

CITY OF SACRAMENTO

1231 I Street, Sacramento, CA 95814

Permit No: 0510440

Insp Area: 2

Thos Bros: 336J4

Site Address: 816 LAKE FRONT DR SAC

Parcel No: 031-1240-030

Sub-Type: REP

Housing (Y/N): N

CONTRACTOR

WEATHERTITE ROOFING
4661 SUMMER CREEK CT
SHINGLE SPRINGS, CA 95682

OWNER

WONG CREIGHTON P/PEARLINE
816 LAKE FRONT DR
SACRAMENTO, CA 95831

ARCHITECT

Nature of Work: REROOF - TEAR OFF, RESHEET, INSTALL 35SQ OF LIGHT WEIGHT TILE (REFER TO ENGINEER'S STRUCTURAL REPORT)

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-37 License Number 420375 Date 7/15/05 Contractor Signature Carolyn Pea

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).

PAID
CITY OF SACRAMENTO

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

Date _____ Owner Signature JUL 15 2005

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 improvements 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 7/15/05 Applicant/Agent Signature Carolyn Pea

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.

OR 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 1271896-2004 Exp Date 10/01/2005

(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.

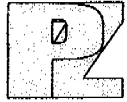
Date 7/15/05 Applicant Signature Carolyn Pea

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.

051 0440

Wong



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

TEL: 916.961.3960
FAX: 916.961.6552

July 14, 2005

Weather-Tite Roofing Company
P.O. Box 6068
Folsom, CA 95673
TEL: (916) 635-9810; M: (916) 849-1977
FAX: (916) 635-9810

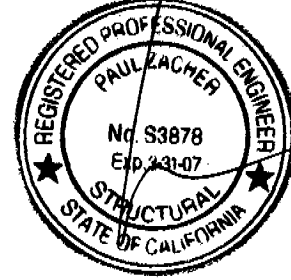
Attn.: Mr. Larry Peer,

re: Job 2005329: WONG

ISSUED

JUL 15 2005

Sacramento Building Division



Subject: Structural Investigation Report of the Roof for the Residence located at 816 Lakefront Drive, Sacramento, CA 95831.

As requested by Mr. Larry Peer, this is a report to determine what needs should be addressed to correct any structural deficiencies of the roof. Paul Zacher visited the site July 11, 2005. 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 with 2001 CBC Title 24 Amendments.

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: Two.
Dimensions: Approximately 3000 square feet.



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.

CONSTRUCTION:

Roof:
The roof covering will consist of a Light Weight Concrete Tile over 7/16" solid sheathing. The roof structure is conventionally framed with 2x8 rafters spaced at 24" on center with 2x4 purlins supported at no more than 6'-0" on center by 2x4 struts bearing on walls below. The garage area is framed with 2x8 rafters spaced at 24" on center and 2x8 cross ties spaced at 16" on center.

CONCLUSIONS:

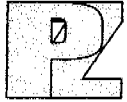
Roof:
The roof structure currently lacks sufficient structural capacity for the applied live and dead loads. See "Recommendations" for location and repair to bring the roof structure up to the required capacity.

CITY COPY

1/7

P
R
I
N
T
E
D
I
N
S
E
R
I
E
S
O
F
C
O
M
M
U
N
I
C
A
T
I
O
N
S

Wong



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

TEL: 916.961.3960
FAX: 916.961.6552

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.

Roof Structure:

1. Scab a 1 3/4" x 11 1/4" LVL to the existing header. Jack up the existing beam as required where the existing sag occurs to provide an even contour at the roof level before installation of the LVL. 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 6'-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.
3. Scab a 2x8 DF#2 purlin along the entire length the existing 2x4 purlin with 16d's @ 3" on center. No additional struts are required unless otherwise noted in item #2 above. See detail 1.
4. Add a 2x6 DF#2 x 9'-0" long purlin with 2x4 struts to the beam below. See detail 1.

