roof, Floor, Slab Edge, Doors)	Frame Type (Wood or Metal)	Cavity Insulation R-Value	Continuous Insulation R-Value	Assembly Ufactor (for wood, metal frame and mass assemblies) 1	Joint Appendix IV Reference	Roof Radiant Barrier Installed Yes or No	Location Comments (attic, garage, typical, etc.)

1) See Joint Appendix IV in Section IV.2, IV.3 and IV.4, which is the basis for the U-factor criterion. U-factors can not exceed prescriptive value to show equivalence to R-values.

DAVID FOULKES

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Date

FENESTRATION PRODUCTS – U-FACTOR AND SHGC

FENESTRATION MAXIMUM ALLOWED AREA WORKSHEET WS-4R –must be included for New Construction, Additions and Alterations.

Fenestration # Type Pos. (Front, Left, Rear, Right, Skylight)	Orientation, N, S, E, W1	Area (ft2)	U-factor2	U-factor Source3	SHGC4	SHGC Source5	Exterior Shading Overhangs6, 7 Ck box if WS-3R is included
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>

- 1) Skylights are now included in West-facing fenestration area if the skylights are tilted to the west or tilted in any direction when the pitch is less than 1:12. See §151(f)3C and In Section 3.2.3 of the Residential Manual
- 2) Enter values in this column are either NFRC Rated value or from Standards default Table 116A.
- 3) Indicate source either from NFRC or Table 116A,
- 4) Enter values in this column from NFRC or from Standards Default Table 116B or adjusted SHGC from WS-3R.
- 5) Indicate source either from NFRC or Table 116B.
- 6) Shading Devices are defined in Table 3-3 in the Residential Manual and see WS-3R to calculate Exterior Shading devices.
- 7) See Section 3.2.4 in the Residential Manual.

HVAC SYSTEMS

Heating Equipment Type and Capacity (furnace, heat pump, boiler, etc.)	Minimum Efficiency (AFUE or HSPF)	Distribution Type and Location (ducts, attic, etc.)	Duct or Piping R-Value	Thermostat Type	Configuration (split or package)
G/E	96.00 AFUE	UNDER HOUSE	R4	Programable	Split Sys
	0 HSPF				
100000 BTU					

Cooling Equipment Type and Capacity (A.C, Heat Pump, Evap Cool)	Minimum Efficiency (SEER or EER)	Duct Location (attic, etc.)	Duct R-Value	Thermostat Type	Configuration (split or package)
G/E	14 SEER	UNDER HOUSE	R4	Programable	Split Sys
	0 EER				
60000 BTU					

DAVID FOULKES

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SEALED DUCTS and TXVs (or Alternative Measures)

A signed CF-4R Form must be provided to the building department for each home for which the following are required.

<input type="checkbox"/>	Sealed Ducts (all climate zones) (Installer testing and certification and HERS rater field verification required.)
<input type="checkbox"/>	TXVs, readily accessible (climate zones 2 and 8-15 only) (Installer testing and certification and HERS Rater field verification required.)
<input type="checkbox"/>	Refrigerant Charge (climate zones 2 and 8-15 only) (Installer testing and certification and HERS Rater field verification required.)

OR

<input type="checkbox"/>	Alternative to Sealed Ducts and Refrigerant Charge TXVs (See Package D Alternative Package Features for Project Climate Zone in the RM Appendix B Table 151-C. Footnotes 7-14.
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OR

<input type="checkbox"/>	For additions and alterations, duct systems that are not documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Residential ACM Manual and duct systems with more than 40 linear feet in unconditioned spaces shall meet the requirements of Section 150(m) and duct insulation requirements of Package D.
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WATER HEATING SYSTEMS

