

39

1

1830 BURBANK AVE

(BLD00-3674)

COUNTY OF SONOMA - PERMIT AND RESOURCE MANAGEMENT DEPARTMENT

2550 Ventura Avenue, Santa Rosa, CA 95403 * (707) 565-1900 FAX (707) 565-1103

Please Print Your Name: DAVID COLOMBO Date Applied: 7/26/00

INFORMATION WITHIN HEAVY LINE TO BE COMPLETED BY APPLICANT

SITE LOCATION INFORMATION - PRINT CLEARLY

Site Address: 1830 BURBANK AVE City: SANTA ROSA ZIP: _____
 Cross-Street: SIBASTOPOL ROAD APN: 125-421-009 Project Phone #: () _____ Project Fax #: () _____
 Directions: _____ Subd. Name: _____ Unit #: _____ Lot #: _____
 Des. use project: REMODEL EXISTING GARAGE w/ 2-BEDROOMS & 1 BATH Living Area: 494 SF Contract Price: 11,200
 Garage: _____ Decks: _____

OWNER NAME AND ADDRESS Name: ALEX SEBASTIAN Mailing Address: 154 HORN AVE City: SANTA ROSA State: CA ZIP: _____ Day Ph: () 533-4852 Fax: () 792-4960

APPLICANT NAME AND ADDRESS Name: DAVID COLOMBO Mailing Address: 4000 MANTUONCET DR City: SANTA ROSA State: CA ZIP: 95404 Day Ph: () 548-5591 Fax: () 568-5592

CONTRACTOR INFORMATION Company Name: _____ Address: _____ City: _____ State: _____ ZIP: _____ Day Ph: () _____ Fax: () _____

OTHER PERSONS (ARCHITECT, ENGINEER, ETC.) Name: DAVID COLOMBO - ARCHITECT Address: _____ City: S.R. State: _____ ZIP: _____ Day Ph: () 568-5591 Fax: () 568-5592 License: C20147 Exp. Date: 3/1/01

WORKER'S COMPENSATION DECLARATION

I hereby affirm under penalty of perjury on all of the following declarations:
 I have and will maintain a certificate of consent to self-insure for worker's compensation, as provided for by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued.
 I have and will maintain worker's compensation insurance, as required by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued. My worker's compensation insurance carrier and policy number are:
 Carrier: _____
 Policy No.: _____

(This section need not be completed if the permit is for one hundred dollars (\$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 worker's compensation laws of California, and agree that if I should become subject to the worker's compensation provisions of Section 3700 of the Labor Code, I shall forthwith comply with those provisions.

Exp. Date: _____ Applicant: _____

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 7706 OF THE LABOR CODE, INTEREST, AND ATTORNEY'S FEES.

OWNER-BUILDER DECLARATION

I hereby affirm under penalty of perjury that I am exempt from the Contractor's 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 require as the applicant for such permit to file a signed statement that he or she is licensed pursuant to the provisions of the Contractor's 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).):

I, as 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 Professions Code). The Contractor's 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 or 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 or 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 Contractor's License Law does not apply to an owner of property who builds, improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractor's License Law.)
 I am exempt under Sec. _____ B & P.C. for this reason: _____

Date: 9-19-00 Owner: Alex Sebastian

LICENSED CONTRACTOR'S 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.

Lic. Class: _____ Lic. No.: _____
 Exp. Date: _____ Contractor: _____

ASBESTOS DECLARATION

Written asbestos notification pursuant to Part 61 of Title 40 of the Code of Federal Regulations is required when asbestos exists in buildings, or portions thereof, undergoing demolition. I hereby declare that demolition authorized by this permit is from construction that does does not contain asbestos, or that no demolition is authorized by this permit.

I certify that I have read this application and affirm under penalty of perjury that the above information is correct. I agree to comply with all local Ordinance's and State laws relating to building construction. I hereby authorize representatives of the County of Sonoma to enter upon the above-mentioned property for inspection purposes. If, after making the Certificate of Exemption for the Worker's Compensation provision of the Labor Code I should become subject to such provisions, I will forthwith comply. In the event I do not comply with the Workman's Compensation law, this permit shall be deemed revoked.

PERMITTEE SIGNATURE: Same as Architect
 ADDRESS: _____ CITY: _____ ZIP: _____
 Contractor Owner Agent for Contractor Agent for Owner

Permit # Bid00-3674 Area 3

Permit Coordinator: _____

CONSTRUCTION LENDING DECLARATION

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.)

Lenders Name: _____ Lenders Address: _____

FOR DEPARTMENT USE

Zoning: RR Bb File No.: _____ Acres: 1
 Existing Use/Structures: S.F. Dwelling, 2 Sheds
 Proposed Use/Structures: Remodel Garage into Living
 Zoning Min. Yard Requirements: EXISTING - NO CHANGE
 NOTE: Fire Safe Standards require all parcels greater than 1 Acre to have a min. 30' setback unless: Mitigation Required Address subject to change
 Approved for Issuance: [Signature] Approved for Occupancy: [Signature]
 By: _____ Date: 09-06-00 By: _____ Date: 09-06-00
 Conditions: NEW COVERED PARKING PROVIDED IN BASED TO BE CONSTRUCTED - SEE BLD00-4012

Sewer Connection: Available Fees Paid City of S. Rosa
 Approved by: [Signature] Date: 9/6/00

Road Encroachment: Fees Paid N/A
 Approved by: [Signature] Date: 9/6/00

Septic System Permit/Clearance # _____
 Approved by: _____ Date: _____

Flood Zone: Yes No 100 Year Flood Elevation: _____
 Site Review: _____

Code Enforcement Violation Yes No Violation # _____
 This permit is limited to _____ days.

Work Authorized: Garage Remodel / Addition of 2 Bedrooms & Bath
 New Addition Alteration Repair Moving Occ/Chg

THIS PERMIT SHALL EXPIRE IN THREE(3) YEARS FROM DATE FEES ARE PAID UNLESS OTHERWISE NOTED BY CODE ENFORCEMENT

<input checked="" type="checkbox"/> Plans Approved	Machine Space for Permit Fee:
<input type="checkbox"/> No Plans Subject to Field Inspection	
Checked By: <u>[Signature]</u> Date: <u>9/17/00</u>	14957 09 19 00831
Permit Cleared for Issuance By: <u>[Signature]</u> Date: <u>9-19-2000</u>	# 0007874
<input type="checkbox"/> Post FIRM <input type="checkbox"/> Aqut Prior Report Available	FEES
<input type="checkbox"/> Pre FIRM <input type="checkbox"/> Geotechnical report Available	ATTL 4357.02
Type of Construction: <u>RV</u> Occupancy: <u>R3</u> No. of Stories: <u>1</u> No. of Bedrooms: <u>2</u>	CHECK 4357.02
Auto. Fire Sprinklers Req'd: <u>No</u> No. of Units: _____ Certificate of Occupancy: _____	CHG 43.00
Final Date: _____ Inspector: _____	

Distribution: White - File Canary - Applicant Pink - Audit Copy Blue - Assessor Cardstock - Inspector

JOB ADDRESS: 1830 Burbank Ave
 MAP REFERENCE: 141a2
 PERMIT NUMBER: Bld00-3674
 INSPECTOR: _____

131) SPECIAL INSPECTION REQUIRED		<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	IF YES, SEE ADDITIONAL SHEET
INSPECTION RECORD	DATE	NAME	REMARKS	
103) FOUNDATION				Remodel
FORMS/SETBACK				
FOOTING				
WALLS				
106) UFER GROUND #				
104) CAISSONS/PIERS				
105) SLAB				
110) MASONRY				
109) RETAINING WALLS				
113) FIREPLACE				
FOOTING				
HEARTH/PROTECTION				
THROAT				
114) CHIMNEY				
120) UNDERFLOOR/UNDERSLAB				
116) J/F ELECTRICAL				
117) U/F MECHANICAL				
118) U/F PLUMBING				
119) U/F FRAMING				
139) U/F INSULATION				
126) SHEAR WALLS				
<input type="checkbox"/> INTERIOR				
<input type="checkbox"/> EXTERIOR				
127) DIAPHRAGMS				
<input type="checkbox"/> ROOF	02-16-200			
<input type="checkbox"/> FLOOR				
134) SIDING/SHEATHING				
125) HOLD DOWNS				
132) CLOSE-IN	02-16-2001 (RES)			
122) ROUGH ELECTRICAL				
123) ROUGH MECHANICAL (RES)				Temp. w/ install. Fixed 12/16/01
124) ROUGH PLUMBING	02-16-2001 (RES)			R. MECH PARTIAL 02-16-2001 (RES)
128) ROUGH FRAME				
160) SMOKE DETECTORS				
139) INSULATION				certs
142) WALLBOARD	5/3/01 (RES)			
135) STUCCO/PLASTER				
<input type="checkbox"/> LATH				
<input type="checkbox"/> SCRATCH				
137) ROOFING				
130) TUB/SHOWER PAN				
164) SUSPENDED CEILING				
ROUGH ELECTRICAL				
ROUGH MECHANICAL				
165) EXITING				
STAIRS/HANDRAILS				
RAMP				
CORRIDORS/DOORS				
166) ACCESSIBILITY COMPLIANCE				
ENERGY REQUIREMENTS				
170) TEMPORARY OCCUPANCY				
171) TEMPORARY ELECTRICAL				
172) TEMPORARY GAS				
174) ELECTRIC METER AUTHORIZATION				
152) PANEL BOARDS/SERVICE				
175) GAS METER AUTHORIZATION				
153) GAS PRESSURE TEST				
HOUSE				
YARD				
190) MANUF. HOME FOUNDATION				
191) MANUF. HOME INSTALLATION				
CONTINUITY				
STAIRS/SKIRTS				
RIDGE BOLTING				
SWIMMING POOLS				
194) PRE-GUNITE				
195) PRE-DECK				
196) PRE-PLASTER/FENCE				
102) GRADING FINAL				
176) ELECTRICAL FINAL				
177) MECHANICAL FINAL				
178) PLUMBING FINAL				
199) FINAL	8/4/03 (RES)			
OCCUPANCY (OK TO OCCUPY)				
FIRE INSPECTION REQUIRED			DATE	NAME
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
770) SPRINKLER FINAL				
771) ABOVEGROUND HYDROSTATIC				
772) UNDERGROUND HYDROSTATIC				
773) UNDERGROUND FLUSH				
774) THRUST BLOCKS				
775) PIPE WELD				
776) HYDRANTS/APPLIANCES				
777) PUMP ACCEPTANCE				
778) WATER SUPPLY TANK				
779) ALARM SYSTEM				
780) HOOD & DUCT SYSTEM				
781) ABOVEGROUND TANK/DISPENSER				
198) FIRE FINAL				
CLEARANCES:				
FIRE <input type="checkbox"/> Local <input type="checkbox"/> County				
HEALTH DEPARTMENT				
ZONING				
SANITATION				
N.C.A.P.C.D.				
PLAN RETENTION REQUIRED?				
<input type="checkbox"/> Yes <input type="checkbox"/> No				

