



Type



Plans

BLD13 - 4144

Permit Number

3349

Street Number

Joy Rd

Street Name

066

Community Code

073 - 250 - 085

APN

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:

Steve Borchardt

Date

Applied:

9/5/13

INFORMATION WITHIN HEAVY LINE TO BE COMPLETED BY APPLICANT

SITE LOCATION INFORMATION - PRINT CLEARLY

Site Address: 3349 Joy Rd.	City: Occidental	ZIP: 95403
Cross-Street: Bittner Rd.	APN: 073-250-085	Project Phone #: ()
Directions:	Email address:	Project Fax #: ()
Describe Project: Foundation Repair - 148'	Living Area	Unit #
	Garage	Lot #
	Decks	Contract Price:

OWNER NAME AND ADDRESS

APPLICANT NAME AND ADDRESS

Name: David Brown	Name: Steve Borchardt
Mailing Address: 3349 Joy Rd.	Mailing Address: 2406 Zuno Ct.
City: Occidental	City: SR
State: CA	State: CA
ZIP: 95403	ZIP: 95403
Day Ph: ()	Day Ph: ()
Fax: ()	Fax: ()

CONTRACTOR INFORMATION

OTHER PERSONS (ARCHITECT, ENGINEER, ETC.)

Company Name: Borchardt Const.	Name:
Address: 2406 Zuno Ct.	Address:
City: SR	City:
State: CA	State:
ZIP: 95403	ZIP:
Day Ph: () 481-9273	Day Ph: ()
Fax: ()	Fax: ()

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 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: New York Marine Life
 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: 10/13 Applicant: [Signature]

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

By my signature below I acknowledge that, except for my personal residence in which I must have resided for at least one year prior to completion of the improvements covered by this permit, I cannot legally sell a structure that I have built as an owner-builder if it has not been constructed in its entirety by licensed contractors. I understand that a copy of the applicable law, Section 7044 of the Business and Professions Code, is available upon request when this application is submitted or at the following website: <http://www.leginfo.ca.gov/calaw.html>.

Date: Signature of Property Owner or Authorized Agent

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: B Lic. No. 448783

Exp. Date: 11/13 Contractor: [Signature]

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 Ordinances 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: [Signature]

ADDRESS: 2406 Zuno Ct. CITY: SR ZIP: 95403

☒ Contractor ☐ Owner ☐ Other Licensed Professional

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: ARB-10 File No. 3-15-12
 Existing Use/Structures: Foundation Repair
 Proposed Use/Structures: Foundation Repair
 Zoning Min. Yard Requirements: Front: 10' Side: 10' Back: 10'
 NOTE: Fire Safe Standards require all parcels greater than 1 acre to have a min. 30' setback unless mitigated. ☐ Mitigation Required ☐ Address subject to change
 Approval for Permit Issuance: [Signature] Approval for Occupancy: [Signature]

By: [Signature] By: [Signature]

Date: 9-5-13 Date: 9-5-13

Conditions: No increase in floor area, use or height of structure. Foundation repair only.

Sewer Connection: ☐ Available ☐ Fees Paid

Approved by: [Signature] Date: 9/5/13

Road Encroachment: ☐ Fees Paid

Approved by: [Signature] Date: 9/5/13

Septic System Permit/Clearance #: SEP15-0499

Approved by: [Signature] Date: 09/10/2013

Flood Zone: ☐ Yes ☐ No 100 Year Flood Elevation:

Site Review: SEP13-0472

Drainage Review: [Signature] Date: 9/5/13

Fire: [Signature]

Approved by: [Signature] Date: 9/5/13

Code Enforcement Violation ☐ Yes ☒ No Violation #

This permit is limited to _____ days.

Work Authorized: new foundation

☒ Plans Approved ☐ Post FIRM ☐ Alquist Priolo Report Available

☐ No Plans Subject to Field Inspection ☐ Pre FIRM ☐ Geotechnical report Available

Plancheck Cleared By: [Signature] Date: 9/10/13

Permit Issued for: [Signature] Date: 9/10/13

Auto. Fire Sprinklers Req'd: NO

No. of Units: 1 No. of Bedrooms: 3

Certificate of Occupancy: [Signature]

Machine Space for Permit Fee

PERMIT AND RESOURCE MANAGEMENT DEPARTMENT

COUNTY OF SONOMA

JOB ADDRESS: 3349 Joy Rd. Occ

PERMIT NUMBER: BLO13-4144

INSPECTION AREA: 7

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

Distribution: White - File Canary - Applicant Blue - Assessor Cardstock - Inspector