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 6 in 12
Pitch Adjustment Factor 1.12

LOCATION: ROOF

<u>MATERIAL</u>	<u>WEIGHT</u>	
Light Weight Tile	7.30	psf
Roofing felt	0.30	psf
1x4 skip sht'g	1.09	psf
7/16" OSB/ plywood	1.30	psf
2x8 rafters @ 24" oc	<u>1.32</u>	psf
Load	11.3	psf
Roof Pitch Adjustment	<u>1.34</u>	psf
Total Load	12.7	psf

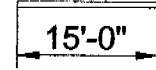
LOADING:

Rafter:

Dr = 12.7 psf x 2'-0" = 24.6 plf
Lr = 16.0 psf x 2'-0" = 32.0 plf

2x8 #2

25.4 / 32.0

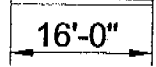


B1:

Dr = 12.7 psf x 10'-0" = 127 plf
Lr = 16.0 psf x 10'-0" = 160 plf

4x12 #2 + 1-3/4"x11-1/4" LVL

127 / 160

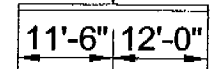


B2:

Pdr = 12.7 psf x 7' x 7' = 622 lbs
Plr = 16.0 psf x 7' x 7' = 784 plf

3-1/8" x 18" GLB

622 / 784



Paul Zacher Structural Engr's, Inc.
 4701 Lakeside Way
 Fair Oaks, CA 95628

Title :
 Dsgnr:
 Description :

Job #
 Date: 6:45PM, 14 JUL 05

Scope :

Rev: 580006
 User: KW-0602844, Ver 5.8.0, 1-Dec-2003
 (c)1983-2003 ENERCALC Engineering Software

Timber Beam & Joist

Wong.ecw:Calculations

Description RAFTERS AND BEAMS

Timber Member Information Code Ref: 1997/2001 NDS, 2000/2003 IBC, 2003 NFPA 5000. Base allowables are user defined

	rafter	B1	B2
Timber Section	2x8 4x12#2+1.75x11.875		3.125x18
Beam Width	in 1.500	6.186	3.125
Beam Depth	in 7.250	11.250	18.000
Le: Unbraced Length	ft 0.00	0.00	0.00
Timber Grade	Douglas Fir - Larch, No.2	Custom, DF#2 + LVL	Douglas Fir, 24F - V4
Fb - Basic Allow	psi 875.0	1,450.0	2,400.0
Fv - Basic Allow	psi 95.0	1,670.0	240.0
Elastic Modulus	ksi 1,600.0	1,666.7	1,800.0
Load Duration Factor	1.250	1.250	1.250
Member Type	Sawn	Manuf/Pine	GluLam
Repetitive Status	Repetitive	No	No

Center Span Data

	ft	15.00	16.00	23.50
Span	ft			
Dead Load	#/ft	25.40	127.00	
Live Load	#/ft	32.00	160.00	
Point #1 DL	lbs			622.00
LL	lbs			784.00
@ X	ft			11.500

Results Ratio = 0.9767 0.4660 0.1956

Mmax @ Center	in-k	19.37	110.21	98.80
@ X =	ft	7.50	8.00	11.47
fb : Actual	psi	1,474.2	844.6	585.5
Fb : Allowable	psi	1,509.4	1,812.5	2,993.0
		Bending OK	Bending OK	Bending OK
fv : Actual	psi	54.6	43.9	19.1
Fv : Allowable	psi	118.8	2,087.5	300.0
		Shear OK	Shear OK	Shear OK