<input type="checkbox"/>	Check box if system meets criteria of a "Standard" system. Standard system is one gas-fired water heater per dwelling unit. If the water heater is a storage type, 50 gallons is the maximum capacity and recirculation system is not allowed.
<input type="checkbox"/>	Check box when using Preapproved Alternative Water Heating table, Table 5-4 in Chapter 5 in the Residential Manual. No water heating calculations are required, and the system complies automatically.
<input type="checkbox"/>	Check box if system does not meet criteria of "Standard" system, and does not comply with the Preapproved Alternative Water Heating table. In this case, the Performance Method must be used and must be included in the submittal.
<input type="checkbox"/>	Check box to verify that a time control is required for a recirculating system pump for a system serving multiple units

Systems serving single dwelling units

Water Heater Type Fuel Type	Distribution Type	Number in System	Rated Input (kW or Btu hr)	Tank Capacity (gallons)	Energy Factor ¹ or Thermal Efficiency	Standby ¹ Loss (%)	Tank External Insulation R-Value

System serving multiple dwelling units

Water Heater Type Fuel Type	Distribution Type	Number in System	Rated Input (kW or Btu hr)	Tank Capacity (gallons)	Energy Factor ¹ or Thermal Efficiency	Standby ¹ Loss (%)	Tank External Insulation R-Value

¹ For small gas storage water heaters (rated inputs 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 Rated Input, Recovery Efficiency, Thermal Efficiency and Standby Loss. For instantaneous gas water heaters, list Rated Input and Thermal Efficiencies.

Pipe Insulation (kitchen lines > 3/4 inches) All hot water pipes from the heating source to the kitchen fixtures that are 3/4 inches or greater in diameter shall be thermally insulated as specified by Section 150 (j) 2 A or 150 (j) 2 B.

DAVID FOULKES

Project Title

Date

SPECIAL FEATURES NOT REQUIRING HERS VERIFICATION (add extra sheets if necessary)

Indicate which special features are part of this project. The list below represents special features relevant to the Prescriptive and Performance Method.

<input type="checkbox"/>	Feature	Required Forms (if applicable)	Description
<input type="checkbox"/>	Metal Framed Walls	CF-1R	
<input type="checkbox"/>	Radiant Barriers	CF-1R	
<input type="checkbox"/>	Exterior Shades	WS-4R N A: Performance Calculation	
<input type="checkbox"/>	Cool Roof	Required. Attach CRRC Label to Forms.	
<input type="checkbox"/>	Dedicated Hydronic Heating System	Performance Calculation Required: Attach Run to Forms.	
<input type="checkbox"/>	Combined Hydronic System	Performance Calculation Required: Attach Run to Forms.	
<input type="checkbox"/>	Gas Cooling	N A: Performance Calculation Required.	
<input type="checkbox"/>	Buried Ducts	N A: Indicate on building plans.	
<input type="checkbox"/>	Kitchen Pipe Insulation	See Section 5.6.2 Distribution Systems in Residential Manual.	
<input type="checkbox"/>	Multiple Water Heaters Per Dwelling Unit	See Table 5-13 or use Performance Calculation and attach Run to Forms.	
<input type="checkbox"/>	Central Water Heating System Serving Multiple Dwellings	Performance Calculation and attach Run to Forms.	
<input type="checkbox"/>	Non-NAECA Large Water Heater	CF-1R	
<input type="checkbox"/>	Indirect Water Heater	See Table 5-13 or use Performance Calculation and attach Run to Forms	
<input type="checkbox"/>	Instantaneous Gas Water Heater	See Table 5-13 or use Performance Calculation and attach Run to Forms	
<input type="checkbox"/>	Solar Water Heating System	See Table 5-13 or use Performance Calculation and attach Run to Forms	
<input type="checkbox"/>	Wood Stove Boiler	Performance Calculation and attach Run to Forms	

SPECIAL FEATURES REQUIRING HERS RATER VERIFICATION

(add extra sheets if necessary) Indicate to the HERS Rater which credits are part of this project and need verification.

