

CITY OF SACRAMENTO
1231 I Street, Sacramento, CA 95814

Permit No: 0106083
Insp Area: 2

Site Address: 7219 RUSH RIVER DR SAC
Parcel No: 031-0440-042

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

CONTRACTOR
ZIMMERMAN ROOFING, INC
3675 R STREET
SACRAMENTO, CA 95816

OWNER
WANG KA/SAU C
7219 RUSH RIVER DR
SACRAMENTO CA 95831

ARCHITECT

Nature of Work: 34 SQ T/O REROOF W MONIER 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 C39 License Number 557559 Date 5-14-01 Contractor Signature Alme Gonzalez

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 5-14-01 Applicant/Agent Signature Alme Gonzalez

WORKER'S COMPENSATION DECLARATION: I hereby affirm under penalty of perjury one of the following declarations:
I have and will maintain a certificate of consent to self-insure for workers' compensation as provided for by Section 3700 of the Labor Code, for the performance of work for which the permit is issued

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

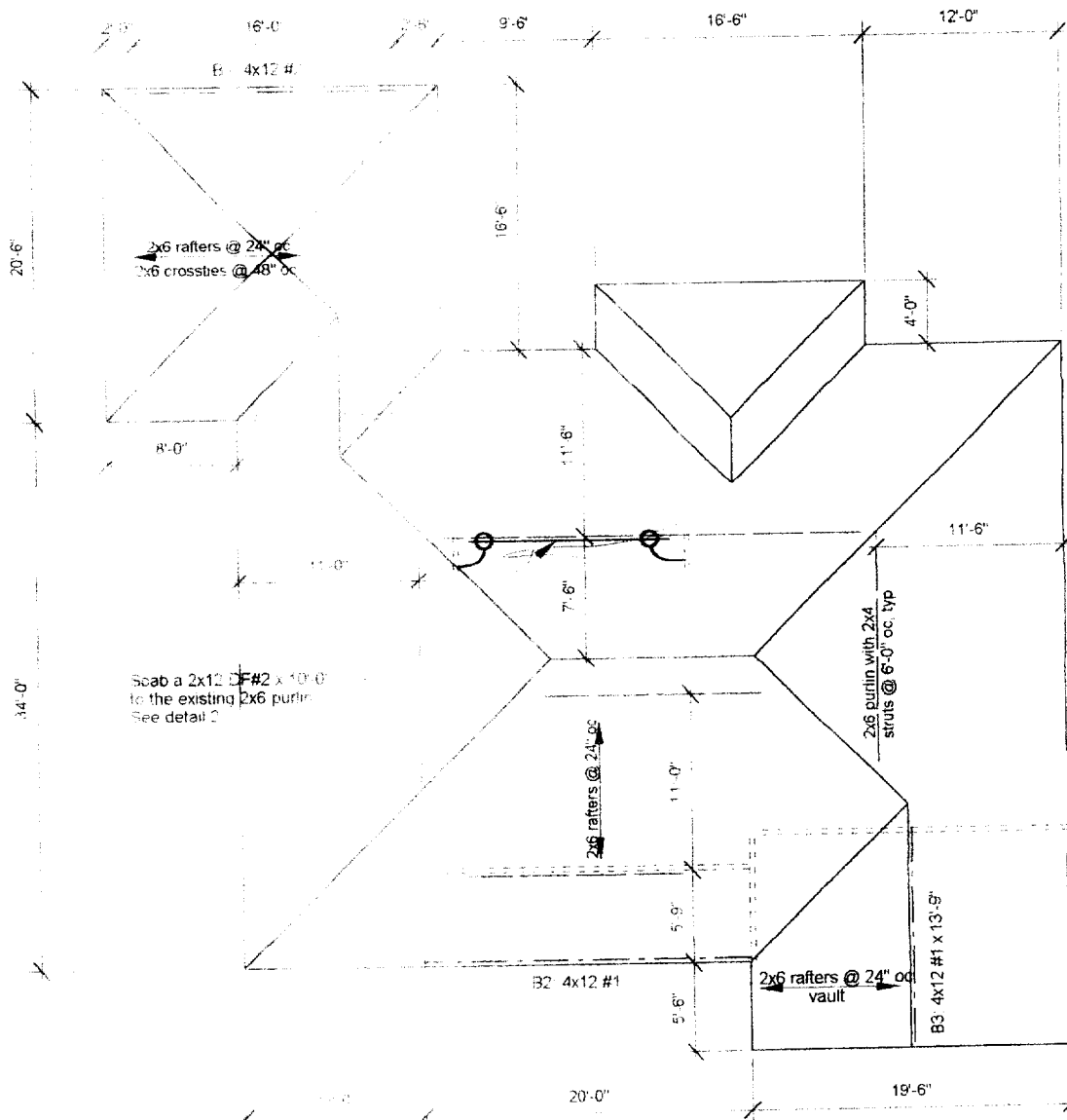
Carrier STATE FUND Policy Number 713-00-2021 Exp Date 10/01/2001