131) SPECIAL INSPECTION REQUIRED		<input type="checkbox"/> YES	<input type="checkbox"/> NO	IF YES, SEE ADDITIONAL SHEET	
INSPECTION RECORD		DATE	NAME	REMARKS	
101) ROUGH GRADING		9/17/13	Q	(126) all shear except braced wall. Need doc for nailing.	
103) FOUNDATION					
FORMS/SETBACK					
FOOTING					
WALLS					
106) UFER GROUND #		9/17/13	Q		
104) CAISSONS/PIERS					
105) SLAB					
107) UNDERGROUND UTILITIES					
110) MASONRY					
109) RETAINING WALLS					
113) FIREPLACE					
FOOTING					
HEARTH/PROTECTION					
THROAT					
114) CHIMNEY					
120) UNDERFLOOR/UNDERSLAB		2-28-14	RP		
115) HYDRONICS					
116) U/F ELECTRICAL					
117) U/F MECHANICAL					
118) U/F PLUMBING					
119) U/F FRAMING					
139) U/F INSULATION					
126) SHEAR WALLS		10-31-13	WK		
<input type="checkbox"/> INTERIOR	<input type="checkbox"/> EXTERIOR				
127) DIAPHRAGMS					
<input checked="" type="checkbox"/> ROOF	<input type="checkbox"/> FLOOR	10/28/13			
134) SIDING/SHEATHING					
125) HOLD DOWNS					
132) CLOSE-IN		2-28-14	RP		
122) ROUGH ELECTRICAL					
123) ROUGH MECHANICAL		2-28-14	RP		
124) ROUGH PLUMBING					
128) ROUGH FRAME					
160) SMOKE DETECTORS					
139) INSULATION					
142) WALLBOARD					
143) FIREWALLS					
135) STUCCO/PLASTER					
<input type="checkbox"/> LATH	<input type="checkbox"/> SCRATCH				
137) ROOFING		5/5/14	BT	NO STONE! See CN 4/23/14 BT	
130) TUB/SHOWER PAN					
162) FIRE DAMPERS/DOORS					
164) SUSPENDED CEILING					
<input type="checkbox"/> ROUGH ELEC.	<input type="checkbox"/> ROUGH MECH.				
165) EXITING - RAMPS/STAIRS					
163) HANDRAILS/GUARDRAILS					
CORRIDORS/DOORS					
166) ACCESSIBILITY COMPLIANCE				650) SUSMP INSPECTION	
144) WATER TANKS				651) NPDES EROSION COMPLIANCE	
<input type="checkbox"/> SLAB	<input type="checkbox"/> WALLS			652) NPDES SEDIMENT COMPLIANCE	
170) TEMPORARY OCCUPANCY				653) NPDES DOCS/SWPPP	
171) TEMPORARY ELECTRICAL				FIRE INSPECTION REQUIRED	
172) TEMPORARY GAS				<input type="checkbox"/> Yes <input type="checkbox"/> No	
174) ELECTRIC METER AUTHORIZATION				759) KNOX BOX	
152) PANEL BOARDS/SERVICE		11/5/13	Q	760) PROPANE TANK HOLD DOWNS	
189) SEPTIC ELECTRIC FINAL				770) SPRINKLER FINAL	
175) GAS METER AUTHORIZATION				771) ABOVEGROUND HYDROSTATIC	
153) GAS PRESSURE TEST				772) UNDERGROUND HYDROSTATIC	
HOUSE 7/14/13 YARD 10-31-13 WK				773) UNDERGROUND FLUSH	
190) MANUF. HOME FOUNDATION				774) THRUST BLOCKS	
191) MANUF. HOME INSTALLATION				775) PIPE WELD	
CONTINUITY				776) HYDRANTS/APPLIANCES	
STAIRS/SKIRTS				777) PUMP ACCEPTANCE	
RIDGE BOLTING				778) WATER SUPPLY/TANK	
193) MANUF. HOME COND. FINAL				779) ALARM SYSTEM	
SWIMMING POOLS				780) HOOD & DUCT SYSTEM	
194) PRE-GUNITE				781) ABOVEGROUND TANK/DISPENSER	
195) PRE-DECK				198) FIRE FINAL	
196) PRE-PLASTER/FENCE				CLEARANCES:	
197) VINYL/FIBERGLASS POOL EXCAVATION				FIRE <input type="checkbox"/> Local <input type="checkbox"/> County	
102) GRADING FINAL				HEALTH DEPARTMENT	
176) ELECTRICAL FINAL				ZONING	
177) MECHANICAL FINAL				SANITATION	
178) PLUMBING FINAL					
199) FINAL		12/5/14	Q	PLAN RETENTION REQUIRED?	
OCCUPANCY (OK TO OCCUPY)				<input type="checkbox"/> Yes <input type="checkbox"/> No	

PERMIT #

PERFORMANCE CERTIFICATE: Residential (Part 1 of 5) **CF-1R**

Project Name Brown Residence	Building Type <input checked="" type="checkbox"/> Single Family <input type="checkbox"/> Addition Alone <input type="checkbox"/> Multi Family <input checked="" type="checkbox"/> Existing+ Addition/Alteration	Date 9/17/2013		
Project Address 3349 Joy Road Occidental	California Energy Climate Zone CA Climate Zone 02	Total Cond. Floor Area 2,008	Addition 457	# of Stories 1

FIELD INSPECTION ENERGY CHECKLIST

☐ Yes ☒ No HERS Measures -- If Yes, A CF-4R must be provided per Part 2 of 5 of this form.
☒ Yes ☐ No Special Features -- If Yes, see Part 2 of 5 of this form for details.