<input type="checkbox"/>	Feature	Required Forms (if applicable)	Description
<input type="checkbox"/>	Duct Sealing	CF-6R part 4 of 12	
<input type="checkbox"/>	Refrigerant Charge	CF-6R part 5 of 12	
<input type="checkbox"/>	Thermostatic Expansion Valve	CF-6R part 6 of 12	

DAVID FOULKES

Project Title

Date

COMPLIANCE STATEMENT

This certificate of compliance lists the building features and specifications needed to comply with Title 24, Parts 1 and 6 of the California Code of Regulations, and the administrative regulations to implement them. This certificate has been signed by the individual with overall design responsibility. The undersigned recognizes that compliance using duct design, duct sealing, verification of refrigerant charge and TXVs, insulation installation quality, and building envelope sealing require installer testing and certification and field verification by an approved HERS rater.

Designer or Owner (per Business and Professions Code)

Documentation Author

Name: EARL COX	Name: EARL COX
Title/Firm: KLEEN AIR	Title/Firm: KLEEN AIR
Address: 1657 SILICA AVENUE SACRAMENTO CA 95815	Address: 1657 SILICA AVENUE SACRAMENTO CA 95815
Telephone: 916-922-3995	Telephone: 916-922-3995
License #: 481974	
(signature) (date)	(signature) (date)

Enforcement Agency

Name:	Comments:
Title	
Agency:	
Telephone:	
(signature stamp) (date)	

2526 N STREET

SACRAMENTO CA 95816

0601214

Site Address

Permit Number

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, Model and Serial Number	# of Identical Systems	Efficiency (AFUE, etc.) ¹ >(CF-1R value)	Duct Location (attic, etc.)	Duct or Piping R-value	Heating Load (Btu hr)	Heating Capacity (Btu hr)
	CARRIER	1	96.00 AFUE	DER HOU	R4	107502	100000
Split Sys	58MVP100-F-1-20		0 HSPF				
G/E	0						

Cooling Equipment

Equip Type (pkg. heat pump)	CEC Certified Mfr. Name, Model and Serial Number	# of Identical Systems	Efficiency (AFUE, etc.) ¹ >(CF-1R value)	Duct Location (attic, etc.)	Duct or Piping R-value	Cooling Load (Btu hr)	Cooling Capacity (Btu hr)
	CARRIER	1	14.00 SEER	DER HOU	R4	68757	60000
Split Sys	38TDB060--3		0 EER				
G/E	0						
	CARRIER						
Coil	PS1660M215						
	0						

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.


Signature, Date

KLEEN AIR

Installing Subcontractor (Co. Name)

OR General Contractor (Co. Name) OR Owner

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

INSTALLER COMPLIANCE STATEMENT FOR DUCT LEAKAGE

Copies to: Builder, HERS Rater, Building Owner at Occupancy and Building Department

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

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 type="checkbox"/> Cooling <input type="checkbox"/> Heating) or <input 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, enter total calculated or measured fan flow in CFM here:			
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.			
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)			
8 Entire New Duct System - Pass If Leakage Percentage < 6% for Final or < 4% at Rough-in [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)]]		<input 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
		<input type="checkbox"/> Pass	<input type="checkbox"/> Fail
		<input 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.

KLEEN AIR

Signature

Date

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

2526 N STREET

SACRAMENTO CA 95816

0

Site Address

Permit Number

THERMOSTATIC EXPANSION VALVE (TXV)

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

<input 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.			
Yes is a pass			<input type="checkbox"/>	Pass	<input type="checkbox"/>
			<input type="checkbox"/>	Fail	<input type="checkbox"/>

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 55oF 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

2526 N STREET

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Permit Number

Standard Charge 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.

<input type="checkbox"/>	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	System Passes
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Alternate Charge Measurement Procedure (outdoor air dry-bulb below 55 oF)

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 oF 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 airflow must be greater than the calculated airflow).	

Alternate Charge 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.