PERMIT # B1000-3674

COUNTY OF SONOMA

PERMIT AND RESOURCE MANAGEMENT DEPARTMENT

2550 Ventura Avenue, Santa Rosa, CA

(707) 565-1900 FAX (707) 565-1103

BUILDING PERMIT RECEIPT	BLD00-3674
--------------------------------	-------------------

Site Location Information		Printed By: BKEARNS 12:21 Sep 19, 2000	
Address: 1830 BURBANK AVE ROS		APN: 125-421-009	
Cross Street: SEBASTOPOL RD		Initialized By: CNIEDERM B-BLD 0001	
Owner SEBASTIAN ALEX & KRISTIN J 1830 BURBANK AV SANTA ROSA CA 954077115		Applicant COLOMBO DAVID ARCHITECT 4000 MONTGOMERY DR SANT ROSA CA 95404 707 568 5591	
Contractor 707 523 4852		Architect or Engineer	
Lic. #:		Lic. #:	

Building Permit Expires 3 YEARS from the Date Permit Fees Are Paid (See Register Validation Date)
 Status: PC APRVD
 Issued:

Permit Description: CONVERT (E) GARAGE TO LIVING(2 BEDROOMS/1 BATH)

Valuation/Contract \$: \$11,200.00 PC-Calc (Old/New): 0 PERM-Calc (Old/New): 0 Type: SADD
 Plancheck Multiplier: 1.00 Penalty Multiplier (Where Applicable):
 Occupancy Type Factor Sq. Feet Valuation

Subtotal: .00
 Multiplier 1.00: .00
 Addl Fixed Amount: 11,200.00
 Total Valuation: 11,200.00

Table Date: 07/01/2000

Item #	Item Account Code	Description	Fee	Previously Paid
0011	025015-1341 3505	INSPECTIONS - OTHER	\$.00	\$.00
0012	025015-1341 3505	INSP. OUTSIDE NORMAL HRS	\$.00	\$.00
0013	025015-1341 3505	REINSPECTION(S) FEE	\$.00	\$.00
0050	327023-4040	S.M.I.P. RESIDENTIAL	\$1.12	\$.00
0060	025015-1341	BLDG PERM PLAN CHECK FEE	\$146.51	\$146.51
0062	025015-1341	ADDITIONAL PLANCHECK FEE	\$.00	\$.00
0100	025015-1341 3502	SITE REVIEW/ELEV. CERT.	\$.00	\$.00
0119	649103-3661	CO FIRE MARSHAL REVIEW	\$.00	\$.00
0120	025015-1341 3504	FIRE STDS INSPECT - PRMD	\$.00	\$.00
0121	025015-1341	FIRE SAFE STDS & REF PRMD	\$.00	\$.00
0122	025015-1341 3504	ELECTRICAL FEE	\$33.50	\$.00
0123	025015-1341 3504	MECHANICAL FEE	\$33.50	\$.00
0124	025015-1341 3504	PLUMBING FEE	\$33.50	\$.00
0132	025015-1341 3504	BUILDING PERMIT FEE	\$225.40	\$.00
0220	025015-1600	VIO. PENALTY FEE (BLDG)	\$.00	\$.00
0221	025015-4114 2001	VIO. INVEST. FEE (BLDG)	\$.00	\$.00
0366	025015-1342 0411	CLEARANCE OFFICE REVIEW	\$.00	\$.00
0707	025015-3140 6054	REF.-GRADING/DRAIN. PLAN	\$.00	\$.00
0708	025015-3140 6055	REF.-GRD/DRAIN DAM/DRVWY	\$.00	\$.00
1165	025015-3829 6146	ZONING PERMITS W/O D.R.	\$30.00	\$.00
2000	335208-4040-W	CTY-WDE CE TRAFFIC MIT	\$.00	\$.00
2001	335307-4040-W	CTY-WDE NO TRAFFIC MIT	\$.00	\$.00
2002	335406-4040-W	CTY-WDE SO TRAFFIC MIT	\$.00	\$.00
2003	335505-4040-W	CTY-WDE WE TRAFFIC MIT	\$.00	\$.00
2005	335042-4040-W	EASTMN LN TRAFFIC MIT	\$.00	\$.00
2006	335075-4040-W	MOORLAND AV DRAINAGE MIT	\$.00	\$.00
2007	335034-4040-W	LARK/WIKIUP TRAFFIC MIT	\$.00	\$.00
2008	335059-4040-W	SONOMA VLY TRAFFIC MIT	\$.00	\$.00
5011	025015-1341-W 3505	INSPECTIONS - OTHER	\$.00	\$.00
5012	025015-1341-W 3505	INSP. OUTSIDE NORMAL HRS	\$.00	\$.00
5013	025015-1341-W 3505	REINSPECTION(S) FEE	\$.00	\$.00
5060	025015-1341-W	BLDG PERM PLAN CHECK FEE	\$.00	\$.00
5062	025015-1341-W	ADDITIONAL PLANCHECK FEE	\$.00	\$.00
5100	025015-1341-W 3502	SITE REVIEW/ELEV. CERT.	\$.00	\$.00
5119	649103-3661-W	CO FIRE MARSHAL REVIEW	\$.00	\$.00
5120	025015-1341-W 3504	FIRE STDS INSPECT - PRMD	\$.00	\$.00
5121	025015-1341-W	FIRE SAFE STDS & REF PRMD	\$.00	\$.00
5122	025015-1341-W 3504	ELECTRICAL FEE	\$.00	\$.00
5123	025015-1341-W 3504	MECHANICAL FEE	\$.00	\$.00
5124	025015-1341-W 3504	PLUMBING FEE	\$.00	\$.00
5132	025015-1341-W 3504	BUILDING PERMIT FEE	\$.00	\$.00
5220	025015-1600-W	VIOLATION PENALTY FEE	\$.00	\$.00
5221	025015-4114-W 2001	VIOLATION INVESTIG FEE	\$.00	\$.00
5366	025015-1342-W 0411	CLEARANCE OFFICE REVIEW	\$.00	\$.00
5707	025015-3140-W 6054	REF.-GRADING/DRAIN. PLAN	\$.00	\$.00
5708	025015-3140-W 6055	REF.-GRD/DRAIN DAM/DRVWY	\$.00	\$.00
6165	025015-3829-W 6146	ZONING PERMITS W/O D.R.	\$.00	\$.00
7000	335208-4040-W	PRM-CO-WDE CE DEV FEE TR	\$.00	\$.00
7001	335307-4040-W	PRM-CO-WDE NO DEV FEE TR	\$.00	\$.00
7002	335406-4040-W	PRM-CO-WDE SO DEV FEE TR	\$.00	\$.00
7003	335505-4040-W	PRM-CO-WDE WE DEV FEE TR	\$.00	\$.00
7005	335042-4040-W	PRM-EASTMN LN DEV FEE TR	\$.00	\$.00
7006	335075-4040-W	PRM-MOORLAND DEV FEE TR	\$.00	\$.00
7007	335034-4040-W	PRM LARK/WIK SP PLN DEV	\$.00	\$.00
7008	335059-4040-W	PRM-SONOMA VLY DEV FEE TR	\$.00	\$.00

Qualifies for fee waivers (Y/N): N

Total Calculated Fees	\$503.53	\$146.51
Previously Paid	<u>\$146.51</u>	
Balance Due	\$357.02	

COUNTY OF SONOMA

PERMIT AND RESOURCE MANAGEMENT DEPARTMENT

2550 Ventura Avenue, Santa Rosa, CA

(707) 565-1900 FAX (707) 565-1103

PLANCHECK RECEIPT ONLY - NOT A PERMIT	BLD00-3674
--	-------------------

Address: 1830 BURBANK AVE ROS

Printed By: LHELTON 08:58 Sep 06, 2000

Cross Street: SEBASTOPOL RD

APN: 125-421-009

Res/Com: R

In Planchek: 00/00/0000

Std/Quick: Q Fire District: ROSELAND FIRE GENERAL (\$ Tax Rate Area: 150008

Activity Type: B-BLD 0001

Insp Area: 10

Owner

Applicant

SEBASTIAN ALEX & KRISTIN J
1830 BURBANK AV
SANTA ROSA CA

COLOMBO DAVID ARCHITECT
4000 MONTGOMERY DR
SANT ROSA CA
95404
707 568 5591

954077115

Planchek Expires 1 Year from Date Planchek Fees Are Paid (See Register Validation Date)

Site Review Fees Paid This Application: \$.00

Site Review File #:

Description:

CONVERT (E) GARAGE TO LIVING(2 BEDROOMS/1 BATH)

Initialized By: CNIEDERM Approved By: Status: STARTED

Valuation/Contract \$: \$11,200.00 PC-Calc (Old/New): 0 PERM-Calc (Old/New): 0 Type: SADD