(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 5-14-01 Applicant Signature Alme Gonzalez

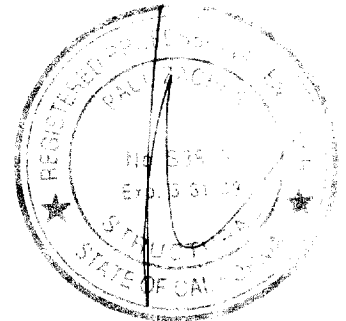
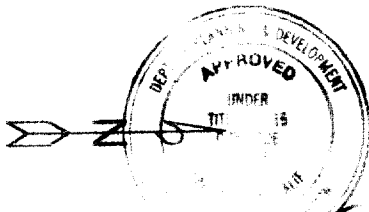
WARNING: FAILURE TO SECURE WORKER'S COMPENSATION COVERAGE IS UNLAWFUL AND SHALL SUBJECT AN EMPLOYER TO CRIMINAL PENALTIES AND CIVIL FINES UP TO ONE HUNDRED THOUSAND DOLLARS (\$100,000) IN ADDITION TO THE COST OF COMPENSATION, DAMAGES AS PROVIDED FOR IN SECTION 3706 OF THE LABOR CODE, INTEREST AND ATTORNEY'S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

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



This set of plans and specifications must be kept on the job at all times and it is unlawful to make any changes or alterations from the same without written permission from the Building Inspection Division.

The approval of this plan and specification SHALL NOT be held to permit or approve the violation of any City Ordinance or State Law.