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

Signature, Date

KLEEN AIR

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

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

2526 N STREET

SACRAMENTO CA 95816

0

Site Address

Permit Number

FAN WATT DRAW

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

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 results of Watts cfm: _____	
Measured Fan Flow (Enter total cfm from airflow verification) _____	
Enter results of Watts cfm: _____	
<input type="checkbox"/> Yes	<input type="checkbox"/> No
Calculated fan watt cfm is equal to or lower than the fan watt cfm draw documented in CF-1R	
Yes is a pass	
<input type="checkbox"/> Pass	<input type="checkbox"/> Fail

ADEQUATE AIRFLOW VERIFICATION

Procedures for field verification and diagnostic testing of adequate airflow are available in RACM, Appendix RE4.1.

Method For Airflow Measurement				
<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Duct design exists on plans
<input type="checkbox"/>	RE4.1.1	Diagnostic Fan Flow Using Flow Capture Hood		
<input type="checkbox"/>	RE4.1.2	Diagnostic Fan Flow Using Plenum Pressure Matching		
<input type="checkbox"/>	RE4.1.3	Diagnostic Fan Flow Using Flow Grid Measurement		
Measured Airflow: _____				cfm ton
<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Measured airflow is greater than the criteria in Table RE-2
Yes is a pass				<input type="checkbox"/> Pass <input type="checkbox"/> Fail

MAXIMUM COOLING CAPACITY

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

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

HIGH EER AIR CONDITIONER

Procedures for verification are available in RACM, Appendix RI.

1	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	EER values of installed systems match the CF-1R
2	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	For split system, indoor coil is matched to outdoor coil
3	<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					
					<input type="checkbox"/> Pass <input type="checkbox"/> Fail

KLEEN AIR

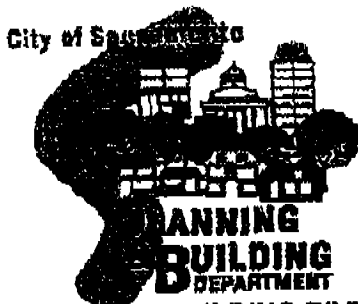
Tests Performed

Signature, Date

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

COPY TO: Building Department, HERS Rater, Building Owner at Occupancy

Building Permit



BUILDING DIVISION (916) 808-BLDG (2534)

***** Office Use Only *****

Permit No: 2601214
Date Issued: 1/30/06
Total Amount: 19480

ISSUED CITY OF SACRAMENTO JAN 30 2006

***** Please Fill in the Following *****

Site Address: 2526 N STREET CENTER
Nature of Work: Replace HEAT PUMP w/ GAS/ELECT
HORZ. UNDER HOUSE

DOWNTOWN PERMIT

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: 481974 Date: Signature: Earl Cox

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 3 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 employee with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (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 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: 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: STATE FUND Policy Number: 1664742-2005 Expiration Date: 10/06

(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: Applicant Signature: Earl Cox

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.

City of Sacramento



FAXBACK PERMIT APPLICATION

(certain restrictions apply)

Faxed request received in this office before 3:00 p.m. will be processed the following work day. Contractors must have a current certificate of Worker's Compensation Insurance. Work started before a Building Permit is issued will be subject to quad fees.

Permits requiring plan review are not eligible for FAXBACK

In order to process this request, ALL of the following information MUST be provided:

Job Address: 2526 N STREET Unit # _____
 Parcel Number: _____
 CONTACT PERSON: DAVID FOUKES
 Property Owner: DAVID FOUKES
 Address: 2526 N STREET License # 481974
 City/State/Zip: SACRAMENTO, CA 95816
 Phone: 916-457-7355

Contract Price \$ 12,816.00
 CONTACT PHONE: EARL COX
 Contractor: KLEEN AIR
 Address: 1657 SILICA AVENUE
 City/State/Zip: SACRAMENTO, CA 95815
 Phone: 916-922-3995 FAX: 916-8409

NATURE OF WORK: (Provide detailed description of work & indicate type of work in selections below.)