INSULATION		Area	Special	Status
Construction	Type	Cavity	Features (see Part 2 of 5)	
Floor	Wood Framed w/Crawl Space	R-19	971	Altered
Wall	Wood Framed	R-13	1,336	Altered
Roof	Wood Framed Attic	R-30	370	Altered
Floor	Wood Framed w/Crawl Space	R-19	352	New
Wall	Wood Framed	R-13	839	New
Door	Opaque Door	None	44	New
Roof	Wood Framed Attic	R-30	267	New
Roof	Wood Framed Rafter	R-25	547	Altered

FENESTRATION		U-Factor	SHGC	Overhang	Sideflns	Exterior	Status
Orientation	Area(ft ²)					Shades	
Front (N)	80.0	0.990	0.74	none	none	Bug Screen	Removed
Left (E)	37.5	0.990	0.74	1.3	none	Bug Screen	Removed
Left (E)	60.5	0.350	0.29	1.3	none	Bug Screen	New
Rear (S)	25.0	0.990	0.74	6.0	none	Bug Screen	Removed
Rear (S)	22.5	0.350	0.29	1.3	none	Bug Screen	Altered
Rear (S)	24.0	0.350	0.29	6.0	none	Bug Screen	New
Rear (S)	10.0	0.320	0.28	6.0	none	Bug Screen	New
Right (W)	25.0	0.990	0.74	6.0	none	Bug Screen	Removed
Right (W)	25.0	0.990	0.74	none	none	Bug Screen	Removed
Right (W)	12.0	0.350	0.29	none	none	Bug Screen	New
Right (W)	53.4	0.530	0.65	6.0	none	Bug Screen	New

HVAC SYSTEMS

Qty.	Heating	Min. Eff	Cooling	Min. Eff	Thermostat	Status
1	Central Furnace	95% AFUE	No Cooling	13.0 SEER	Setback	Altered

HVAC DISTRIBUTION

Location	Heating	Cooling	Duct Location	Duct R-Value	Status
HVAC System	Ducted	Ducted	Attic, Ceiling Ins, vented	6.0	Altered

WATER HEATING

Qty.	Type	Gallons	Min. Eff	Distribution	Status
1	Instant Gas	0	0.82	All Pipes Ins	Altered

PERFORMANCE CERTIFICATE: Residential (Part 1 of 5) **CF-1R**

Project Name Brown Residence	Building Type <input checked="" type="checkbox"/> Single Family <input type="checkbox"/> Addition Alone <input type="checkbox"/> Multi Family <input checked="" type="checkbox"/> Existing+ Addition/Alteration	Date 9/17/2013		
Project Address 3349 Joy Road Occidental	California Energy Climate Zone CA Climate Zone 02	Total Cond. Floor Area 2,008	Addition 457	# of Stories 1

FIELD INSPECTION ENERGY CHECKLIST

☐ Yes ☒ No HERS Measures -- If Yes, A CF-4R must be provided per Part 2 of 5 of this form.
☒ Yes ☐ No Special Features -- If Yes, see Part 2 of 5 of this form for details.

INSULATION		Cavity	Area (ft ²)	Special Features (see Part 2 of 5)	Status
Construction	Type				
Roof	Wood Framed Rafter	R-25	318		New

FENESTRATION		U- Factor	SHGC	Overhang	Sidelins	Exterior Shades	Status
Orientation	Area(ft ²)						
Front (N)	47.5	0.350	0.29	none	none	Bug Screen	New
Front (N)	54.0	0.320	0.28	10.0	none	Bug Screen	New
Left (E)	6.0	0.320	0.28	1.3	none	Bug Screen	New
Right (W)	25.0	0.350	0.29	1.3	none	Bug Screen	New

HVAC SYSTEMS						
Qty.	Heating	Min. Eff	Cooling	Min. Eff	Thermostat	Status

HVAC DISTRIBUTION					Duct R-Value	Status
Location	Heating	Cooling	Duct Location			

WATER HEATING					Status
Qty.	Type	Gallons	Min. Eff	Distribution	

PERFORMANCE CERTIFICATE: Residential (Part 2 of 5) **CF-1R**

Project Name Brown Residence	Building Type <input checked="" type="checkbox"/> Single Family <input type="checkbox"/> Addition Alone <input type="checkbox"/> Multi Family <input checked="" type="checkbox"/> Existing+ Addition/Alteration	Date 9/17/2013
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SPECIAL FEATURES INSPECTION CHECKLIST

The enforcement agency should pay special attention to the items specified in this checklist. These items require special written justification and documentation, and special verification to be used with the performance approach. The enforcement agency determines the adequacy of the justification, and may reject a building or design that otherwise complies based on the adequacy of the special justification and documentation submitted.

*The HVAC System Bryant 359BAV036060** does not include a cooling system, field verification is not necessary.*

The Existing Roof Roof R-25 Vaulted has a U-Factor greater than the Vintage Defaults. Field verification is required.

HERS REQUIRED VERIFICATION

Items in this section require field testing and/or verification by a certified HERS Rater. The inspector must receive a completed CF-4R form for each of the measures listed below for final to be given.