Paul
5/11/01

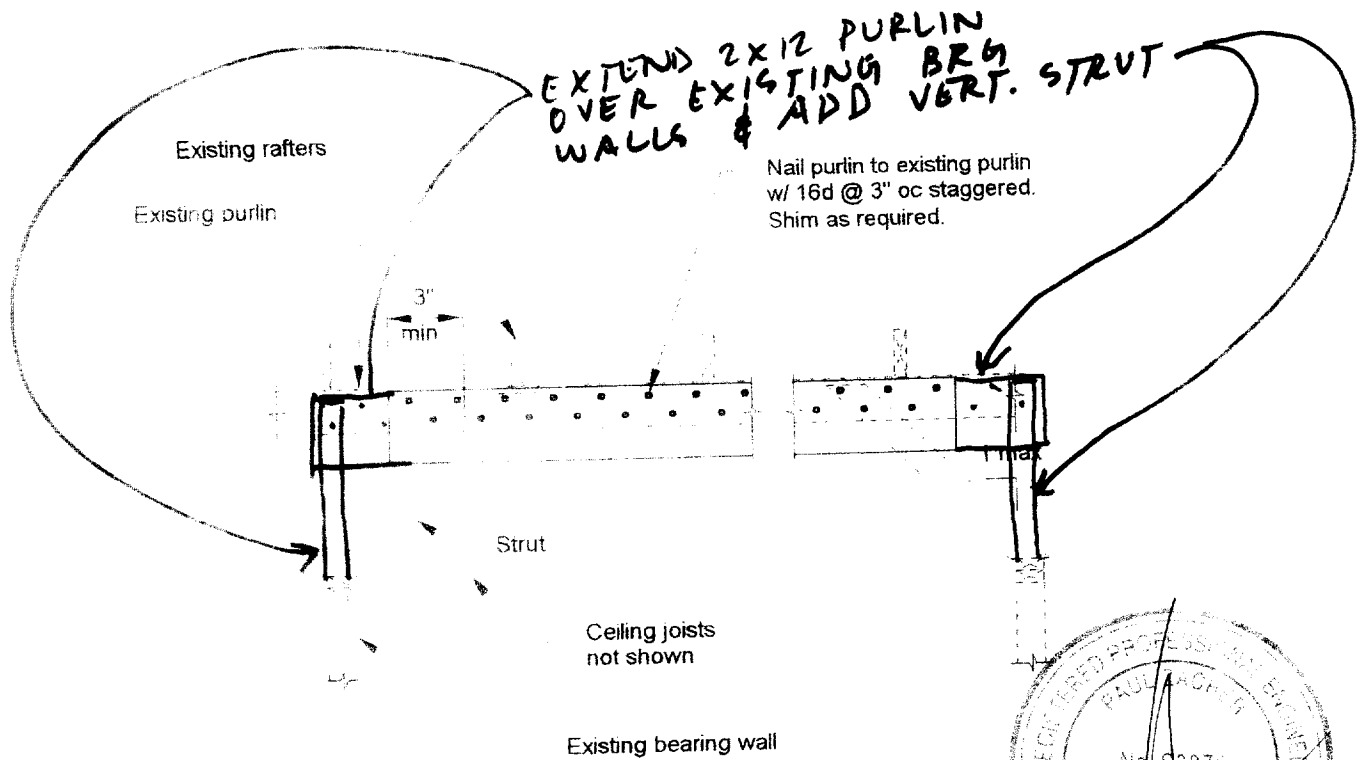
Notes

- 1 This is a reroof project. The new roofing material shall be a Light Weight Concrete Tile. The tile shall weigh less than or equal to 70 psf.
- 2 All rafters are 2x6 DF#2 and hips and valleys are 2x8 DF#2 unless otherwise noted.
- 3 All existing rafter, hips, valleys, rafter ties, and purlins are braced per UBC Section 2320.12 "Roof and Ceiling Framing" unless otherwise shown.
- 4 All structural wood members that were observed appear to be in sound condition and without structural defect.



ROOF PLAN - WANG

Not to Scale



2

PURLIN DETAIL

scale: 1/2" = 1'-0"

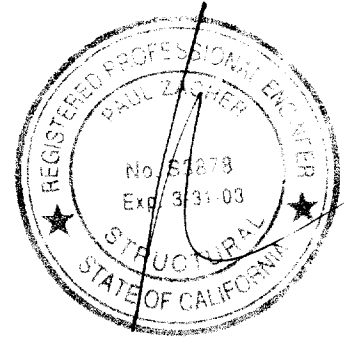
Wang

Paul Zacher - Structural Engineers
4701 Lakeside Way
Fair Oaks CA 95628

TEL: 916.961.3960
FAX: 916.961.6552

May 7, 2001

Zimmerman Roofing
3675 R Street
Sacramento, CA 95816
TEL: 916.454.3667
FAX: 916.455.3784



Attn: Mr. Jeff Tucker,

re: Job 2001_092 WANG

Subject: Structural Investigation Report of the Roof for the Residence located at 7219 Rush River Drive, Sacramento, CA 95831

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 May 7, 2001. The investigation was made to determine the existing condition of the structure. All information, data and analysis contained within this report are based on the 1997 Uniform Building Code.

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

DESCRIPTION:

Type of Facility	Residence
Year Built	Estimated 1980's vintage
Occupancy:	Residential
No. of Stories:	One
Dimensions:	Approximately 2500 square feet with a first story plate height of 8 feet.

CONSTRUCTION:

Roof:

The roof covering will consist of a Light Weight Concrete Tile over 1/2" solid sheathing. The living area is conventionally framed with 2x6 rafters spaced at 24" on center with 2x6 purlins supported at no more than 8'-0" on center by 2x4 struts bearing on walls below except for the vaulted ceiling areas. The vaulted ceiling is constructed of 2x6 rafters spaced at 24" on center supported at the ridge by a 4x beam. The garage area is framed with 2x6 rafters spaced at 24" on center and 2x6 cross ties spaced at 4'-0" on center.