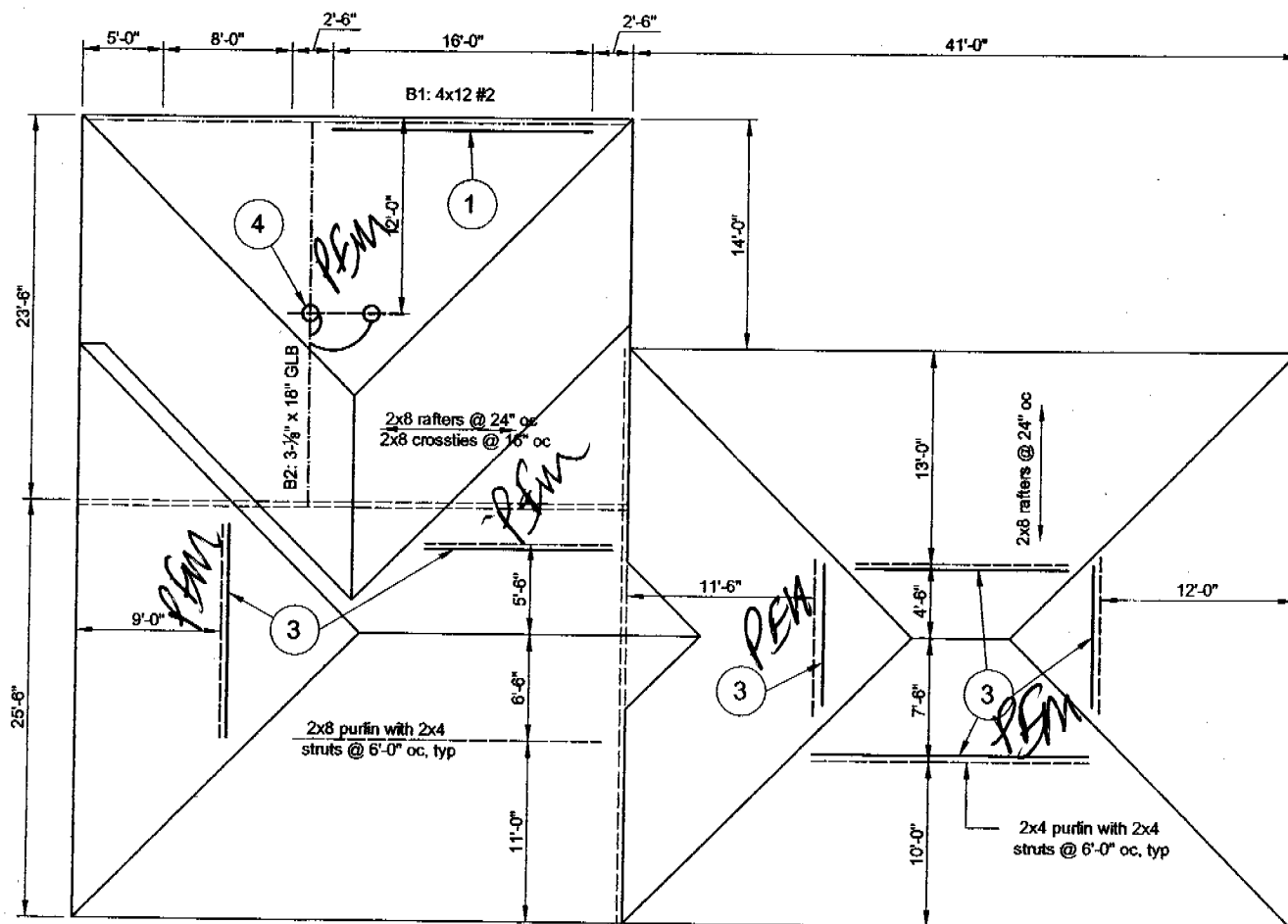
Reactions

@ Left End DL	lbs	190.50	1,016.00	317.62
LL	lbs	240.00	1,280.00	400.34
Max. DL+LL	lbs	430.50	2,296.00	717.96
@ Right End DL	lbs	190.50	1,016.00	304.38
LL	lbs	240.00	1,280.00	383.66
Max. DL+LL	lbs	430.50	2,296.00	688.04

Deflections Ratio OK Deflection OK Deflection OK

Center DL Defl	in	-0.380	-0.153	-0.106
L/Defl Ratio		474.2	1,254.2	2,654.5
Center LL Defl	in	-0.478	-0.193	-0.134
L/Defl Ratio		376.4	995.6	2,106.0
Center Total Defl	in	-0.858	-0.346	-0.240
Location	ft	7.500	8.000	11.656
L/Defl Ratio		209.8	555.0	1,174.3

5



FRAMING NOTES:

1. Scab a 1 3/4" x 11 1/4" LVL to the existing 4x12 beam. See detail 2.
2. Add a 2x4 strut to bearing below (total 1).
4. Scab a 2x8 DF#2 purlin along the entire length the existing 2x4 purlin with 16d's @ 3" on center. No additional struts are required unless otherwise noted in item #2 above.
4. Add a 2x6 DF#2 x 9'-0" long purlin with 2x4 struts to bearing below.

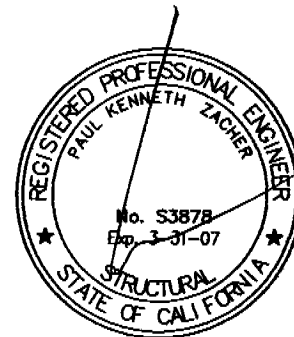
NOTES:

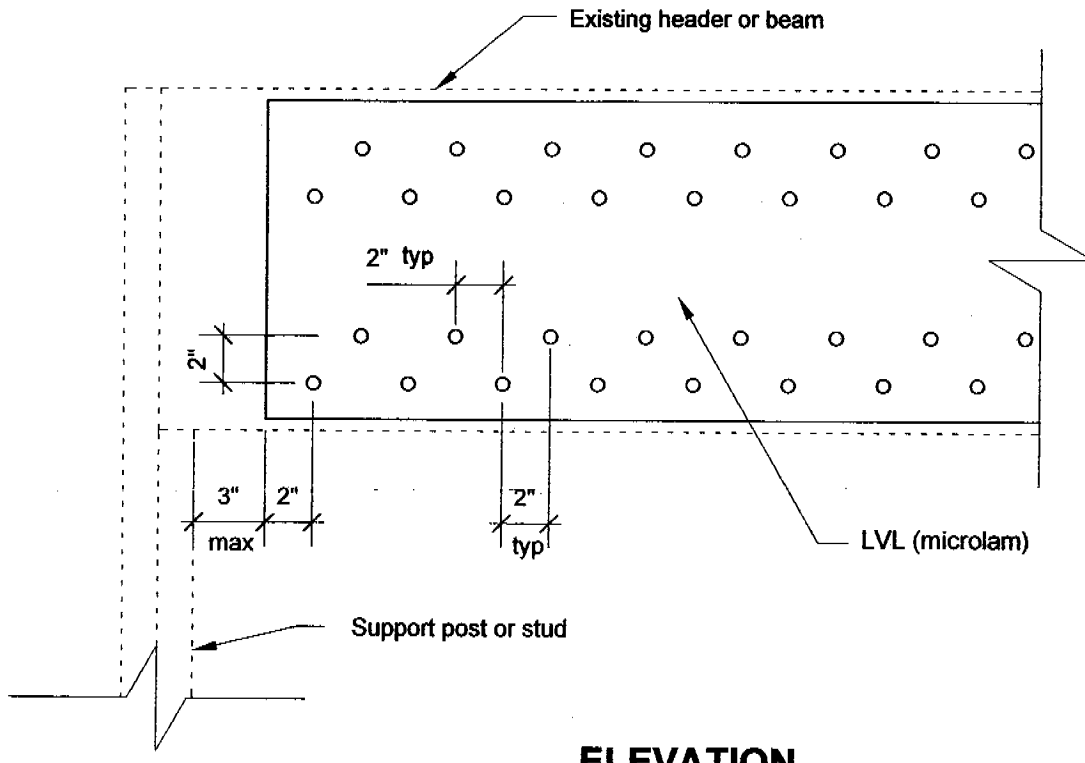
- A. This is a reroof project. The new roofing material shall be a Light Weight Concrete Tile. The tile shall weigh less than or equal to 7.3 psf.
- B. All framing members including rafters, purlins, joists and beams are existing unless otherwise noted in the framing notes above.
- C. All rafters are 2x6 DF#2 and hips and valleys are 2x8 DF#2 unless otherwise noted.
- D. All existing rafter, hips, valleys, rafter ties, and purlins are braced per UBC Section 2320.1 "Roof and Ceiling Framing" unless otherwise shown.
- E. All structural wood members that were observed appear to be in sound condition and without structural defect.

1 **ROOF PLAN - WONG**

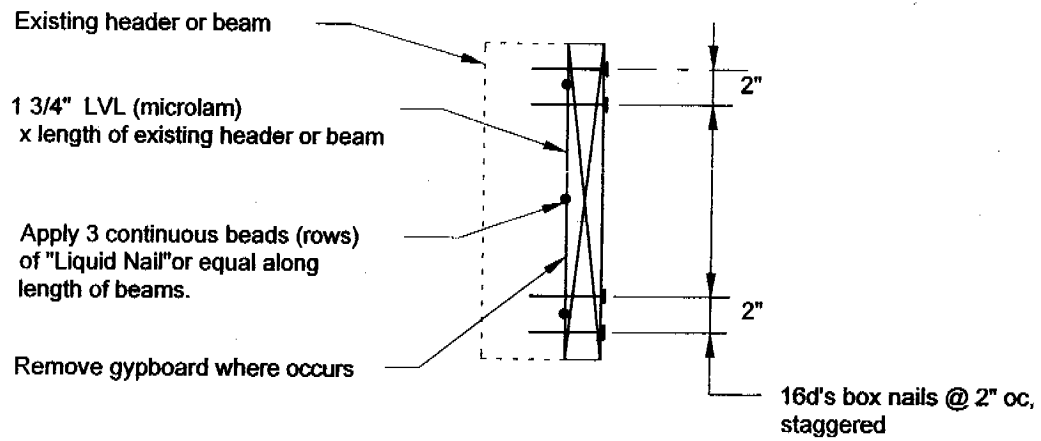
Not to Scale

G





ELEVATION



SECTION

2

DETAIL

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