PERFORMANCE CERTIFICATE: Residential (Part 3 of 5) **CF-1R**

Project Name Brown Residence	Building Type <input checked="" type="checkbox"/> Single Family <input type="checkbox"/> Addition Alone <input type="checkbox"/> Multi Family <input checked="" type="checkbox"/> Existing+ Addition/Alteration	Date 9/17/2013
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ANNUAL ENERGY USE SUMMARY

TDV (kBtu/ft ² -yr)	Standard	Proposed	Margin
Space Heating	119.88	31.88	88.00
Space Cooling	65.27	26.32	38.95
Fans	28.69	11.00	17.69
Domestic Hot Water	20.62	13.89	6.73
Pumps	0.00	0.00	0.00
Totals	234.46	83.09	151.37
Percent Better Than Standard:			64.6 %

BUILDING COMPLIES - NO HERS VERIFICATION REQUIRED

Building Front Orientation:	(N) 0 deg	Ext. Walls/Roof	Wall Area	Fenestration Area
Number of Dwelling Units:	1.00	(N)	508	102
Fuel Available at Site:	Natural Gas	(E)	808	87
Raised Floor Area:	1,323	(S)	502	57
Slab on Grade Area:	0	(W)	715	90
Average Ceiling Height:	9.4	Roof	1,502	0
Fenestration Average U-Factor:	0.37	TOTAL:		315
Average SHGC:	0.35	Fenestration/CFA Ratio:		15.7 %

REMARKS

Existing insulation: R-0 floors, R-0 walls, R-11 attic/vaulted - replace existing with R-19 floors, R-13 walls, R-30 attic, R-26 min at vaulted

Insulation at addition: R-19 floors, R-13 walls, R-30 attic

Existing fenestration: wood framed single pane windows - replace with wood frame, dual pane Low E by Marvin

New fenestration: wood frame, dual pane Low E by Marvin

Replace water and space heating system and distribution as indicated

BUILDING PLAN CHECK**APPROVED**

OCT 01 2013

STATEMENT OF COMPLIANCE

This certificate of compliance lists the building features and specifications needed to comply with Title 24, Parts 1 the Administrative Regulations and Part 6 the Efficiency Standards of the California Code of Regulations.

PERMIT AND RESOURCE
MANAGEMENT DEPARTMENT
CABEC
California Association of Building Energy Consultants
CERTIFIED ENERGY ANALYST
Peter Ziedrich
R08-93-277

The documentation author hereby certifies that the documentation is accurate and complete.

Documentation AuthorCompany **RaPID Energy Compliance**Address **420 Hudson Street, Suite K**City/State/Zip **Healdsburg, CA 95448**Name **Peter Ziedrich**Phone **707 433-2878**

Signed

9/17/2013

Date

The individual with overall design responsibility hereby certifies that the proposed building design represented in this set of construction documents is consistent with the other compliance forms and worksheets, with the specifications, and with any other calculations submitted with this permit application, and recognizes that compliance using duct design, duct sealing, verification of refrigerant charge, 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 & Professions Code)Company **SEB D&D**Address **2406 Zurlo Court**City/State/Zip **Santa Rosa, CA 95403**Name **Steven Borchardt**Phone **(707) 578-2021**

Signed

License #

Date

CERTIFICATE OF COMPLIANCE: Residential

(Part 4 of 5)

CF-1R

Project Name Brown Residence	Building Type <input checked="" type="checkbox"/> Single Family <input type="checkbox"/> Addition Alone <input type="checkbox"/> Multi Family <input checked="" type="checkbox"/> Existing+ Addition/Alteration	Date 9/17/2013
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OPAQUE SURFACE DETAILS

Surface Type	Area	U-Factor	Insulation				Azim	Tilt	Status	Joint Appendix 4	Location/Comments
			Cavity	Exterior	Frame	Interior					
Floor	971	0.037	R-19				0	180	Altered	4.4.1-A4 (E=4.4.1-A1)	First Floor
Wall	221	0.356	None				0	90	Removed	4.3.1-A1	First Floor
Wall	328	0.102	R-13				90	90	Altered	4.3.1-A3 (E=4.3.1-A1)	First Floor
Wall	354	0.102	R-13				180	90	Altered	4.3.1-A3 (E=4.3.1-A1)	First Floor
Door	20	0.500	None				180	90	Removed	4.5.1-A4	First Floor
Wall	284	0.102	R-13				270	90	Altered	4.3.1-A3 (E=4.3.1-A1)	First Floor
Roof	370	0.031	R-30				0	0	Altered	4.2.1-A20 (E=4.2.1-A14)	First Floor
Roof	181	0.076	R-11				0	0	Removed	4.2.1-A14	First Floor
Floor	160	0.097	None				0	180	Removed	4.4.1-A1	First Floor
Wall	148	0.356	None				0	90	Removed	4.3.1-A1	First Floor
Wall	101	0.356	None				90	90	Removed	4.3.1-A1	First Floor
Door	20	0.500	None				90	90	Removed	4.5.1-A4	First Floor
Wall	92	0.356	None				270	90	Removed	4.3.1-A1	First Floor
Roof	160	0.076	R-11				180	0	Removed	4.2.1-A14	First Floor
Floor	352	0.037	R-19				0	180	New	4.4.1-A4	First Floor
Wall	285	0.102	R-13				0	90	New	4.3.1-A3	First Floor