Wang

Paul Zacher - Structural Engineers
4701 Lakeside Way
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CONCLUSIONS

Roof:

The living area lacks sufficient structural capacity for the applied live and dead loads. The garage has sufficient structural capacity for the applied live and dead loads. See "Recommendations" for location and repair.

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. Scab a 2x12 DF#2 x 10'-0" long purlin to the existing 2x6 purlin which spans 8'-0". Attach it with 16d's @ 3" on center. Support the 2x12 to the bearing walls below with 2x4 struts. See details 1 and 2.

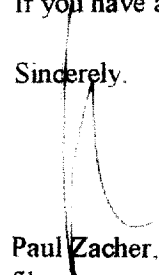
It shall be noted that small hairline cracking may occur at exterior stucco and interior gypboard finished walls that are load bearing or distributing roof strut loads. These cracks are a natural occurrence as the existing structure re-distributes the new roof weight. They are cosmetic in nature and are not an indication of a structural hazard or failure.

It shall be noted that some deflection of the rafters may be evident after installation of the tile. The existing roof framing has deflected but this may not be readily evident due to the uneven nature of the existing roofing material. Concrete tile is a very consistent and uniform product and when installed in an even plane, even small deflections can become apparent. This is only a cosmetic issue and not a structural concern.

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 that 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>	
Light Weight Tile	7.00	psf
Roofing felt	0.30	psf
1x4 skip sht'g	1.09	psf
1/2" OSB/ plywood	1.50	psf
2x6 rafters @ 24" oc	1.00	psf
Load	10.9	psf
Roof Pitch Adjustment	0.59	psf
Total Load	11.5	psf

LOCATION: VAULT

<u>MATERIAL</u>	<u>WEIGHT</u>	
Light Weight Tile	7.00	psf
Roofing felt	0.30	psf
1/2" OSB/ plywood	1.50	psf
1x4 skip sht'g	1.09	psf
2x6 rafters @ 24" oc	1.00	psf
Batt/blown insul	0.50	psf
1/2" Gypboard	2.50	psf
Load	13.9	psf
Roof Pitch Adjustment	0.75	psf
Total Load	14.6	psf

P K Zacher S E

4701 Lakeside Way

Fair Oaks, CA 95628

TEL: (916) 961-3960

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Job #

Date:

2002	2002	2002	2002
100	200	300	400
500	600	700	800
900	1000	1100	1200
1300	1400	1500	1600
1700	1800	1900	2000
2100	2200	2300	2400
2500	2600	2700	2800
2900	3000	3100	3200
3300	3400	3500	3600
3700	3800	3900	4000
4100	4200	4300	4400
4500	4600	4700	4800
4900	5000	5100	5200
5300	5400	5500	5600
5700	5800	5900	6000
6100	6200	6300	6400
6500	6600	6700	6800
6900	7000	7100	7200
7300	7400	7500	7600
7700	7800	7900	8000
8100	8200	8300	8400
8500	8600	8700	8800
8900	9000	9100	9200
9300	9400	9500	9600
9700	9800	9900	10000

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Title :
 Dsgnr:
 Description :
 Scope :

Job #
 Date: 11:06AM, 7 MAY 01

Rev: 610304
 User: RW 0602644, Ver: 5.1.3.02-11/1999, Win32
 (c) 1983-99 ENERCALC