Planchek Multiplier: 1.00

Occupancy

Type

Factor Sq. Feet

Valuation

Subtotal: .00

Multiplier 1.00: .00

Addl Fixed Amount: 11,200.00

Total Valuation: 11,200.00

Table Date: 07/01/2000

Item #	Item Account Code	Description	Fee	Previously Paid
0060	1341	BLDG PERM PLAN CHECK FEE	\$146.51	\$.00
0100	1341	3502 SITE REVIEW/ELEV. CERT.	\$.00	\$.00
0119	649103-3661	CO FIRE MARSHAL REVIEW	\$.00	\$.00
0121	1341	FIRE SAFE STDS & REF PRMD	\$.00	\$.00
0366	1342	0411 CLEARANCE OFFICE REVIEW	\$.00	\$.00
0707	3140	6054 REF.-GRADING/DRAIN. PLAN	\$.00	\$.00
0708	3140	6055 REF.-GRD/DRAIN DAM/DRVWY	\$.00	\$.00
5060	1341-WAIVED	BLDG PERM PLAN CHECK FEE	\$.00	\$.00
5100	1341-WAIVED	3502 SITE REVIEW/ELEV. CERT.	\$.00	\$.00
5121	1341-WAIVED	FIRE SAFE STDS & REF PRMD	\$.00	\$.00
5366	1342-WAIVED	0411 CLEARANCE OFFICE REVIEW	\$.00	\$.00
5707	3140-WAIVED	6054 REF.-GRADING/DRAIN. PLAN	\$.00	\$.00
5708	3140-WAIVED	6055 REF.-GRD/DRAIN DAM/DRVWY	\$.00	\$.00

Qualifies for fee waivers (Y/N): N

Total Calculated Fees	\$146.51	\$.00
Additional Fees	\$.00	
Previously Paid	\$.00	
Balance Due	\$146.51	

* This is your PLANCHECK receipt. *
* Additional fees will be required for BUILDING PERMIT issuance. *

013927 09-06-2000
SIERRA \$146.51
KANTL \$146.51
CHECK \$146.51
DUES \$0.00

INSULATION CERTIFICATE

ALEX SEBASTIAN

IC-1

1830 Burbank Ave

Santa Rosa

Number and Street

City

Sonoma

BLD-003674

County

Subdivision Permit #

Lot Number

Description of Installation

1. ROOF

Material _____
Thickness (inches) _____

Brand Name _____
Thermal Resistance (R-Value) _____

2. CEILING

Batt or Blanket Type R-19
Thickness (inches) _____
Loose Fill Type _____
Contractor's min installed weight/ft² _____ lb
Manufacturer's installed weight per square foot to achieve Thermal Resistance (R-Value) _____

Brand Name Certainteed
Thermal Resistance (R-Value) 19
Brand _____
Minimum thickness 5.5 inches

3. EXTERIOR WALL

Frame Type STUD WALL

A. Cavity Insulation

Material Fiberglass Bat
Thickness (inches) 3.5

Brand Name Owens Corning
Thermal Resistance (R-Value) 13

B. Exterior Foam Sheathing

Material _____
Thickness (inches) _____

Brand Name _____
Thermal Resistance (R-Value) _____

4. RAISED FLOOR

Material Fiberglass
Thickness (inches) _____

Brand Name Certainteed
Thermal Resistance (R-Value) 19

5. SLAB FLOOR/PERIMETER

Material _____
Thickness (inches) _____
Perimeter Insulation Depth (inches) _____

Brand Name _____
Thermal Resistance (R-Value) _____

6. FOUNDATION WALL

Material _____
Thickness (inches) _____

Brand Name _____
Thermal Resistance (R-Value) _____

Declaration

I hereby certify that the above insulation was installed in the building at the above location in conformance with the current Energy Efficiency Standards for residential buildings (Title 24, Part 6, California Code of Regulations) as indicated on the Certificate of Compliance, where applicable.

Item #s _____
Signature, Date Alex Sebastian 4-19-01

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

Item #s _____
Signature, Date _____

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

Item #s _____
Signature, Date _____

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

July 1, 1999

cut near



SONOMA COUNTY
PERMIT AND RESOURCE MANAGEMENT
Operations Division
Construction Inspection Section

Lee Hetherington
Building Inspector II

2550 Ventura Avenue
Santa Rosa, CA 95403-2025

Voice (707) 563-1552
Office (707) 563-1900
Fax (707) 563-1972

Att: Alex Sebastian re: 1830 Burbank Ave
292-0116

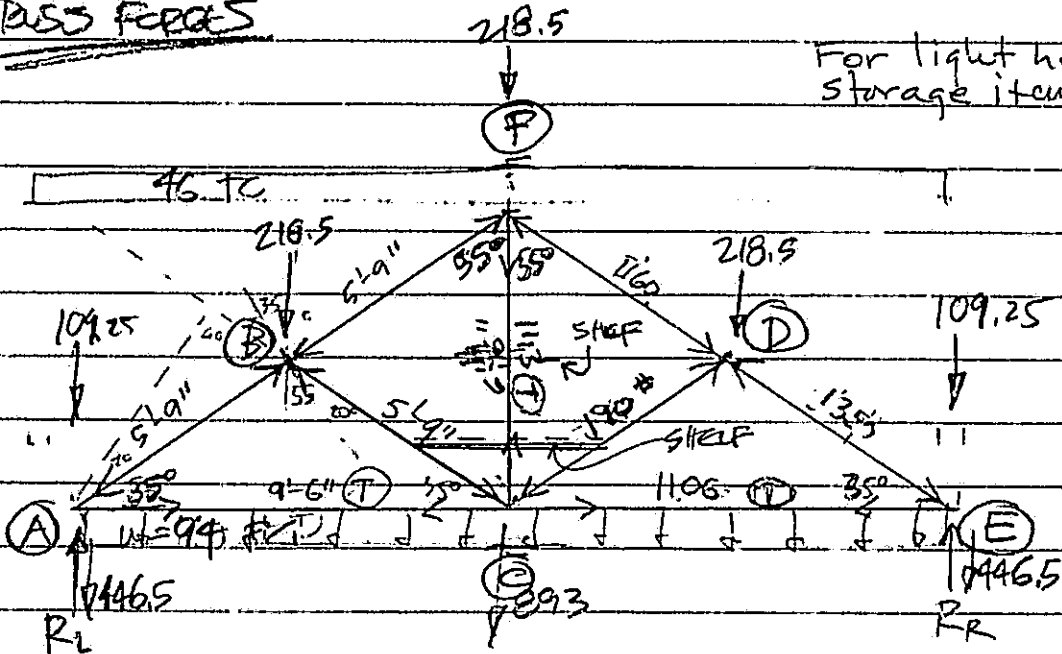
1972

JOHN LARIMER, PE #39692
 12995 DUPONT RD
 SERRA STOPEL, CA 95472
 (707) 874-1828 (PHONE/FAX)

SEBASTIAN HOUSE
 1830 BUREAU AVE (1)
 GARAGE TRUSSES
 STORAGE ANALYSIS

TRUSS FORCES

For light household storage items only



$$W = [40 \text{ PSF} (DL) + 14 (DL) + 16 (RL)] \times 2$$

$$= 740 \text{ #/1}, 94 \text{ BC/46 TC}$$

$$R_L = R_R = 140(9.5) = 1330 / 774.25$$

Revision, BLD00-3674 (4)

* APPROVED
 Per corrector
 notice, item #1
 FEB 13 2001
 MWE

PERMIT AND
 MANAGEMENT

$$F_{VA} = 774.25$$

$$\frac{F_{VA}}{F_{AB}} = \sin 35^\circ (1.574)$$

$$F_{AB} = 1350$$

$$\frac{F_{AC}}{F_{AB}} = \cos 35^\circ (0.82)$$

$$F_{AC} = 1106$$

$$(B) F_{BC} (\cos 20^\circ) = 218.5 (\cos 35^\circ)$$

$$F_{BC} = 191 \text{ #}$$

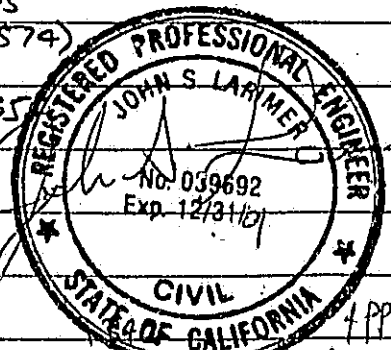
$$F_{DP} = 1350 - 218 (\sin 35^\circ) - 191 (\sin 20^\circ)$$

$$F_{BF} = 1160 \text{ #}$$

$$(P) F_{FC} = 1160 (\cos 55^\circ) (2) - 218.5$$

$$= 1113 \text{ #}$$

$$(C) 1113 - 893 - (2) (F_{BC}) (\sin 35^\circ) \text{ (Revision)}$$



FILE COPY BLD00-3674

MEMBERS

BOTTOM CHORD

$S = 7.5 + 3.1 = 10.6 \text{ in}^3$

$A = 8.25 + 5.25 = 13.5 \text{ in}^2$

$f_b = \frac{94 (9.5)^2 (1.5)}{10.6 (1.25)} = 960 \frac{\text{psi}}{1200}$

$f_a = \frac{1106}{13.5} = 82 \frac{\text{psi}}{1000}$

$\frac{960}{1200} + \frac{82}{1000} = .85 \leq 1 \quad \checkmark \text{ OK}$

TOP CHORD

$f_b = \frac{46 (18.9) (5.75)^2 (1.5)}{3.1 (1.25)} = 482 \text{ psi}$

$f_a = 1350 / 5.25 = 257 \text{ psi}$

$.40 + .26 < 1 \quad \text{OK} \checkmark$

OTHER MEMBERS C.K. BY INSPECTION

CONNECTIONS

(A) $F_{AB}(\text{HORIZ}) = 1350 (18.9) = 1106 \#$

(B) $F_{BC}(\text{HORIZ}) = 191 (3.42) = 65 \#$

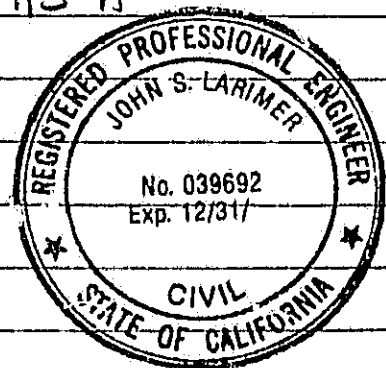
(F) $F_{BR}(\text{VERT}) = 1160 (5.74) = 665 \#$

