

CITY OF SACRAMENTO

1231 I Street, Sacramento, CA 95814

Permit No: 0112592

Insp Area: 4

Thos Bros: 277E5

Site Address: 2837 CAMARILLO DR SAC

Parcel No: 262-0314-021

Sub-Type: REP

Housing (Y/N): N

CONTRACTOR

MONARCH ROOFING
8250 ALPINE AV # H
SAC, CA. 95826

OWNER

AGUILERA DENNIS R & SUZANNE R
2837 CAMARILLO DR
SACRAMENTO CA 95833

ARCHITECT

Nature of Work: REMOVE EXIST ROOFING, INSTALL 24 SQ NEW LIGHTWEIGHT CONCRETE 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 684798 Date 10/02/01 Contractor Signature [Signature]

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 above mentioned property for inspection purposes.

Date 10/02/01 Applicant/Agent Signature [Signature]

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 comply with the Administrative Code, 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 OCT 02 2001 Policy Number 1633220 Exp Date 04/15/2002

____ (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 10/02/01 Applicant Signature [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 FEE.

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

Aguilera

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

TEL: 916.961.3960
FAX: 916.961.3960

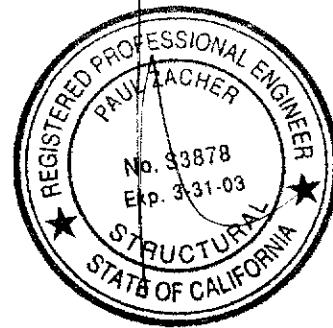
September 10, 2001

Monarch Roofing
8250 Alpine Avenue, Suite H
Sacramento, CA 95826
TEL: (916) 978-3182
FAX: (916) 452-5140

Attn.: Mr. Neal Weber,

re: Job 2001_269: AGUILERA

Subject: Structural Investigation Report of the Roof for the Residence located at 2837 Camarillo Drive, Sacramento, CA 95833.



As requested by Mr. Neal Weber, this is a report to determine what needs should be addressed to correct any structural deficiencies of the roof. Paul Zacher visited the site September 10, 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:

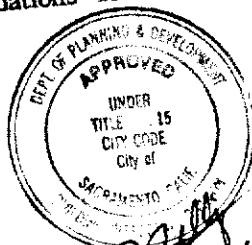
Type of Facility:	Residence.
Year Built:	Estimated 1970's vintage.
Occupancy:	Residential.
No. of Stories:	Two.
Dimensions:	Approximately 2000 square feet with a first story plate height of 8 feet.

CONSTRUCTION:

Roof:
The roof covering will consist of a Light Weight Concrete Tile over a batten system. The living area is framed with pre-engineered wood trusses spaced at 24" on center.

CONCLUSIONS:

Roof:
The living area currently lacks sufficient structural capacity for the applied live and dead loads. See "Recommendations" for location and repairs to bring the living area under the required capacity.



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.

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Aguilera



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

TEL: 916.961.3960
FAX: 916.961.3960

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 2x6 rafter to the existing 2x4 rafters with 16d's @ 12" on center where the span is greater than 7'-9". See detail 1.

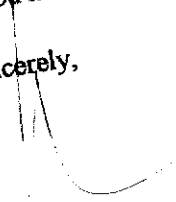
It shall be noted that small hairline cracking may occur at exterior stucco and interior gypboard finished walls that are load bearing or distributing roof strut loads. These cracks are a natural occurrence as the existing structure re-distributes the new roof weight. They are cosmetic in nature and 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 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
2x4 rafters @ 24" oc	0.64	psf
	Load	10.5 psf
Roof Pitch Adjustment	<u>0.57</u>	psf
Total Load	11.1	psf

LOCATION: TOP CHORD

<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
2x4 truss @ 24" oc	0.64	psf
	Load	10.5 psf
Roof Pitch Adjustment	<u>0.57</u>	psf
Total Load	11.1	psf

LOCATION: BOTTOM CHORD

<u>MATERIAL</u>	<u>WEIGHT</u>	
Batt/blown insul	0.50	psf
2x4 truss @ 24" oc	1.28	psf
1/2" Gypboard	2.50	psf
	Load	4.3 psf

P.K. Zacher, S.E.

