

CITY OF SACRAMENTO

Permit No: 9806836

1231 I Street, Sacramento, CA 95814

Insp Area: 2

Site Address: 1441 JOEL CT SAC

Sub-Type: RES

Parcel No:

Housing (Y/N): N

CONTRACTOR

ZIMMERMAN ROOFING
3560 RAMONA AV
SACRAMENTO, CA

95826

OWNER

HIROSHIGE TAKEO & YONE
1441 JOEL CT
SACRAMENTO

95822

ARCHITECT

Nature of Work: T/O AND REROOF 29 SQS WITH TILE

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

Lender's Name Lender's Address

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

License Class C-39 License Number C-39 Date 7-24-98 Contractor Signature Kelly Coy

OWNER-BUILDER DECLARATION: I hereby affirm under penalty of perjury that I am exempt from the contractors License Law for the following reason (Sec. 7031.5, Business and Professions Code; any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he or she is licensed pursuant to the provisions of the Contractors License Law (Chapter 9 (commencing with Section 7000) of Division 8 of the Business and Professions Code) or that he or she is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars (\$500.00);

I, as a owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business and Professional Code: The Contractors License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or herself or through his/her own employees, provided that such improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he/she did not build or improve for the purpose of sale.)

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

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

Date Owner Signature

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

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

Date 7-24-98 Applicant/Agent Signature Kelly Coy

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

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

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

Carrier State Fund Policy Number 713 970002021 Exp 10-1-98

(This section need not be completed if the permit is for \$100 or less) I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the workers' compensation laws of California and agree that if I should become subject to the workers' compensation provisions of Section 3700 of the Labor Code, I shall forthwith comply with those provisions.

Date 7-24-98 Applicant Signature Kelly Coy

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

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



DEPARTMENT OF  
PLANNING AND DEVELOPMENT

CITY OF SACRAMENTO  
CALIFORNIA

1231 I STREET  
ROOM 200  
SACRAMENTO, CA  
95814-2998

Permit Service  
916-264-7619  
FAX 916-264-7096

Hiroshige  
14-11 Joel Ct.  
SACRAMENTO, CA 95822

TILE ROOF WORKSHEET

This worksheet must be filled out whenever any type of tile roof is applied for.

If the answer to question #5 is yes, a written engineering report from a registered engineer must be provided with each application.

BRAND AND MODEL OF TILE Manier tile

TILE WEIGHT PER SQUARE 730

WEIGHT OF ROOF SYSTEM PER SQUARE 180

TOTAL WEIGHT OF ROOF SYSTEM 910

DOES TOTAL WEIGHT OF ROOF SYSTEM EXCEED 750# PER SQUARE? YES  NO

ROOF SLOPE 4/12

PLEASE PROVIDE A SEPARATE WORKSHEET FOR EACH APPLICATION INVOLVING A TILE ROOF

See attached engineering report

**Paul Zacher-Structural Engineers**

4700 Lakeside Way  
San Diego, CA 95628

TEL: 916.961.3960  
FAX: 916.961.3960  
e-mail: pzacher@softcom.net

June 30, 1998

Zimmerman Roofing  
3560 Ramona Avenue  
Sacramento, CA 95826  
TEL: 916.454.3667  
FAX: 916.455.3784  
TEL (Jeff): 916.392.1971  
FAX (Jeff): 916.392.6853  
FAX (Framer) : 916.383.5308

Attn: Mr. Jeff Tucker,

re Job 98128: HIROSHIGE

Subject: Structural Investigation Report of the Roof for the Residence located at 1441  
Joel Court, Sacramento, CA 95822

As requested by Mr. Jeff Tucker, this is a report to determine what needs should be addressed to correct any structural deficiencies of the roof. Paul Zacher visited the site June 30, 1998. The investigation was made to determine the existing condition of the structure. All information, data and analysis contained within this report is based on the 1994 Uniform Building Code.

The following is based on visual observations with no subsurface investigation being made

DESCRIPTION:

Type of Facility: Residence.  
Year Built: Estimated 1960's vintage.  
Occupancy: Residential.  
No. of Stories: One.  
Dimensions: Approximately 1600 square feet with a first story plate height of 8 feet.

CONSTRUCTION:

Roof  
The roof covering will consist of Monier Duralite Shake Tile over 1/2" solid sheathing.  
The living area is conventionally framed with 2x4 rafters spaced at 24" on center with

1/2

2x4 purlins supported at no more than 6'-0" on center by 2x4 struts bearing on walls below. The garage area is framed with 2x6 rafters spaced at 24" on center and 2x6 cross ties spaced at 4'-0" on center.