Description of Work: REPLACE HEAT PUMP WITH SPLIT GAS/ELECTRIC HVAC SYSTEM
HORN UNDER HOUSE

<input type="checkbox"/> REROOF (excluding tile) <input type="checkbox"/> TEAR-OFF <input type="checkbox"/> RESHEET <input type="checkbox"/> HOUSE # SQUARES <input type="checkbox"/> GARAGE # SQUARES # Stories: 1 2 3+ Material: _____	<input checked="" type="checkbox"/> HVAC INSTALLATIONS <input type="checkbox"/> NEW CHANGE-OUT <input type="checkbox"/> Heat Pump <input type="checkbox"/> Package <input checked="" type="checkbox"/> Split system <input type="checkbox"/> Roof mount <input type="checkbox"/> Cut-in <input type="checkbox"/> Heat pump or elect. unit to gas. <input type="checkbox"/> Wall furnace <input type="checkbox"/> Fireplace insert <input type="checkbox"/> Other (describe below) Value of duct work: \$ _____ Equipment: \$ _____ Cut-in: \$ _____	(Residential ONLY) <input type="checkbox"/> WATER HEATER <input type="checkbox"/> GAS <input type="checkbox"/> ELECTRIC <input type="checkbox"/> Change-out <input type="checkbox"/> Electric to Gas <input type="checkbox"/> Relocate <input type="checkbox"/> New <input type="checkbox"/> DRY ROT OR TERMITTE DAMAGE REPAIR <input type="checkbox"/> Flooring/Joists <input type="checkbox"/> Roof Structure <input type="checkbox"/> Exterior <input type="checkbox"/> Mud/sill/Studs * Design Review approval may be required. <input type="checkbox"/> PUBLIC UTILITIES SAFETY INSPECTION* (Residential and single apartment units ONLY) <input type="checkbox"/> SMUD <input type="checkbox"/> PG&E	(Residential ONLY) MINOR ELECTRIC and/or MINOR PLUMBING <input type="checkbox"/> Electric Service Change # amps <input type="checkbox"/> New electric circuits <input type="checkbox"/> Re-wire <input type="checkbox"/> Replacement <input type="checkbox"/> Water Service <input type="checkbox"/> Sewer Service <input type="checkbox"/> Gas Line <input type="checkbox"/> Re-plumb <input type="checkbox"/> Water <input type="checkbox"/> Waste
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* Design Review approval may be required.

* Design Review approval may be required.

*NOTE: Correction Notice items will require an additional building permit.

IVR Faxback Permit updated 12/20/01

HEATING AND COOLING EQUIPMENT QUESTIONNAIRE

Applicant's name: KLEEN AIR Phone: 916-922-3995

Project Address: 2526 N STREET

Please check the appropriate boxes. Only check a box if it accurately and completely describes your proposed work, otherwise leave boxes blank.

1. GROUND-MOUNTED UNIT

- a. There is an existing ground-mounted unit.
 - The existing unit shall be removed. The new unit shall be placed in the same location as the existing unit and shall not exceed the size of the existing unit by more than 25%.
 - The new unit differs in location from the existing unit.
 - The new unit is fully screened behind a solid fenced area and will not be visible from any street views.
 - Existing shrubs or buildings will screen the unit from being visible from any street views.
- b. There is no unit in the proposed location.
 - The new unit will be fully screened behind a solid fenced area and will not be visible from any street views.
 - Existing shrubs or buildings will screen the unit from being visible from any street views.

2. ROOF-MOUNTED UNIT

- a. There is an existing roof-mounted unit.
 - The existing unit shall be removed. The new unit shall be placed in the same location as the existing unit and shall not exceed the size of the existing unit by more than 25%.
 - The new unit differs in location from the existing unit. The new unit shall be screened from street views by the building with no portion of the new unit being visible from any street views.
- b. There is no existing roof-mounted unit
 - The new unit shall be screened from street views by the building with no portion of the new unit being visible from any street views

By signing below, the applicant certifies that this form accurately describes the proposed work.