(E) (C) $T_{FC} = 1113 \#$

★ APPROVED ★

FEB 13 2001

PERMIT AND PROJECT MANAGEMENT

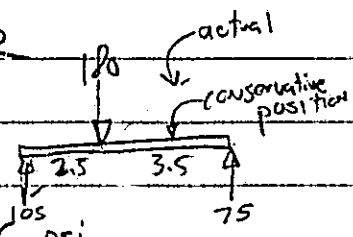


TRUSS SHELF

CHECK FORCE ON WEB MEMBER

$$W = \frac{(45)(2)(\frac{1}{2})}{W \quad T \quad A \quad L} = 180 \#$$

$$f_b = \frac{180(35)(2.5)(12)}{6(3.1)} = 1016 \text{ psi} \quad \therefore \text{OK}$$



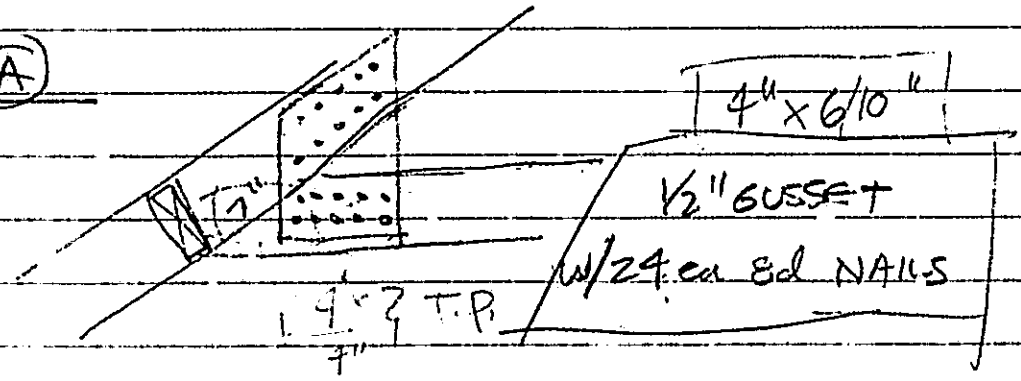
VERIFY CONNECTION @ B GOOD PER 75 # TENSION

UPPER SHELF OK. LOADS PT. (C) O.K.

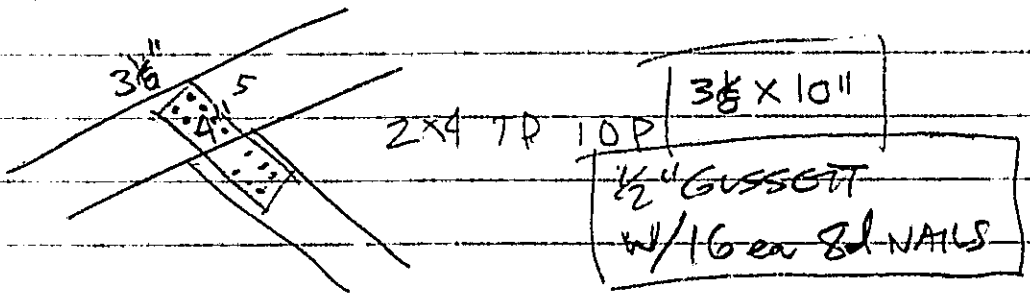
★ APPROVED ★
FEB 13 2001
PERMIT AND INSURANCE
MANAGEMENT DEPARTMENT



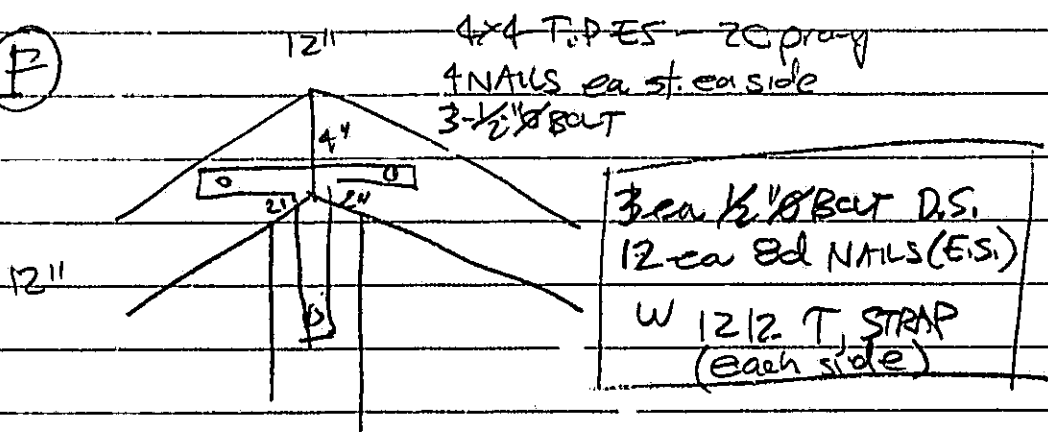
JOINT (A)



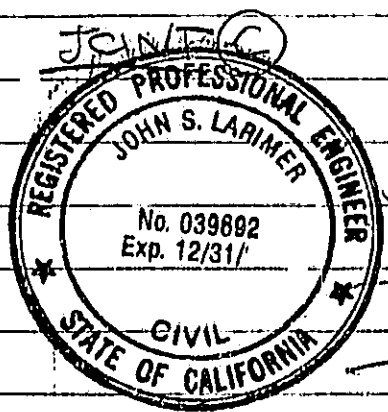
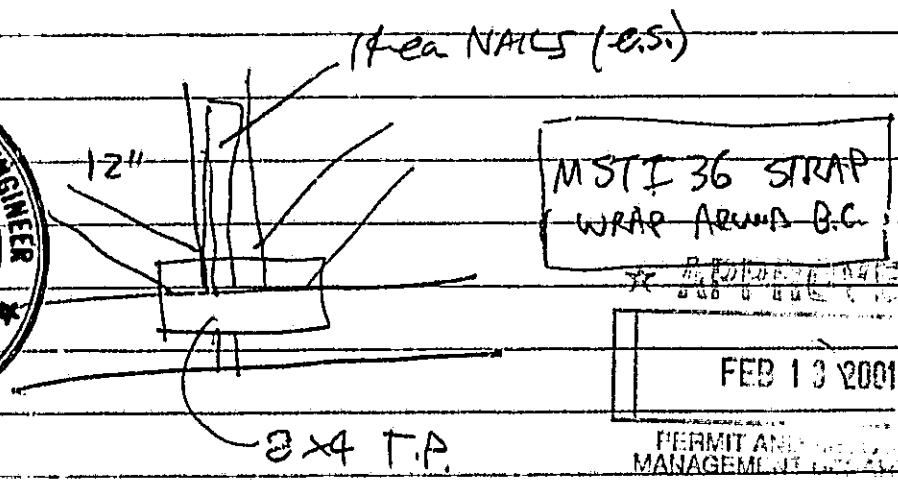
JOINT (B)



JOINT (F)



JOINT (C)

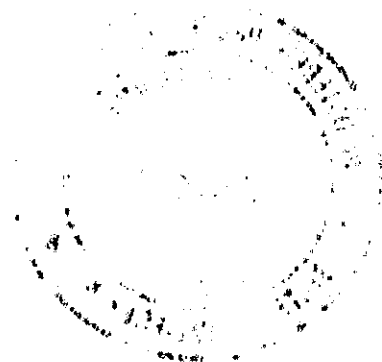


FEB 13 2001
PERMIT AND INSPECTION
MANAGEMENT DEPARTMENT

FILE

★ APPLICATION
Revision for
FEB 13 2001
Correction Notice
PERMIT AND
MANAGEMENT DE
BLD00-3674

COPY



TITLE 24 REPORT

Title 24 Report for:

Alex Sebastian
1830 Burbank Ave. ✕
Santa Rosa, CA

Project Designer:

David Colombo
4000 Montgomery Drive
Santa Rosa, CA 95404
707-568-5591

Report Prepared By:

David Colombo
DCA
4000 Montgomery Drive
Santa Rosa, CA 95404
(707) 568-5591

FILE

★ APPROVED ★

MAR 02 2001

PERMIT AND RESOURCE
MANAGEMENT DEPARTMENT

Job Number:

DCA20013

Date:

3/1/01

The EnergyPro computer program has been used to perform the calculations summarized in this compliance report. This program has approval and is authorized by the California Energy Commission for use with both the Residential and Nonresidential 1998 Building Energy Efficiency Standards.

This program developed by Gabel Dodd/EnergySoft, LLC (415) 883-5900.

TABLE OF CONTENTS

Cover Page	1
Table of Contents	2
Form CF-1R Certificate of Compliance	3
Form MF-1R Mandatory Measures Checklist	6
Form C-2R Computer Method Summary	7
Form CF-6R Installation Certificate	11
HVAC System Heating and Cooling Loads Summary	18

Certificate of Compliance: Residential

(Part 1 of 2) **CF-1R**

Alex Sebastian

3/1/01

Project Title

Date

1830 Burbank Ave. Santa Rosa

Project Address

Building Permit #

DCA

(707) 568-5591

Plan Check / Date

Documentation Author

Telephone

Field Check / Date

Computer Performance

2

Enforcement Agency Use Only

Compliance Method (Package or Computer)

Climate Zone

GENERAL INFORMATION

Total Conditioned Floor Area: 494 ft²

Total Conditioned Slab Area: 0 ft²

Building Type:

(check one or more)

- | | |
|--|--|
| <input checked="" type="checkbox"/> Single Family Detached (SFD) | <input checked="" type="checkbox"/> Addition Alone |
| <input type="checkbox"/> Single Family Attached (SFA) | <input type="checkbox"/> Existing Building |
| <input type="checkbox"/> Multi-Family | <input type="checkbox"/> Existing Plus Addition |

★ **APPROVED** ★

MAR 02 2001

PERMIT AND RESOURCE
MANAGEMENT DEPARTMENT

Front Orientation: (West) 270 deg Floor Construction Type: Slab Floor

Number of Dwelling Units: 1.00

Number of Stories: 1

Raised Floor

BUILDING SHELL INSULATION

Component Type	Frame Type	Const. Assembly U-Value	Location/Comments (attic, garage, typical, etc.)
R-19 Floor (F.19.2x8.16)	Wood	0.038	Exterior Floor / Over Crawlspace (w/R-6 Credit)
R-15 Wall (W.15.2x4.16)	Wood	0.081	Exterior Wall
Solid Wood Door	Wood	0.387	Exterior Door
R-19 Roof (R.19.2x8.16)	Wood	0.051	Exterior Roof

FENESTRATION

Shading Devices

Type	Orientation	Area (SF)	Labeled Fenestration U-Value	SHGC	Interior (roller blind, etc.)	Exterior (shadescreen, etc.)	Overhang Yes / No	Side Fins Yes / No
Front	(West)	30.0	0.30	0.19	Draperies	Bug Screen	<input type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/>
Left	(North)	24.0	0.50	0.53	Draperies	Bug Screen	<input type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/>
Right	(South)	35.0	0.50	0.53	Draperies	Bug Screen	<input type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input checked="" 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"/>

Run Initiation Time: 03/01/01 14:27:49

Run Code: 983485669

Certificate of Compliance: Residential

(Part 2 of 2) **CF-1R**

Alex Sebastian
Project Title

3/1/01
Date

HVAC SYSTEMS Note: Input Hydronic or Combined Hydronic data under Water Heating Systems, except Design Heating Load.