FENESTRATION SURFACE DETAILS

ID	Type	Area	U-Factor ¹		SHGC ²		Azm	Status	Glazing Type	Location/Comments
1	Window	55.0	0.990	Default	0.74	Default	0	Removed	Single Non Metal Clear	First Floor
2	Window	37.5	0.990	Default	0.74	Default	90	Removed	Single Non Metal Clear	First Floor
3	Window	24.5	0.350	NFRC	0.29	NFRC	90	New	Marvin Low E Arg D/H	First Floor
4	Window	25.0	0.990	Default	0.74	Default	180	Removed	Single Non Metal Clear	First Floor
5	Window	12.5	0.350	NFRC	0.29	NFRC	180	Altered	Marvin Low E Arg D/H	First Floor
6	Existing		0.990	Default	0.74	Default			Single Non Metal Clear	pre-altered for above
7	Window	24.0	0.350	NFRC	0.29	NFRC	180	New	Marvin Low E Arg D/H	First Floor
8	Window	10.0	0.320	NFRC	0.28	NFRC	180	New	Marvin Low E Arg Awrv/FX	First Floor
9	Window	25.0	0.990	Default	0.74	Default	270	Removed	Single Non Metal Clear	First Floor
10	Window	12.5	0.990	Default	0.74	Default	270	Removed	Single Non Metal Clear	First Floor
11	Window	12.0	0.350	NFRC	0.29	NFRC	270	New	Marvin Low E Arg D/H	First Floor
12	Window	53.4	0.530	Default	0.65	Default	270	New	Dbi Non-Mtl Clr French	First Floor
13	Window	12.5	0.990	Default	0.74	Default	0	Removed	Single Non Metal Clear	First Floor
14	Window	12.5	0.990	Default	0.74	Default	270	Removed	Single Non Metal Clear	First Floor
15	Window	37.5	0.350	NFRC	0.29	NFRC	0	New	Marvin Low E Arg D/H	First Floor
16	Window	54.0	0.320	NFRC	0.28	NFRC	0	New	Marvin Low E Arg Awrv/FX	First Floor

(1) U-Factor Type: 116-A = Default Table from Standards, NFRC = Labeled Value

(2) SHGC Type: 116-B = Default Table from Standards, NFRC = Labeled Value

EXTERIOR SHADING DETAILS

ID	Exterior Shade Type	SHGC	Window		Overhang				Left Fin			Right Fin		
			Hgt	Wd	Len	Hgt	LExt	RExt	Dist	Len	Hgt	Dist	Len	Hgt
1	Bug Screen	0.76												
2	Bug Screen	0.76	5.0	7.5	1.3	1.0	1.3	1.3						
3	Bug Screen	0.76	3.8	6.5	1.3	1.0	1.3	1.3						
4	Bug Screen	0.76	5.0	5.0	6.0	0.1	6.0	6.0						
5	Bug Screen	0.76	5.0	2.5	1.3	1.0	1.3	1.3						
6	Bug Screen	0.76	5.0	2.5	1.3	1.0	1.3	1.3						
7	Bug Screen	0.76	4.0	6.0	6.0	0.1	6.0	6.0						
8	Bug Screen	0.76	2.0	5.0	6.0	0.1	6.0	6.0						
9	Bug Screen	0.76	5.0	5.0	6.0	0.1	6.0	6.0						
10	Bug Screen	0.76												
11	Bug Screen	0.76												
12	Bug Screen	0.76	6.7	8.0	6.0	0.1	6.0	6.0						
13	Bug Screen	0.76												
14	Bug Screen	0.76												
15	Bug Screen	0.76												
16	Bug Screen	0.76	6.0	9.0	10.0	0.1	10.0	10.0						

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Surface Type	Area	U-Factor	Insulation					Azm	Tilt	Status	Joint Appendix 4	Location/Comments
			Cavity	Exterior	Frame	Interior	Frame					
Door	24	0.500	None					0	90	New	4.5.1-A4	First Floor
Wall	105	0.102	R-13					90	90	New	4.3.1-A3	First Floor
Door	20	0.500	None					90	90	New	4.5.1-A4	First Floor
Wall	106	0.102	R-13					270	90	New	4.3.1-A3	First Floor
Roof	267	0.031	R-30					0	0	New	4.2.1-A20	First Floor
Wall	90	0.356	None					0	90	Removed	4.3.1-A1	Second Floor
Wall	69	0.102	R-13					90	90	Altered	4.3.1-A3 (E=4.3.1-A1)	Second Floor
Wall	142	0.356	None					90	90	Removed	4.3.1-A1	Second Floor
Wall	92	0.102	R-13					180	90	Altered	4.3.1-A3 (E=4.3.1-A1)	Second Floor
Wall	210	0.102	R-13					270	90	Altered	4.3.1-A3 (E=4.3.1-A1)	Second Floor
Roof	547	0.039	R-25					180	40	Altered	4.2.2-A39 (E=4.2.2-A2)	Second Floor
Wall	98	0.102	R-13					0	90	New	4.3.1-A3	Second Floor
Wall	220	0.102	R-13					90	90	New	4.3.1-A3	Second Floor
Wall	25	0.102	R-13					270	90	New	4.3.1-A3	Second Floor
Roof	318	0.039	R-25					180	40	New	4.2.2-A39	Second Floor

[illegible]

(2) SHGC Type: 116-B = Default Table from Standards, NFRC = Labeled Value

[illegible]