Applicant's signature: Earl Cox Date: 1-27-06

For City Staff use only

Counter Staff: [Signature]

- In a DR District Meets DR criteria? Yes No (route to DR staff)
- In a P area or listed (route to P staff)
- Not in DR/P area

Central City

CERTIFICATE OF COMPLIANCE: RESIDENTIAL (Page 2 of 5) **CF-1R**

Project Title David Fowler Date 1-27-06

2526 N STREET, SACD 95816

FENESTRATION PRODUCTS - U-FACTOR AND SHGC
 FENESTRATION MAXIMUM ALLOWED AREA WORKSHEET WS-4R -- must be included for New Construction, Additions and Alterations.

Fenestration #/Type/Pos. (Front, Left, Rear, Right, Skylight)	Orien-tation, N, S, E, W	Area (ft ²)	U-factor ¹	U-factor Source ²	SHGC ⁴	SHGC Source ³	Exterior Shading/Overhangs ⁵ ✓ box if WS-3R is included
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>

- 1) Skylights are now included in West-facing fenestration area if the skylights are tilted to the west or tilted in any direction when the pitch is less than 1:12. See §151(f)(3)C and in Section 3.2.3 of the Residential Manual
- 2) Enter values in this column are either NFRC Rated value or from Standards default Table 116A.
- 3) Indicate source either from NFRC, or Table 116A.
- 4) Enter values in this column from NFRC or from Standards Default Table 116B or adjusted SHGC from WS-3R.
- 5) Indicate source either from NFRC or Table 116B
- 6) Shading Devices are defined in Table 3-3 in the Residential Manual and see WS-3R to calculate Exterior Shading devices.
- 7) See Section 3.2.4 in the Residential Manual.

HVAC SYSTEMS

Heating Equipment Type and Capacity (furnace, heat pump, boiler, etc.)	Minimum Efficiency (AFUE or EFSP)	Distribution Type and Location (duct, attic, etc.)	Duct or Piping R-Value	Thermostat Type	Configuration (split or package)
<u>furnace</u>	<u>96</u>	<u>duct</u>	<u>4.2</u>	<u>programm</u>	<u>split</u>

Cooling Equipment Type and Capacity (A/C, heat pump, evap. cooling)	Minimum Efficiency (SEER or EER)	Duct Location (attic, etc.)	Duct R-Value	Thermostat Type	Configuration (split or package)
<u>A/C</u>	<u>14</u>	<u>under floor</u>	<u>4.2</u>	<u>prog.</u>	<u>split</u>

DAVID Foulkes

CERTIFICATE OF FIELD VERIFICATION & DIAGNOSTIC TESTING (Page 2 of 8)

CF-4R

2526 N Street Project Address	Kleen Air / 481974 Contractor Name / License No.
	06-01214
Contractor Contact	Telephone Permit Number
John Gustason	916-768-9459 17829
HERS Rater	Telephone Sample Group Number
<i>[Signature]</i>	February 26, 2005 CC14-1798358409
Certifying Signature	Date Certificate Number
Firm: Energy Analysis and Comfort Solutions, Inc.	HERS Provider: CalCERTS
Street Address: P.O. Box 2233	City/State/Zip: Orangevale / CA / 95662

Copies to: Homeowner, HERS Provider and Building Department
 This CF-4R has been registered with the CalCERTS® registry in accordance with the Title 24 & Title 20 of the CCR.
 CalCERTS® is an approved HERS provider by the California Energy Commission.

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 the CF-6R (Installation Certificate).

THERMOSTATIC EXPANSION VALVE (TXV):

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.

MVAC System: TXV Pass Fail

ATTN: Jim Zimmerman

mailed 2/27/06