Heating Equipment Type (furnace heat pump, etc.)	Minimum Efficiency (AFUE/HSPF)	Distribution Type and Location (ducts, attic, etc.)	Duct or Piping R-Value	Thermostat Type	Location / Comments

Cooling Equipment Type (air conditioner, heat pump, evap. cooling)	Minimum Efficiency (SEER)	Duct Location (attic, etc.)	Duct R-Value	Thermostat Type	Location / Comments

WATER HEATING SYSTEMS

Water Heater System Name	Water Heater Type	Distribution Type	# in Syst.	Rated Input Btu/hr	Tank Cap. (gal)	Energy Fact. ¹ or Recovery Efficiency	Standby Loss (%) ¹	External Tank Insul. R-Value

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

REMARKS

COMPLIANCE STATEMENT

This certificate of compliance lists the building features and performance 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. When this certificate of compliance is submitted for a single building plan to be built in multiple orientations, any shading feature that is varied is indicated in the Special Features/Remarks section.

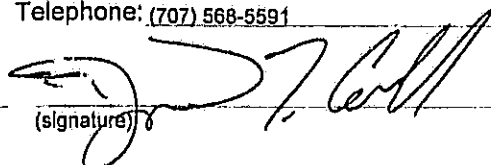
Designer or Owner (per Business & Professions Code)

Name: _____
 Title/Firm: David Colombo
 Address: 4000 Montgomery Drive
 Santa Rosa, CA 95404
 Telephone: 707-568-5591
 Lic. #: _____

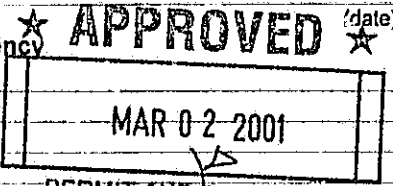
Documentation Author

Name: David Colombo
 Title/Firm: DCA
 Address: 4000 Montgomery Drive
 Santa Rosa, CA 95404
 Telephone: (707) 568-5591

(signature)  (date) _____

(signature)  (date) _____

Enforcement Agency



Name: _____
 Title/Firm: _____
 Address: _____
 Telephone: _____

(signature/stamp) _____ (date) _____

Mandatory Measures Checklist: Residential

MF-1R

NOTE: Lowrise residential buildings subject to the Standards must contain these measures regardless of the compliance approach used. Items marked with an asterisk (*) may be superseded by more stringent compliance requirements listed on the Certificate of Compliance. When this checklist is incorporated into the permit documents, the features noted shall be considered by all parties as binding minimum component specifications.

DESCRIPTION	Instructions: Check or initial applicable boxes or enter N/A if not applicable.	DESIGNER	ENFORCEMENT
Building Envelope Measures			
<input type="checkbox"/>	*§ 150(a): Minimum R-19 ceiling insulation in wood frame assembly, or equivalent U-value.		
<input type="checkbox"/>	§ 150(b): Loose fill insulation manufacturer's labeled R-value.		
<input type="checkbox"/>	*§ 150(c): Minimum R-13 wall insulation in framed walls or equivalent U-value (does not apply to exterior mass walls).		
<input type="checkbox"/>	*§ 150(d): Minimum R-13 raised floor insulation in wood framed floors.		
<input type="checkbox"/>	§ 150(l): Slab edge insulation - water absorption rate < 0.3%, water vapor transmission rate < 2.0 perm/inch.		
<input type="checkbox"/>	§118: Insulation specified or installed meets quality standards. Indicate type and form.		
<input type="checkbox"/>	§116-17: Fenestration Products, Exterior Doors and Infiltration/Exfiltration Controls 1. Doors and windows between conditioned and unconditioned spaces designed to limit air leakage. 2. Manufactured fenestration products labeled with certified U-value, SHGC, and infiltration certification. 3. Exterior doors and windows weatherstripped; all joints and penetrations caulked and sealed.		
<input type="checkbox"/>	§150(g): Vapor barriers mandatory in Climate Zones 14 and 16 only.		
<input type="checkbox"/>	§150(f): Special infiltration barrier installed to comply with Section 151 meets Commission quality standards.		
<input type="checkbox"/>	§150(e): Installation of Fireplaces, Decorative Gas Appliances and Gas Logs. 1. Masonry and factory-built fireplaces have closable doors, outside air intake with damper and control, and flue damper and control; 2. No continuous burning gas pilots allowed.		
Space Conditioning, Water Heating and Plumbing System Measures			
<input type="checkbox"/>	§110-13: HVAC equipment, water heaters, showerheads and faucets certified by the Commission.		
<input type="checkbox"/>	§150(h): Heating and/or cooling loads calculated in accordance with ASHRAE, SMACNA or ACCA.		
<input type="checkbox"/>	§150(i): Setback thermostat on all applicable heating and/or cooling systems.		
<input type="checkbox"/>	§150(j): Pipe and Tank Insulation 1. Storage gas water heaters with less than 0.8 energy factor shall be externally wrapped with R-12. 2. Back-up tanks for solar system, unfired storage tanks, or other indirect hot water tanks have R-12 external insulation or R-16 combined internal/external insulation, piping between heat source and tank insulated. 3. Insulation on the first 6' of pipes closest to water heater tank, non-recirculating systems (R-4 or greater), buried or exposed piping in recirculating sections of hot water systems, cooling system piping below 55 deg F.		
<input type="checkbox"/>	*§150(m): Ducts and Fans 1. All ducts and plenums constructed, installed, insulated, fastened, and sealed to comply with the ICBO 1997 UMC sections 601-603; ducts insulated to a minimum installed R-4.2 or ducts enclosed entirely within conditioned space. Openings shall be sealed with mastic, tape aerosol sealant or other duct closure system that meets the applicable requirements of UL181, UL181S, or UL181B and other applicable specified to: for longevity given in 150(m). 2. Exhaust fans systems have back draft or automatic dampers. 3. Gravity ventilating systems serving conditioned space have either automatic or readily accessible, manually operated dampers.		
<input type="checkbox"/>	§114: Pool and Spa Heating Systems and Equipment 1. Certified with 70% thermal efficiency, on-off switch, weatherproof instructions, no pilot or electric resistance heating. 2. System is installed with at least 38" of pipe between filter and heater, cover for outdoor pools or spas. 3. Pool system has directional inlets and a circulation pump time switch.		
<input type="checkbox"/>	§115: Central Furnaces, pool heaters, spa heaters or household cooking appliances have no constant pilot light.		
Lighting Measures			
<input type="checkbox"/>	§150(k)1: Luminaires for general lighting in kitchens shall have lamps with an efficacy 40 lumens/watt or greater for general lighting in kitchens. This general lighting shall be controlled by a switch on a readily accessible lighting control panel at an entrance to the kitchen.		
<input type="checkbox"/>	§150(k)2: Rooms with a shower or bathtub must either have at least one luminaire with lamps with an efficacy of 40 lumens/watt or greater switched at the entrance to the room or one of the alternative to this requirement allowed in 150(k)2.; and recessed ceiling are IC (insulation cover) approved.		

Computer Method Summary

(Part 2 of 3)

C-2R

Alex Sebastian
Project Title

Date 3/1/01

FENESTRATION SURFACES

#	Type	Area	U-Value	SHGC	Act. Azm.	Tilt	Glazing Type	Location/Comments
1	Window Front (West)	30.0	0.300	0.19	270	90	BetterBuilt, Argon, Film	1st Floor
2	Window Left (North)	24.0	0.500	0.53	0	90	BetterBuilt	1st Floor
3	Window Right (South)	35.0	0.500	0.53	180	90	BetterBuilt	1st Floor

INTERIOR AND EXTERIOR SHADING

#	Interior Shade Type	SHGC	Exterior Shade Type	SHGC	Window Hgt.	Overhang Wd.	Overhang Len.	Left Fin Hgt.	Right Fin Hgt.
1	Drapery	0.68	Bug Screen	0.76					
2	Drapery	0.68	Bug Screen	0.76					
3	Drapery	0.68	Bug Screen	0.76					

Computer Method Summary

(Part 3 of 3)

C-2R

Alex Sebastian
Project Title

3/1/01
Date

THERMAL MASS FOR HIGH MASS DESIGN

Type	Area (sf)	Thick. (in.)	Heat Cap.	Cond.	Form 3 Reference	Inside R-Val.	Location Comments
Tile in Mortar	78	1.50	24	0.67	n/a	0	1st Floor / Interior Mass

PERIMETER LOSSES

Type	Length	F2 Factor	Insulation R-Val.	Depth	Location / Comments

HVAC SYSTEMS

Heating Equipment Type (furnace, heat pump, etc.)	Minimum Efficiency (AFUE/HSPF)	Distribution Type and Location (ducts/attic, etc.)	Duct R-Value	Thermostat Type	Location / Comments

Hydronic Piping System Name	Pipe Length	Pipe Diameter	Insul. Thick.