CERTIFICATE OF COMPLIANCE: Residential

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Project Name Brown Residence	Building Type <input checked="" type="checkbox"/> Single Family <input type="checkbox"/> Addition Alone <input type="checkbox"/> Multi Family <input checked="" type="checkbox"/> Existing+ Addition/Alteration	Date 9/17/2013
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BUILDING ZONE INFORMATION

System Name	Zone Name	Floor Area (ft ²)				Volume	Year Built
		New	Existing	Altered	Removed		
HVAC System	Existing			971		9,807	1910
	Laundry Room (removed)				160	1,616	1910
	Addition	352				3,555	
	Existing		420			3,150	1910
	Addition	265				2,412	
Totals		617	420	971	160		

HVAC SYSTEMS

System Name	Qty.	Heating Type	Min. Eff.	Cooling Type	Min. Eff.	Thermostat Type	Status
HVAC System	1	Central Furnace	95% AFUE	No Cooling	13.0 SEER	Setback	Altered
pre-altered for above		Floor Furnace	65% AFUE	No Cooling	13.0 SEER	Setback	

HVAC DISTRIBUTION

System Name	Heating	Cooling	Duct Location	Duct R-Value	Ducts Tested?	Status
HVAC System	Ducted	Ducted	Attic, Ceiling Ins, vented	6.0	<input type="checkbox"/>	Altered
pre-altered for above	Ductless / with Fan	Ducted	Attic, Ceiling Ins, vented	2.1	<input type="checkbox"/>	
					<input type="checkbox"/>	
					<input type="checkbox"/>	
					<input type="checkbox"/>	

WATER HEATING SYSTEMS

System Name	Qty.	Type	Distribution	Rated Input (Btuh)	Tank Cap. (gal)	Energy Factor or RE	Standby Loss or Pilot	Ext. Tank Insul. R-Value	Status
Takagi T-K4 lpg	1	Instant Gas	All Pipes Ins	190,000	0	0.82	n/a	n/a	Altered
Default Gas Prior to 1999	1	Small Gas	pre-altered for Above	28,000	50	0.53	n/a	n/a	

MULTI-FAMILY WATER HEATING DETAILS

HYDRONIC HEATING SYSTEM PIPING

Control	Hot Water Piping Length (ft)					Add 1/2" Insulation	System Name	Pipe Length	Pipe Diameter	Insul. Thick.
	Qty.	HP	Plenum	Outside	Buried					
						<input type="checkbox"/>				
						<input type="checkbox"/>				
						<input type="checkbox"/>				
						<input type="checkbox"/>				
						<input type="checkbox"/>				

MANDATORY MEASURES SUMMARY: Residential		(Page 1 of 3)	MF-1R
Project Name Brown Residence		Date 9/17/2013	
<p>NOTE: Low-rise residential buildings subject to the Standards must comply with all applicable mandatory measures listed, regardless of the compliance approach used. More stringent energy measures listed on the Certificate of Compliance (CF-1R, CF-1R-ADD, or CF-1R-ALT Form) shall supersede the items marked with an asterisk (*) below. This Mandatory Measures Summary shall be incorporated into the permit documents, and the applicable features shall be considered by all parties as minimum component performance specifications whether they are shown elsewhere in the documents or in this summary. Submit all applicable sections of the MF-1R Form with plans.</p>			
Building Envelope Measures:			
§116(a)1: Doors and windows between conditioned and unconditioned spaces are manufactured to limit air leakage.			
§116(a)4: Fenestration products (except field-fabricated windows) have a label listing the certified U-Factor, certified Solar Heat Gain Coefficient (SHGC), and infiltration that meets the requirements of §10-111(a).			
§117: Exterior doors and windows are weather-stripped; all joints and penetrations are caulked and sealed.			
§118(a): Insulation specified or installed meets Standards for Insulating Material. Indicate type and include on CF-6R Form.			
§118(i): The thermal emittance and solar reflectance values of the cool roofing material meets the requirements of §118(i) when the installation of a Cool Roof is specified on the CF-1R Form.			
*§150(a): Minimum R-19 insulation in wood-frame ceiling or equivalent U-factor.			
§150(b): Loose fill insulation shall conform with manufacturer's installed design labeled R-Value.			
*§150(c): Minimum R-13 insulation in wood-frame wall or equivalent U-factor.			
*§150(d): Minimum R-13 insulation in raised wood-frame floor or equivalent U-factor.			
§150(f): Air retarding wrap is tested, labeled, and installed according to ASTM E1677-95(2000) when specified on the CF-1R Form.			
§150(g): Mandatory Vapor barrier installed in Climate Zones 14 or 16.			
§150(i): Water absorption rate for slab edge insulation material alone without facings is no greater than 0.3%; water vapor permeance rate is no greater than 2.0 perm/inch and shall be protected from physical damage and UV light deterioration.			
Fireplaces, Decorative Gas Appliances and Gas Log Measures:			
§150(e)1A: Masonry or factory-built fireplaces have a closable metal or glass door covering the entire opening of the firebox.			
§150(e)1B: Masonry or factory-built fireplaces have a combustion outside air intake, which is at least six square inches in area and is equipped with a with a readily accessible, operable, and tight-fitting damper and or a combustion-air control device.			
§150(e)2: Continuous burning pilot lights and the use of indoor air for cooling a firebox jacket, when that indoor air is vented to the outside of the building, are prohibited.			
Space Conditioning, Water Heating and Plumbing System Measures:			
§110-§113: HVAC equipment, water heaters, showerheads, faucets and all other regulated appliances are certified by the Energy Commission.			
§113(c)5: Water heating recirculation loops serving multiple dwelling units and High-Rise residential occupancies meet the air release valve, backflow prevention, pump isolation valve, and recirculation loop connection requirements of §113(c)5.			
§115: Continuously burning pilot lights are prohibited for natural gas: fan-type central furnaces, household cooking appliances (appliances with an electrical supply voltage connection with pilot lights that consume less than 150 Btu/hr are exempt), and pool and spa heaters.			
§150(h): Heating and/or cooling loads are calculated in accordance with ASHRAE, SMACNA or ACCA.			
§150(i): Heating systems are equipped with thermostats that meet the setback requirements of Section 112(c).			
§150(j)1A: Storage gas water heaters rated with an Energy Factor no greater than the federal minimal standard are externally wrapped with insulation having an installed thermal resistance of R-12 or greater.			
§150(j)1B: Unfired storage tanks, such as storage tanks or backup tanks for solar water-heating system, or other indirect hot water tanks have R-12 external insulation or R-16 internal insulation where the internal insulation R-value is indicated on the exterior of the tank.			
§150(j)2: First 5 feet of hot and cold water pipes closest to water heater tank, non-recirculating systems, and entire length of recirculating sections of hot water pipes are insulated per Standards Table 150-B.			
§150(j)2: Cooling system piping (suction, chilled water, or brine lines), and piping insulated between heating source and indirect hot water tank shall be insulated to Table 150-B and Equation 150-A.			
§150(j)2: Pipe insulation for steam hydronic heating systems or hot water systems >15 psi, meets the requirements of Standards Table 123-A.			
§150(j)3A: Insulation is protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind.			
§150(j)3A: Insulation for chilled water piping and refrigerant suction lines includes a vapor retardant or is enclosed entirely in conditioned space.			
§150(j)4: Solar water-heating systems and/or collectors are certified by the Solar Rating and Certification Corporation.			