Timber Beam & Joist

c:\enercalc\test.ecw\Calculations

Description RAFTERS AND BEAMS

Timber Member Information Calculations are designed to 1997 NDS and 1997 UBC Requirements

	rafter	vault	B1	B2	B3	B4
Timber Section	2x6	2x6	4x12	4x12	4x12	2x12
Beam Width	in: 1.500	1.500	3.500	3.500	3.500	1.500
Beam Depth	in: 5.500	5.500	11.250	11.250	11.250	11.250
Le. Unbraced Length	ft: 0.00	0.00	0.00	0.00	0.00	0.00
Timber Grade	Douglas Fir - Larch	Douglas Fir - Larch	Douglas Fir - Larch	Douglas Fir - Larch	Douglas Fir - Larch	Douglas Fir - Larch
Fb - Basic Allow	psi: 875.0	875.0	875.0	1,000.0	1,000.0	875.0
Fv - Basic Allow	psi: 95.0	95.0	95.0	95.0	95.0	95.0
Elastic Modulus	ksi: 1,600.0	1,600.0	1,600.0	1,700.0	1,700.0	1,600.0
Load Duration Factor	1.250	1.250	1.250	1.250	1.250	1.250
Member Type	Sawn	Sawn	Sawn	Sawn	Sawn	Sawn
Repetitive Status	Repetitive	Repetitive	No	No	No	No

Center Span Data

	ft	ft	ft	ft	ft	ft
Span	12.00	10.50	16.00	13.75	20.00	8.00
Dead Load	#/ft: 23.00	29.20	81.00	142.00	35.00	109.00
Live Load	#/ft: 32.00	32.00	112.00	156.00	48.00	152.00

Results Ratio = 0.9607 0.8185 0.8344 0.8325 0.4906 0.7240

	in-k	ft	psi	psi	psi	psi
Mmax @ Center	11.88	10.12	74.11	84.51	49.80	25.06
@ X =	6.00	5.25	8.00	6.87	10.00	4.00
f _b Actual	psi: 1,570.9	1,338.3	1,003.8	1,144.7	674.5	791.9
f _b Allowable	psi: 1,635.2	1,635.2	1,203.1	1,375.0	1,375.0	1,093.8
	Bending OK	Bending OK	Bending OK	Bending OK	Bending OK	Bending OK
f _v Actual	psi: 55.7	53.7	52.2	67.4	28.8	71.3
f _v Allowable	psi: 118.8	118.8	118.8	118.8	118.8	118.8
	Shear OK	Shear OK	Shear OK	Shear OK	Shear OK	Shear OK

Reactions

	Dl	Ll	Max. DL+Ll	Dl	Ll	Max. DL+Ll	Dl	Ll	Max. DL+Ll	Dl	Ll	Max. DL+Ll
@ Left End	lbs: 138.00	192.00	330.00	lbs: 138.00	192.00	330.00	lbs: 138.00	192.00	330.00	lbs: 138.00	192.00	330.00
@ Right End	lbs: 138.00	192.00	330.00	lbs: 153.30	168.00	321.30	lbs: 153.30	168.00	321.30	lbs: 153.30	168.00	321.30
	lbs: 648.00	896.00	1,544.00	lbs: 648.00	896.00	1,544.00	lbs: 648.00	896.00	1,544.00	lbs: 648.00	896.00	1,544.00
	lbs: 976.25	1,072.50	2,048.75	lbs: 976.25	1,072.50	2,048.75	lbs: 976.25	1,072.50	2,048.75	lbs: 976.25	1,072.50	2,048.75
	lbs: 350.00	480.00	830.00	lbs: 350.00	480.00	830.00	lbs: 350.00	480.00	830.00	lbs: 350.00	480.00	830.00
	lbs: 436.00	608.00	1,044.00	lbs: 436.00	608.00	1,044.00	lbs: 436.00	608.00	1,044.00	lbs: 436.00	608.00	1,044.00

Deflections Ratio OK Deflection OK Deflection OK Deflection OK Deflection OK Deflection OK

	in	in	in	in	in	in
Center DL Defl	-0.322	-0.240	-0.180	-0.162	-0.178	-0.035
L/Defl Ratio	446.5	525.0	1,068.1	1,020.0	1,344.8	2,721.5
Center LL Defl	-0.449	-0.263	-0.249	-0.178	-0.245	-0.049
L/Defl Ratio	320.9	479.1	772.5	928.5	980.6	1,951.6
Center Total Defl	-0.771	-0.503	-0.428	-0.339	-0.423	-0.084
Location	ft: 6.000	5.250	8.000	6.875	10.000	4.000
L/Defl Ratio	186.7	250.5	448.3	486.0	567.1	1,136.5