Cooling Equipment Type (air conditioner, heat pump, evap. cooling)	Minimum Efficiency (SEER)	Duct Location (attic, etc.)	Duct R-Value	Thermostat Type	Location / Comments

WATER HEATING SYSTEMS

Water Heater System Name	Water Heater Type	Distribution Type	# in Syst.	Rated ¹ Input (Btu/hr)	Tank Cap. (gal)	Energy Fact ¹ or Recovery Efficiency	Standby Loss (%)	Tank Insul. R-Value Ext.

¹ For small gas storage (rated input <= 75000 Btu/hr), electric resistance and heat pump water heaters, list energy factor.
For large gas storage water heaters (rated input > 75000 Btu/hr), list Rated Input, Recovery Efficiency and Standby Loss.
For instantaneous gas water heaters, list Rated Input, and Recovery Efficiency.

REMARKS

CEC Standard

Run Initiation Time: 03/01/01 14:27:49 Run Code: 983485669

INSTALLATION CERTIFICATE

(Part 1 of 7) **CF-6R**

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; 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 pump)	CEC Certified Mfr Name & Model Number	# of Identical Systems	Efficiency ¹ (AFUE, etc.) [\geq CF-1R Value]	Duct Location (attic, etc.)	Duct or Piping R-Value	Heating Load (Btu/hr)	Heating Capacity (Btu/hr)
------------------------------	---------------------------------------	------------------------	--	-----------------------------	------------------------	-----------------------	---------------------------

Cooling Equipment

Equip. Type (pkg. heat pump)	CEC Certified Compressor Unit Mfr Name & Model Number	# of Identical Systems	Efficiency ¹ (SEER, etc.) [\geq CF-1R Value]	Duct Location (attic, etc.)	Duct or R-Value	Cooling Load (Btu/hr)	Cooling Capacity (Btu/hr)
------------------------------	---	------------------------	--	-----------------------------	-----------------	-----------------------	---------------------------

1. \geq reads Greater Than or Equal to.

I, the undersigned, verify that equipment listed above 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) the equipment meets or exceeds the appropriate requirements for manufactured devices (from the Appliance Efficiency Regulations or Part 6), where applicable.

Signature, Date

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)	Effi. ² (EF, RE)	Standby Loss (%)	External Insulation R-Value
-------------	---------------------------------------	---------------------------------------	--------------------------------	------------------------	---	-----------------------	-----------------------------	------------------	-----------------------------

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 0.56.

Faucets & Shower Heads:

All faucets & 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) 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

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

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

INSTALLATION CERTIFICATE

(Part 2 of 7) **CF-6R**

Site Address

Permit Number

FENESTRATION / GLAZING:

Manufacturer/Brand Name	Product U-Value ¹ (= \leq CF-1R value) ²	Product SHGC ¹ (= \leq CF-1R value) ²	# of Panes	Quantity (Optional)	Square Feet	Interior or Exterior Shading Device or Overhang	Comments/Special Features
-------------------------	---	--	------------	---------------------	-------------	---	---------------------------

GROUP LIKE PRODUCTS

1. _____
2. _____
3. _____
4. _____
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-value 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 (interior, exterior or overhang) is installed as specified on the CF-1R. Alternatively, installed weighted average U-values 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-value 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 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 _____

Permit Number _____

DUCT DIAGNOSTICS

This building obtained compliance credit for:

- Duct sealing Duct Area Reduction
 ACCA Manual D design and installation

CREDIT FOR REDUCED DUCT SURFACE AREA OR LOCATION

ACCA Design

Duct Location*	Exterior Surface Area (CF-1R)	Measured Exterior Surface Area
Attic		
Crawlspace		
Basement		
Other		
Total		

*Ignore ducts in conditioned space. Only a check is required for location credit.

- Duct Design on Plans
 Installed duct diameters match plans
 TXV installed
 Access to TXV valve (if installed)
 No TXV, Fan air flow (CFM)
 Duct Leakage Measured
 Measured leakage (CFM) _____
 HVAC fan air flow (CFM) _____ (measured or calculated as)
- $CFM = 0.7 \times A_{floor}$ for CZ 8 through 15
 $CFM = 0.5 \times A_{floor}$ for CZ 1 through 7 & 16
 or, if the equipment size is known, the larger of 1 or 2.
- $CFM = 400 \times \text{Cooling Capacity in Tons or}$
 - $CFM = 21.7 \times \text{Heating Capacity in Thousands of Btu per hour}$

Leakage divided by HVAC Fan air flow _____ (must be ≤ 0.06)

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

- Duct Fan Pressurization at rough - in measured leakage CFM **CHECK AFTER FINISHING WALL:**
 Pressure Pan Test House pressuezzation test Visual Inspection of Duct Connections

Provide Follow-up Test Results or Inspection Results on a Separate Page

This certifies that the ducts surface area and duct locations were verified.

When compliance credit is claimed for duct surface area reductions and duct location improvements beyond those covered by default assumptions, builder employees or subcontractors shall certify that they have verified that the duct surface area and locations match those on the plans and shall indicate the duct surface area in each duct location on the CF6R.

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.]

Tests Performed _____

Signature, Date _____

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

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

INSTALLATION CERTIFICATE

(Part 4 of 7) **CF-6R**

Site Address

Permit Number

BUILDING ENVELOPE LEAKAGE DIAGNOSTICS

This building obtained compliance credit for: Envelope sealing using diagnostic testing (CF-1R)

	Needed for Compliance (from CF-1R)	Measured Blowerdoor Test Results
-Building Envelope Leakage (CFM @ 50 Pa)		
-Leakage level equivalent to an SLA of 3.0 from CF-1R		
-Minimum Building Leakage equivalent to an SLA of 1.5 from CF-1R (CFM @ 50 Pa)		

- | | | |
|------------------------------|-----------------------------|---|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | Is design infiltration less than the SLA 3.0 equivalent (from CF-1R)? |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | Is mechanical ventilation installed? (Required if design is less than 3.0 SLA) |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | Is measured leakage (without fans operating) less than minimum in the above Table (1.5 SLA from CF-1R)? |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | Is mechanical supply ventilation installed to assure house pressure does not go below minus 5 Pascal relative to outside ambient with all exhaust fans operating? |

Mechanical Ventilation - Fill in Table if mechanical ventilation is installed

	Used for Compliance (from CF-1R)	Measured Actual
-Continuous Mechanical Ventilation (CFM)		
-Continuous Mechanical Supply Ventilation (CFM) Required to maintain -5 Pa if building envelope leakage is less than minimum (see above)		
-Total Power Consumption of Continuous Mechanical Ventilation (Watts) ²		

This certifies that the building leakage was verified.

When compliance credit is claimed for building leakage reduction below default assumptions, builder employees or subcontractors shall certify that they have verified that the building leakage level matches that used for compliance on the CF-6R and shall document the infiltration levels required for compliance and the tested infiltration values on the CF-6R.

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.]

Tests
Performed

Signature, Date

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

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

1. When mechanical ventilation is required, CFM less than 0.047 CFM per square foot of conditioned floor area indicates failure to achieve compliance
2. As determined from label on fan or manufacturers literature.

INSTALLATION CERTIFICATE

(Part 5 of 7) **CF-6R**

Site Address

Permit Number

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
LrgPkgHeatPump:	Large packaged heat pump ($\geq 65,000$ 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 Make & 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 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 Equipment 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
SplitHeatPump:	Split system heat pump
PckgHeatPump:	Packaged heat pump
RoomHeatPump:	Room heat pump
LrgPkgHeatPump:	Large packaged heat pump ($\geq 65,000$ Btu/hr output). Substitute EER for SEER when SEER is not available.
RoomAirCond:	Room air conditioner. Minimum SEER varies*
LrgPkgAirCond:	Large packaged air conditioner ($\geq 65,000$ 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 California Energy Commission (CEC) publication Appliance Efficiency Regulations, P400-92-029

Site Address

Permit Number

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-Value:	Installed U-Value must be less than or equal to value from CF-1R OR Installed weighted average U-Value 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 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 interior shading device: blinds, opaque roller shades, blinds (do not list draperies), an exterior 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)

INSTALLATION CERTIFICATE

(Part 7 of 7) **CF-6R**

Site Address

Permit Number

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 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 reading 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.
:	
:	
:	
:	
:	

HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

PROJECT NAME: Alex Sebastian
 SYSTEM NAME: HVAC System

DATE: 3/1/01
 FLOOR AREA: 494

ENGINEERING CHECKS	SYSTEM LOAD
--------------------	-------------

	COIL COOLING PEAK			COIL HTG. PEAK	
	CFM	Sensible	Latent	CFM	Sensible
Heating System					
Output per System					
Total Output (Btuh)					
Output (Btuh/sqft)					
Cooling System					
Output per System					
Total Output (Btuh)					
Total Output (Tons)					
Total Output (Btuh/sqft)					
Total Output (sqft/Ton)					
	Total Room Loads	261	6,436	-216	220
	Return Vented Lighting		0		
	Return Air Ducts		322		473
	Return Fan		0		0
	Ventilation	0	0	0	0
	Supply Fan		0		0
	Supply Air Ducts		322		473
	TOTAL SYSTEM LOAD		7,080	-216	10,398

Air System

CFM per System

Airflow (cfm)

Airflow (cfm/sqft)

Airflow (cfm/Ton)

Outside Air (%)

Outside Air (cfm/sqft)

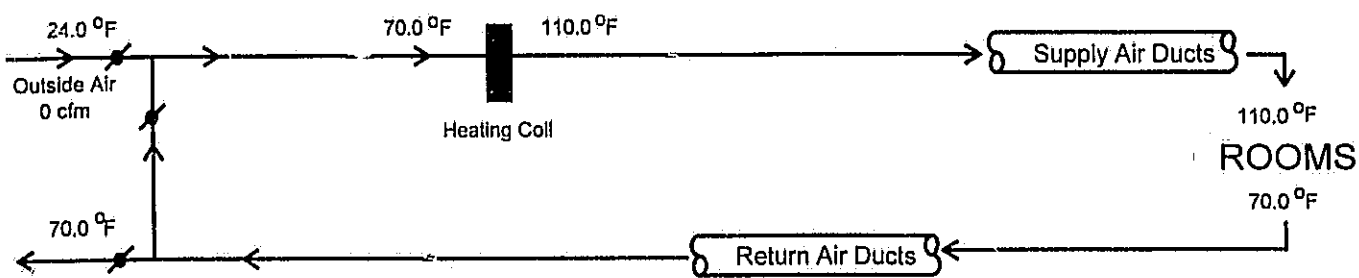
HVAC EQUIPMENT SELECTION

Total Adjusted System Output
 (Adjusted for Peak Design Conditions)