MANDATORY MEASURES SUMMARY: Residential		(Page 2 of 3)	MF-1R
Project Name Brown Residence		Date 9/17/2013	
<p>§150(m)1: All air-distribution system ducts and plenums installed, are sealed and insulated to meet the requirements of CMC Sections 601, 602, 603, 604, 605 and Standard 6-5; supply-air and return-air ducts and plenums are insulated to a minimum installed level of R-4.2 or enclosed entirely in conditioned space. Openings shall be sealed with mastic, tape or other duct-closure system that meets the applicable requirements of UL 181, UL 181A, or UL 181B or aerosol sealant that meets the requirements of UL 723. If mastic or tape is used to seal openings greater than 1/4 inch, the combination of mastic and either mesh or tape shall be used</p> <p>§150(m)1: Building cavities, support platforms for air handlers, and plenums defined or constructed with materials other than sealed sheet metal, duct board or flexible duct shall not be used for conveying conditioned air. Building cavities and support platforms may contain ducts. Ducts installed in cavities and support platforms shall not be compressed to cause reductions in the cross-sectional area of the ducts.</p> <p>§150(m)2D: Joints and seams of duct systems and their components shall not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands.</p> <p>§150(m)7: Exhaust fan systems have back draft or automatic dampers.</p> <p>§150(m)8: Gravity ventilating systems serving conditioned space have either automatic or readily accessible, manually operated dampers.</p> <p>§150(m)9: Insulation shall be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind. Cellular foam insulation shall be protected as above or painted with a coating that is water retardant and provides shielding from solar radiation that can cause degradation of the material.</p> <p>§150(m)10: Flexible ducts cannot have porous inner cores.</p> <p>§150(o): All dwelling units shall meet the requirements of ANSI/ASHRAE Standard 62.2-2007 Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings. Window operation is not a permissible method of providing the Whole Building Ventilation required in Section 4 of that Standard.</p>			
Pool and Spa Heating Systems and Equipment Measures:			
<p>§114(a): Any pool or spa heating system shall be certified to have: a thermal efficiency that complies with the Appliance Efficiency Regulations; an on-off switch mounted outside of the heater; a permanent weatherproof plate or card with operating instructions; and shall not use electric resistance heating or a pilot light.</p> <p>§114(b)1: Any pool or spa heating equipment shall be installed with at least 36" of pipe between filter and heater, or dedicated suction and return lines, or built-up connections for future solar heating.</p> <p>§114(b)2: Outdoor pools or spas that have a heat pump or gas heater shall have a cover.</p> <p>§114(b)3: Pools shall have directional inlets that adequately mix the pool water, and a time switch that will allow all pumps to be set or programmed to run only during off-peak electric demand periods.</p> <p>§150(p): Residential pool systems or equipment meet the pump sizing, flow rate, piping, filters, and valve requirements of §150(p).</p>			
Residential Lighting Measures:			
<p>§150(k)1: High efficacy luminaires or LED Light Engine with Integral Heat Sink has an efficacy that is no lower than the efficacies contained in Table 150-C and is not a low efficacy luminaire as specified by §150(k)2.</p> <p>§150(k)3: The wattage of permanently installed luminaires shall be determined as specified by §130(d).</p> <p>§150(k)4: Ballasts for fluorescent lamps rated 13 Watts or greater shall be electronic and shall have an output frequency no less than 20 kHz.</p> <p>§150(k)5: Permanently installed night lights and night lights integral to a permanently installed luminaire or exhaust fan shall contain only high efficacy lamps meeting the minimum efficacies contained in Table 150-C and shall not contain a line-voltage socket or line-voltage lamp holder; OR shall be rated to consume no more than five watts of power as determined by §130(d), and shall not contain a medium screw-base socket.</p> <p>§150(k)6: Lighting integral to exhaust fans, in rooms other than kitchens, shall meet the applicable requirements of §150(k).</p> <p>§150(k)7: All switching devices and controls shall meet the requirements of §150(k)7.</p> <p>§150(k)8: A minimum of 50 percent of the total rated wattage of permanently installed lighting in kitchens shall be high efficacy. EXCEPTION: Up to 50 watts for dwelling units less than or equal to 2,500 ft² or 100 watts for dwelling units larger than 2,500 ft² may be exempt from the 50% high efficacy requirement when: all low efficacy luminaires in the kitchen are controlled by a manual on occupant sensor, dimmer, energy management system (EMCS), or a multi-scene programmable control system; and all permanently installed luminaires in garages, laundry rooms, closets greater than 70 square feet, and utility rooms are high efficacy and controlled by a manual-on occupant sensor.</p> <p>§150(k)9: Permanently installed lighting that is internal to cabinets shall use no more than 20 watts of power per linear foot of illuminated cabinet.</p>			
<p>EnergyPro 5.1 by EnergySoft User Number: 1759 RunCode: 2013-09-17T11:50:53 ID: 13T132 Page 11 of 14</p>			