#### CONCLUSIONS:

##### Roof

The living area lacks sufficient structural capacity for the applied live and dead loads. The garage area has sufficient structural capacity for the applied live and dead loads.

#### RECOMMENDATIONS:

If any of the following recommendations do not correspond to actual field conditions, the engineer of record shall be notified for further investigation and evaluation before continuing work.

##### Living Area:

1. Where the minimum slope of the struts is less than 45 degrees from the horizontal add a 1/2" OSB gusset plate adjacent to each existing strut and rafter connection and attach it with 8d's at 6" on center at the edges. See details 1 and 2.
2. Provide additional 2x4 struts from the existing purlins to the bearing walls below. The maximum spacing between the new and existing struts shall not exceed 4'-0" on center. The unbraced length of the struts shall not exceed 8'-0" and the minimum slope of the struts shall not be less than 45 degrees from the horizontal. See detail 1

The inspection consisted of visual observation only, made solely to determine the structural capacity of the existing roof. Analysis does not determine any effects on the overall structure under lateral forces or effects on the foundation unless specifically noted in the calculations and in this document. No warranties, expressed or implied, are made or intended in conjunction with this report. The inspection was made only to the portions that were accessible. The specific items noted were those that were observable and there may be defects which are not observable, or are hidden by architectural and structural materials.

If you have any questions on the above, do not hesitate to call.

Sincerely,

Paul Zacher, P.E., S.E.  
file



**DESIGN LOADING:**

Roof Pitch	4	in 12
Pitch Adjustment Factor	1.05	

**LOCATION: ROOF**

<u>MATERIAL</u>	<u>WEIGHT</u>	
Monier Shake or Slate Duralite	7.40	psf
Roofing felt	0.30	psf
1x4 skip sht'g	1.09	psf
1/2" OSB/ plywood	1.50	psf
2x6 rafters @ 24" oc	<u>1.00</u>	psf
	Load	11.3 psf
Roof Pitch Adjustment	<u>0.61</u>	psf
Total Load	11.9	psf

**BEAM DESIGN FOR UNIFORM LOAD: 2x4**

Values for DF Larch #2)

Width, b	1.5 inches
Depth, d	3.5 inches
Length of beam	7.83 feet
Dead load roof	11.9 psf
Live load roof	16 psf
Contributory width of roof load	2 feet
Dead load floor	0 psf
Live load floor	0 psf
Contributory width of floor load	0 feet
Dead load wall	0 plf
Live load defl ratio	240
Total load defl ratio	180
Total dead load	23.8 plf
Total live load	32 plf

Base design values:

Shear, $F_v$	95 psi
Bending, $F_b$	875 psi
Comp. perp. to grain, $F_c$	625 psi
Mod of Elasticity, E	1700000 psi
Load duration factor, Cd	1.25
Size Factor, Cf	1.50
Repetitive factor, Cr	1.15

Dead load reaction	93 lbs
Live load reaction	125 lbs
Total load reaction	218 lbs

Allowable shear, $F_v'$	119 psi
Actual shear, fv	58 psi
Allowable bending, $F_b'$	1887 psi
Actual bending, fb	1676 psi
Allowable live load defl	0.39 inches
Actual live load defl	0.30 inches
Allowable total load defl	0.52 inches
Actual total load defl	0.52 inches

Bearing length req'd	0.23 inches
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Horizontal Shear OK

Bending OK

Live Load Deflection OK

Total Load Deflection OK

**BEAM DESIGN FOR UNIFORM LOAD: 2x6**

(Values for DF Larch #2)

Width, b	1.5 inches
Depth, d	5.5 inches
Length of beam	12 feet
Dead load roof	11.9 psf
Live load roof	16 psf
Contributory width of roof load	2 feet
Dead load floor	0 psf
Live load floor	0 psf
Contributory width of floor load	0 feet
Dead load wall	0 plf
Live load defl ratio	240
Total load defl ratio	180
Total dead load	23.8 plf
Total live load	32 plf

Base design values:

Shear, $F_v$	95 psi
Bending, $F_b$	875 psi
Comp. perp. to grain, $F_c$	625 psi
Mod of Elasticity, E	1600000 psi
Load duration factor, $C_d$	1.25
Size Factor, $C_f$	1.30
Repetitive factor, $C_r$	1.15

Dead load reaction	143 lbs
Live load reaction	192 lbs
Total load reaction	335 lbs

Allowable shear, $F_v'$	119 psi
Actual shear, $f_v$	56 psi
Allowable bending, $F_b'$	1635 psi
Actual bending, $f_b$	1594 psi
Allowable live load defl	0.60 inches
Actual live load defl	0.45 inches
Allowable total load defl	0.80 inches
Actual total load defl	0.78 inches

Bearing length req'd	0.36 inches
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Horizontal Shear OK