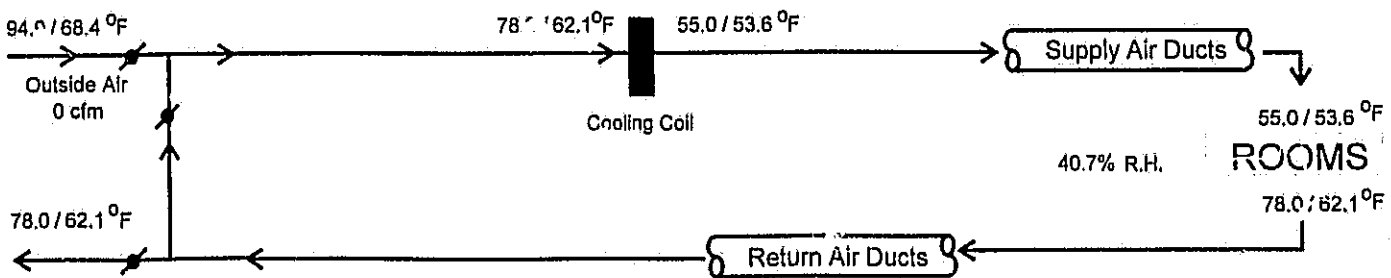
TIME OF SYSTEM PEAK Aug 2 pm Jan 12 am

Note: values above given at ARI conditions

HEATING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Heating Peak)



COOLING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Cooling Peak)



BLD00-3674

SCHOOL DISTRICT CERTIFICATION OF COMPLIANCE

RETURN TO Permit and Resource Management, County of Sonoma, 2550 Ventura Ave., Santa Rosa, California 95403

FROM: High School District _____ Elementary District _____

THIS CERTIFICATION IS VOID IF NOT RETURNED TO THE BUILDING INSPECTION DEPARTMENT WITHIN 30 DAYS AFTER THIS FORM IS SIGNED AND DATED BY THE SCHOOL DISTRICTS

[To be completed by applicant for building permit(s) and verified by Permit and Resource Management]

EFFECTIVE DATE 8-11-00 (Date Plan Check Fee Was Paid) CITY RECEIPT NO. _____

PROJECT ADDRESS 1834 Burbank Ave - Santa Rosa

PROPERTY OWNER'S NAME Sebastian, Alex

If applicable: Mobilehome Park Name _____ Lot/Space Number _____

ASSESSOR'S PARCEL NO. 125-421-009

PROJECT DESCRIPTION - Include number of dwelling units. If agricultural, state specific use. Also include information regarding whether or not replacement dwelling, building used for religious purposes, private school or owned and occupied by governmental entity.

Remodel - convert garage to living

Building Type: Residential Commercial/Industrial Mobilehome/Manufactured Home

Square footage breakdown per residential unit: residential area* 4944

Total No. of residential units 1 Total Square Feet of Eligible Building Area*: 4944

I declare under penalty of perjury under the laws of the State of California on behalf of _____ (Developer/Owner) that the information furnished above is accurate and correct to the best of my knowledge. [Signature] Applicant's Signature

The County of Sonoma Permit and Resource Management on Aug-11, 2000 has verified the square footage and use information furnished by the above developer. [Signature] County of Sonoma Signature

- * Residential Buildings are building occupancies for single and multiple family dwellings, apartments, condominiums, and residential hotels where the primary purpose is to provide a residence and not a services, such as health care.
- * Commercial/Industrial Buildings are building occupancies other than residential. Includes those buildings where the primary purpose is to provide a service, such as health care. Also includes senior citizen housing (Civil Code 51.3), residential care facility for elderly [H&S Code 15432(d)(9)], and adult only mobilehomes [Gov. Code 65995.2(a)]
- * Eligible Commercial/Industrial Area is all chargeable covered and enclosed space calculated by the building department. Chargeable Covered and Enclosed Space include all the covered and enclosed space within the perimeter of a commercial or industrial structure but does not include any storage areas incidental to the principal use of the development, garage, parking structure, unenclosed walkway, or utility or disposal area.
- * Eligible Residential Area means the Assessable Space calculated by the building department which includes all the square footage within the perimeter of a residential structure, but does not include any carport, walkway, overhang, patio detached accessory structure, or similar area.

[To be completed by school districts] SCHOOL DISTRICT CERTIFICATION

School District requirements for the above project have been satisfied pursuant to (circle one):

Gov. Code 53080

Mitigation Agreement

Not subject to fee requirement

This Certification covers only the amount of square footage identified above. Any additional square footage for the project is subject to another certification of compliance.

ELEM. SCHOOL DISTRICT recpt. no. _____

HIGH SCHOOL DISTRICT recpt. no. 000110

Square footage: _____ at \$ N.A. / sq. ft.

Square footage: _____ at \$ _____ / sq. ft.

Total Fee Amount collected: \$ _____

Total Fee Amount collected: \$ EXEMPT

Authorized School District Official [Signature]

Authorized School District Official [Signature]

Date: 9/8/00 9/8/00

Date: _____

With regard to mobilehomes / manufactured homes, it is understood that the validity of any certificate of occupancy or Statement of Installation Acceptance issued by the City is conditioned on the concurrent payment of fees set forth above.

Applicant is hereby noticed that anyone filing a protest on the imposition of Government Code Section 53080 fees must do so within 90 days from payment of the fee.

TITLE 24 REPORT

Title 24 Report for:

Alex Sebastian
1830 Burbank Ave.
Santa Rosa, CA

Project Designer:

David Colombo
4000 Montgomery Drive
Santa Rosa, CA 95404
707-568-5591

Report Prepared By:

David Colombo
DCA
4000 Montgomery Drive
Santa Rosa, CA 95404
(707) 568-5591

Job Number:

DCA20013

Date:

8/30/00

The EnergyPro computer program has been used to perform the calculations summarized in this compliance report. This program has approval and is authorized by the California Energy Commission for use with both the Residential and Nonresidential 1998 Building Energy Efficiency Standards.

This program developed by Gabel Dodd/EnergySoft, LLC (415) 883-5900.

TABLE OF CONTENTS

Cover Page	1
Table of Contents	2
Form CF-1R Certificate of Compliance	3
Form MF-1R Mandatory Measures Checklist	6
Form C-2R Computer Method Summary	7
HVAC System Heating and Cooling Loads Summary	11

Certificate of Compliance: Residential

(Part 1 of 2) **CF-1R**

Alex Sebastian

8/30/00

Project Title

Date

1830 Burbank Ave. Santa Rosa

Project Address

Building Permit #

DCA

(707) 568-5591

Plan Check / Date

Documentation Author

Telephone

Computer Performance

2

Field Check / Date

Compliance Method (Package or Computer)

Climate Zone

Enforcement Agency Use Only

GENERAL INFORMATION

Total Conditioned Floor Area: 494 ft²

Total Conditioned Slab Area: 0 ft²

Building Type:

(check one or more)

- | | |
|--|--|
| <input checked="" type="checkbox"/> Single Family Detached (SFD) | <input checked="" type="checkbox"/> Addition Alone |
| <input type="checkbox"/> Single Family Attached (SFA) | <input type="checkbox"/> Existing Building |
| <input type="checkbox"/> Multi-Family | <input type="checkbox"/> Existing Plus Addition |

Front Orientation: (West) 270 deg Floor Construction Type: Slab Floor

Number of Dwelling Units: 1.00

Number of Stories: 1

Raised Floor

BUILDING SHELL INSULATION

Component Type	Frame Type	Const. Assembly U-Value	Location/Comments (attic, garage, typical, etc.)
R-19 Floor (F.19.2x8.16)	Wood	0.038	Exterior Floor / Over Crawlspace (w/R-6 Credit)
R-15 Wall (W.15.2x4.16)	Wood	0.081	Exterior Wall
Solid Wood Door	None	0.387	Exterior Door
R-30 Roof (R.30.2x12.16)	Wood	0.034	Exterior Roof

FENESTRATION

Shading Devices

Type	Orientation	Area (SF)	Labeled Fenestration U-Value	SHGC	Interior (roller blind, etc.)	Exterior (shadescreen, etc.)	Overhang Yes / No	Side Fins Yes / No
Front	(West)	30.0	0.60	0.65	Drapery	Bug Screen	<input type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/>
Left	(North)	42.0	0.60	0.65	Drapery	Bug Screen	<input type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/>
Right	(South)	18.0	0.60	0.65	Drapery	Bug Screen	<input type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input checked="" 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"/>

Run Initiation Time: 08/30/00 10:57:13 Run Code: 957608233

Certificate of Compliance: Residential

(Part 2 of 2)

CF-1R

Alex Sebastian

8/30/00

Project Title

Date

HVAC SYSTEMS

Note: Input Hydronic or Combined Hydronic data under Water Heating Systems, except Design Heating Load.

Heating Equipment Type (furnace, heat pump, etc.)	Minimum Efficiency (AFUE/HSPF)	Distribution Type and Location (ducts, attic, etc.)	Duct or Piping R-Value	Thermostat Type	Location / Comments

Cooling Equipment Type (air conditioner, heat pump, evap. cooling)	Minimum Efficiency (SEER)	Duct Location (attic, etc.)	Duct R-Value	Thermostat Type	Location / Comments

WATER HEATING SYSTEMS

Water Heater System Name	Water Heater Type	Distribution Type	# in Syst.	Rated ¹ Input Btu/hr	Tank Cap. (gal)	Energy Fact. ¹ or Recovery Efficiency	Standby Loss (%) ¹	External Tank Insul. R-Value

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

REMARKS

COMPLIANCE STATEMENT

This certificate of compliance lists the building features and performance 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. When this certificate of compliance is submitted for a single building plan to be built in multiple orientations, any shading feature that is varied is indicated in the Special Features/Remarks section.