MANDATORY MEASURES SUMMARY: Residential**(Page 3 of 3)****MF-1R**

Project Name

Brown Residence

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§150(k)10: Permanently installed luminaires in bathrooms, attached and detached garages, laundry rooms, closets and utility rooms shall be high efficacy.

EXCEPTION 1: Permanently installed low efficacy luminaires shall be allowed provided that they are controlled by a manual-on occupant sensor certified to comply with the applicable requirements of §119.

EXCEPTION 2: Permanently installed low efficacy luminaires in closets less than 70 square feet are not required to be controlled by a manual-on occupancy sensor.

§150(k)11: Permanently installed luminaires located in rooms or areas other than in kitchens, bathrooms, garages, laundry rooms, closets, and utility rooms shall be high efficacy luminaires. EXCEPTION 1: Permanently installed low efficacy luminaires shall be allowed provided they are controlled by either a dimmer switch that complies with the applicable requirements of §119, or by a manual-on occupant sensor that complies with the applicable requirements of §119. EXCEPTION 2: Lighting in detached storage building less than 1000 square feet located on a residential site is not required to comply with §150(k)11.

§150(k)12: Luminaires recessed into insulated ceilings shall be listed for zero clearance insulation contact (IC) by Underwriters Laboratories or other nationally recognized testing/rating laboratory; and have a label that certifies the luminaire is airtight with air leakage less than 2.0 CFM at 75 Pascals when tested in accordance with ASTM E283; and be sealed with a gasket or caulk between the luminaire housing and ceiling.

§150(k)13: Luminaires providing outdoor lighting, including lighting for private patios in low-rise residential buildings with four or more dwelling units, entrances, balconies, and porches, which are permanently mounted to a residential building or to other buildings on the same lot shall be high efficacy. EXCEPTION 1: Permanently installed outdoor low efficacy luminaires shall be allowed provided that they are controlled by a manual on/off switch, a motion sensor not having an override or bypass switch that disables the motion sensor, and one of the following controls: a photocontrol not having an override or bypass switch that disables the photocontrol; OR an astronomical time clock not having an override or bypass switch that disables the astronomical time clock; OR an energy management control system (EMCS) not having an override or bypass switch that allows the luminaire to be always on. EXCEPTION 2: Outdoor luminaires used to comply with Exception 1 to §150(k)13 may be controlled by a temporary override switch which bypasses the motion sensing function provided that the motion sensor is automatically reactivated within six hours. EXCEPTION 3: Permanently installed luminaires in or around swimming pool, water features, or other location subject to Article 680 of the California Electric Code need not be high efficacy luminaires.

§150(k)14: Internally illuminated address signs shall comply with Section 148; OR not contain a screw-base socket, and consume no more than five watts of power as determined according to §130(d).

§150(k)15: Lighting for parking lots and carports with a total of for 8 or more vehicles per site shall comply with the applicable requirements in Sections 130, 132, 134, and 147. Lighting for parking garages for 8 or more vehicles shall comply with the applicable requirements of Sections 130, 131, 134, and 146.

§150(k)16: Permanently installed lighting in the enclosed, non-dwelling spaces of low-rise residential buildings with four or more dwelling units shall be high efficacy luminaires. EXCEPTION: Permanently installed low efficacy luminaires shall be allowed provided that they are controlled by an occupant sensor(s) certified to comply with the applicable requirements of §119.