Bending OK

Live Load Deflection OK

Total Load Deflection OK

**BEAM DESIGN FOR UNIFORM LOAD:**

(Values for DF Larch #1)

Width, b	3.5 inches
Depth, d	5.5 inches
Length of beam	7 feet
Dead load roof	11.9 psf
Live load roof	16 psf
Contributory width of roof load	4 feet
Dead load floor	0 psf
Live load floor	0 psf
Contributory width of floor load	0 feet
Dead load wall	0 plf
Live load defl ratio	240
Total load defl ratio	180
Total dead load	47.6 plf
Total live load	64 plf

Base design values:

Shear, $F_v$	95 psi
Bending, $F_b$	875 psi
Comp perp to grain, $F_c$	625 psi
Mod of Elasticity, E	1600000 psi
Load duration factor, $C_d$	1.25
Size Factor, $C_f$	1.30

Dead load reaction	167 lbs
Live load reaction	224 lbs
Total load reaction	391 lbs

Allowable shear, $F_v'$	119 psi
Actual shear, $f_v$	26 psi
Allowable bending, $F_b'$	1422 psi
Actual bending, $f_b$	465 psi
Allowable live load defl	0.35 inches
Actual live load defl	0.04 inches
Allowable total load defl	0.47 inches
Actual total load defl	0.08 inches

Bearing length req'd	0.18 inches
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Horizontal Shear OK

Bending OK

Live Load Deflection OK

Total Load Deflection OK





Add 2x4 shim as req'd w/ 16d @ 8" oc to existing member

Existing rafter

Existing ceiling joist

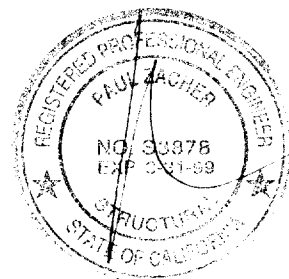
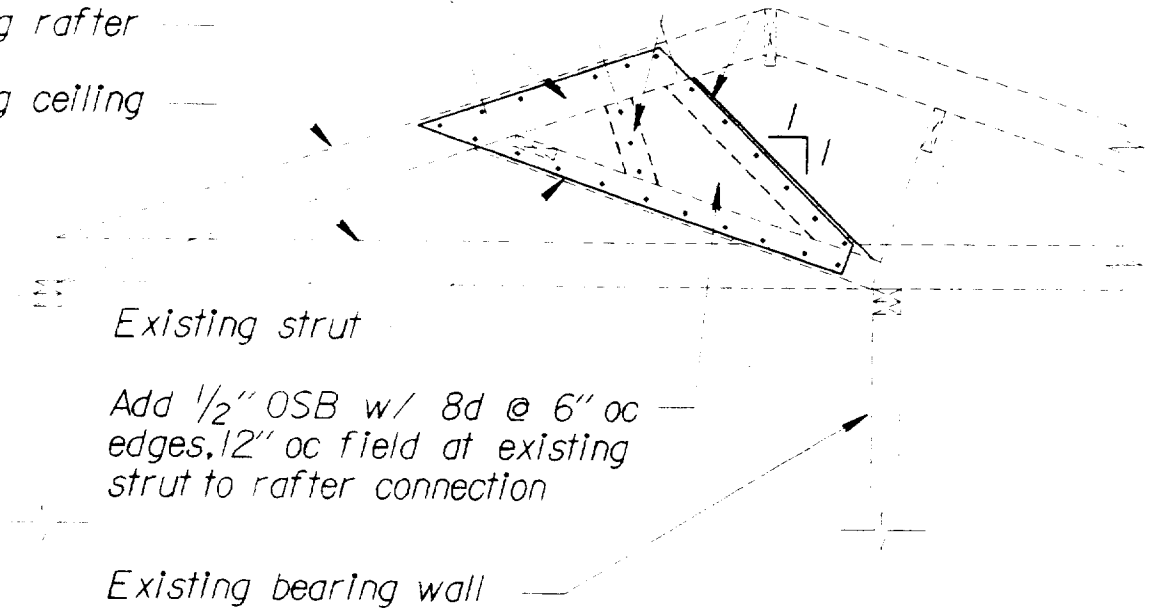
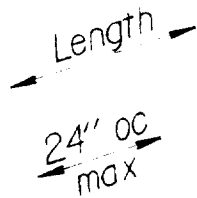
Existing strut

Add 1/2" OSB w/ 8d @ 6" oc edges, 12" oc field at existing strut to rafter connection

Existing bearing wall

If "Length" of panel is greater than 24", add intermediate struts at 24" oc max

— Add 2x4 to brace edge of OSB panel



2

GUSSET PLATE DETAIL

1/2" = 1'-0"