Designer or Owner (per Business & Professions Code)

Name: _____

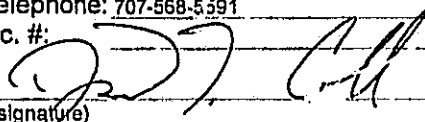
Title/Firm: David Colombo

Address: 4000 Montgomery Drive

Santa Rosa, CA 95404

Telephone: 707-568-5591

Lic. #: _____

 _____
(signature) (date)

Documentation Author

Name: David Colombo

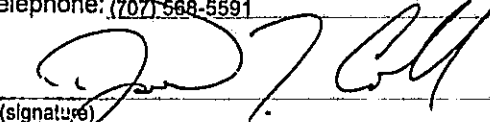
Title/Firm: DCA

Address: 4000 Montgomery Drive

Santa Rosa, CA 95404

Telephone: (707) 568-5591

Lic. #: _____

 _____
(signature) (date)

Enforcement Agency

Name: _____

Title/Firm: _____

Address: _____

Telephone: _____

(signature/stamp) (date)

Mandatory Measures Checklist: Residential

MF-1R

NOTE: Lowrise residential buildings subject to the Standard's must contain these measures regardless of the compliance approach used. Items marked with an asterisk (*) may be superseded by more stringent compliance requirements listed on the Certificate of Compliance. When this checklist is incorporated into the permit documents, the features noted shall be considered by all parties as binding minimum component specifications.

DESCRIPTION Instructions: Check or initial applicable boxes or enter N/A if not applicable.	DESIGNER	ENFORCEMENT
Building Envelope Measures		
<input type="checkbox"/> *§ 150(a): Minimum R-19 ceiling insulation in wood frame assembly, or equivalent U-value.		
<input type="checkbox"/> § 150(b): Loose fill insulation manufacturer's labeled R-value.		
<input type="checkbox"/> *§ 150(c): Minimum R-13 wall insulation in framed walls or equivalent U-value (does not apply to exterior mass walls)		
<input type="checkbox"/> *§ 150(d): Minimum R-13 raised floor insulation in wood framed floors.		
<input type="checkbox"/> § 150(i): Slab edge insulation - water absorption rate < 0.3%, water vapor transmission rate < 2.0 perm/inch.		
<input type="checkbox"/> §118: Insulation specified or installed meets quality standards. Indicate type and form.		
<input type="checkbox"/> §116-17: Fenestration Products, Exterior Doors and Infiltration/Exfiltration Controls 1. Doors and windows between conditioned and unconditioned spaces designed to limit air leakage. 2. Manufactured fenestration products labeled with certified U-value, SHGC, and infiltration certification. 3. Exterior doors and windows weatherstripped; all joints and penetrations caulked and sealed.		
<input type="checkbox"/> §150(g): Vapor barriers mandatory in Climate Zones 14 and 16 only.		
<input type="checkbox"/> §150(f): Special infiltration barrier installed to comply with Section 151 meets Commission quality standards.		
<input type="checkbox"/> §150(e): Installation of Fireplaces, Decorative Gas Appliances and Gas Logs. 1. Masonry and factory-built fireplaces have closable doors, outside air intake with damper and control, and flue damper and control; 2. No continuous burning gas pilots allowed.		
Space Conditioning, Water Heating and Plumbing System Measures		
<input type="checkbox"/> §110-13: HVAC equipment, water heaters, showerheads and faucets certified by the Commission.		
<input type="checkbox"/> §150(h): Heating and/or cooling loads calculated in accordance with ASHRAE, SMACNA or ACCA.		
<input type="checkbox"/> §150(i): Setback thermostat on all applicable heating and/or cooling systems.		
<input type="checkbox"/> §150(j): Pipe and Tank Insulation 1. Storage gas water heaters with less than 0.58 energy factor shall be externally wrapped with R-12. 2. Back-up tanks for solar system, unfired storage tanks or other indirect hot water tanks have R-12 external insulation or R-16 combined internal/external insulation, piping between heat source and tank insulated. 3. Insulation on the first 5' of pipes closest to water heater tank, non-recirculating systems (R-4 or greater), buried or exposed piping in recirculating sections of hot water systems, cooling system piping below 55 deg F.		
<input type="checkbox"/> *§150(m): Ducts and Fans 1. All ducts and plenums constructed, installed, insulated, fastened, and sealed to comply with the ICBO 1997 UMC sections 601.603; ducts insulated to a minimum installed R-4.2 or ducts enclosed entirely within conditioned space. Openings shall be sealed with mastic, tape aerosol sealant or other duct closure system that meets the applicable requirements of UL181, UL181S, or UL181B and other applicable specified test for longevity given in 150(m). 2. Exhaust fans systems have back draft or automatic dampers 3. Gravity ventilating systems serving conditioned space have either automatic or readily accessible, manually operated dampers.		
<input type="checkbox"/> §114: Pool and Spa Heating Systems and Equipment 1. Certified with 78% thermal efficiency, on-off switch, weatherproof instructions, no pilot or electric resistance heating. 2. System is installed with at least 38" of pipe between filter and heater, cover for outdoor pools or spas. 3. Pool system has directional inlets and a circulation pump time switch.		
<input type="checkbox"/> §115: Central Furnace, pool heaters, spa heaters or household cooking appliances have no constant pilot light.		
Lighting Measures		
<input type="checkbox"/> §150(k)1: Luminaire for general lighting in kitchens shall have lamps with an efficacy 40 lumens/watt or greater for general lighting in kitchens. This general lighting shall be controlled by a switch on a readily accessible lighting control panel at an entrance to the kitchen.		
<input type="checkbox"/> §150(k)2: Rooms with a shower or bathtub must either have at least one luminaire with lamps with an efficacy of 40 lumens/watt or greater switched at the entrance to the room or one of the alternative to this requirement allowed in 150(k)2; and recessed ceiling are IC (insulation cover) approved.		

Computer Method Summary

(Part 3 of 3)

C-2R

Alex Sebastian

8/30/00

Project Title

Date

THERMAL MASS FOR HIGH MASS DESIGN

Type	Area (sf)	Thick. (in.)	Heat Cap.	Cond.	Form 3 Reference	Inside R-Val.	Location Comments
Tile in Mortar	78	1.50	24	0.67	n/a	0	1st Floor / Interior Mass

PERIMETER LOSSES

Type	Length	F2 Factor	Insulation R-Val.	Depth	Location / Comments

HVAC SYSTEMS

Heating Equipment Type (furnace, heat pump, etc.)	Minimum Efficiency (AFUE/HSPF)	Distribution Type and Location (ducts/attic, etc.)	Duct R-Value	Thermostat Type	Location / Comments

Hydronic Piping System Name	Pipe Length	Pipe Diameter	Insul. Thick.

Cooling Equipment Type (air conditioner, heat pump, evap. cooling)	Minimum Efficiency (SEER)	Duct Location (attic, etc.)	Duct R-Value	Thermostat Type	Location / Comments

WATER HEATING SYSTEMS

Water Heater System Name	Water Heater Type	Distribution Type	# in Syst.	Rated ¹ Input (Btu/hr)	Tank Cap. (gal)	Energy Fact ¹ or Recovery Efficiency	Standby Loss ¹ (%)	Tank Insul. R-Value Ext.

¹ For small gas storage (rated input <= 75000 Btu/hr), electric resistance and heat pump water heaters, list energy factor. For large gas storage water heaters (rated input > 75000 Btu/hr), list Rated Input, Recovery Efficiency and Standby Loss. For instantaneous gas water heaters, list Rated Input, and Recovery Efficiency.

REMARKS

CEC Standard

HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

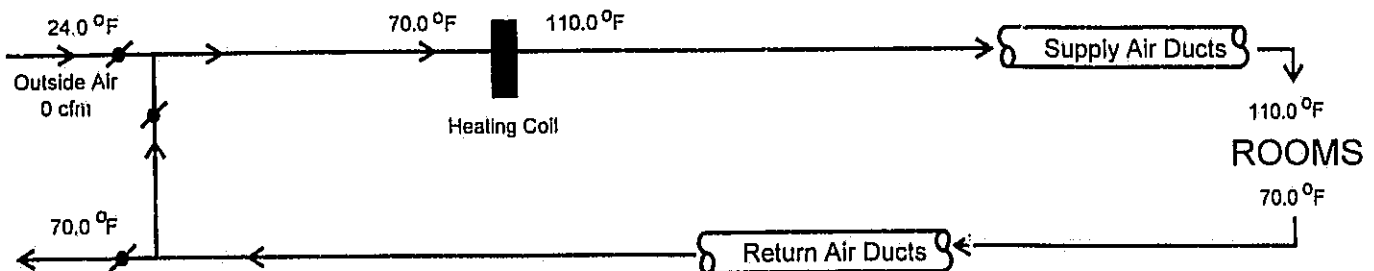
PROJECT NAME Alex Sebastian
 SYSTEM NAME HVAC System

DATE 8/30/00
 FLOOR AREA 494

ENGINEERING CHECKS		SYSTEM LOAD				
Number of Systems		COIL COOLING PEAK			COIL HTG. PEAK	
Heating System		CFM	Sensible	Latent	CFM	Sensible
Output per System	Total Room Loads	303	7,484	-216	228	9,776
Total Output (Btuh)	Return Vented Lighting		0			
Output (Btuh/sqft)	Return Air Ducts		374			489
Cooling System	Return Fan		0			0
Output per System	Ventilation	0	0	0	0	0
Total Output (Btuh)	Supply Fan		0			0
Total Output (Tons)	Supply Air Ducts		374			489
Total Output (Btuh/sqft)	TOTAL SYSTEM LOAD		8,233	-216		10,753
Total Output (sqft/Ton)						
Air System	HVAC EQUIPMENT SELECTION					
CFM per System	Total Adjusted System Output (Adjusted for Peak Design Conditions)					
Airflow (cfm)	TIME OF SYSTEM PEAK					
Airflow (cfm/sqft)	Aug 2 pm					
Airflow (cfm/Ton)	Jan 12 am					
Outside Air (%)						
Outside Air (cfm/sqft)						

Note: values above given at ARI conditions

HEATING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Heating Peak)



COOLING SYSTEM PSYCHROMETRICS (Airstream Temperature at Time of Cooling Peak)