4701 Lakeside Way
Fair Oaks, CA 95628
TEL: (916) 961-3960
FAX: (916) 961-6552

Job #: 01.209

Date: 9/10/01

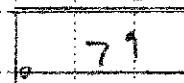
LOADING

PART 1

Op: 11.1 p.f.c. 20' 22.2 p.f.c. 2-4#2

Lp: 16.0' . . . = 32'

22.2/32

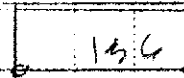


PART 2

Op: 11.1 p.f.c. 20' 22.2 p.f.c. 2-4#2 +

Lp: 16.0' . . . = 32' 2-6#2

22.2/32

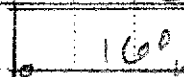


B1

Op: 11.1 p.f.c. 6' 67 p.f.c. 4-12#2

Lp: 16.0' . . . = 96'

67/96



Paul Zacher - Structural Engineers
 4701 Lakeside Way
 Fair Oaks
 TEL: (916) 961-3960
 FAX: (916) 961-6552

Title :
 Dsgnr:
 Description :

Job #
 Date: 11:57AM, 10 SEP 01

Scope :

Rev: 510304
 User: RW-0602844, Ver 5.1.3, 22-Jun-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

Timber Section		rafter 2x4	rafter 2x4 + 2x6	B1 4x12
Beam Width	in	1.500	2.120	3.500
Beam Depth	in	3.500	5.500	11.250
Le: Unbraced Length	ft	0.00	0.00	0.00
Timber Grade		Douglas Fir - Larch	Douglas Fir - Larch	Douglas Fir - Larch
Fb - Basic Allow	psi	875.0	875.0	875.0
Fv - Basic Allow	psi	95.0	95.0	95.0
Elastic Modulus	ksi	1,600.0	1,600.0	1,600.0
Load Duration Factor		1.250	1.250	1.250
Member Type		Sawn	Sawn	Sawn
Repetitive Status		Repetitive	Repetitive	No

Center Span Data

Span	ft	7.75	13.50	16.00
Dead Load	#/ft	22.20	22.20	67.00
Live Load	#/ft	32.00	32.00	96.00

Results Ratio = 0.8451 0.8478 0.7047

Mmax @ Center	in-k	4.88	14.82	62.59
@ X =	ft	3.87	6.75	8.00
Fb: Actual	psi	1,594.5	1,386.3	847.8
Fb: Allowable	psi	1,886.7	1,635.2	1,203.1
		Bending OK	Bending OK	Bending OK
Fv: Actual	psi	55.7	44.1	44.1
Fv: Allowable	psi	118.8	118.8	118.8
		Shear OK	Shear OK	Shear OK

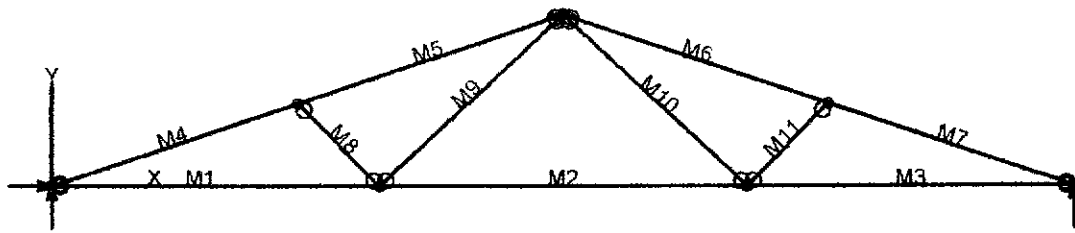
Reactions

@ Left End	DL	lbs	86.02	149.85	536.00
	LL	lbs	124.00	216.00	768.00
	Max. DL+LL	lbs	210.02	365.85	1,304.00
@ Right End	DL	lbs	86.02	149.85	536.00
	LL	lbs	124.00	216.00	768.00
	Max. DL+LL	lbs	210.02	365.85	1,304.00

Deflections

Ratio OK Deflection OK Deflection OK

Center DL Defl	in	-0.210	-0.353	-0.149
L/Defl Ratio		442.6	459.2	1,291.3
Center LL Defl	in	-0.303	-0.509	-0.213
L/Defl Ratio		307.0	318.6	901.2
Center Total Defl	in	-0.513	-0.861	-0.362
Location	ft	3.875	6.750	8.000
L/Defl Ratio		181.3	188.1	530.8



VisualAnalysis 3.50.c Report

09/10/01 11:53:29

Project: Truss 1

File: Untitled.Vap

Company: PK Associates Engineers

Engineer: Paul Zacher

Default Units: Feet, Pounds, Degrees, °Fahrenheit, Seconds.

Nodes

Node	X ft	Y ft	Fix	DX	Fix	DY	Fix	RZ
N1	0.00	0.00	Yes		Yes		No	
N2	8.00	0.00	No		No		"	
N3	17.00	0.00	"		"		"	
N4	25.00	0.00	"		Yes		"	
N5	6.00	2.00	"		No		"	
N6	19.00	2.00	"		"		"	
N7	12.50	4.17	"		"		"	

Member Elements

Member	Section	Material	Length ft
M1	SS2x4	Wood	8.00
M2	"	"	9.00
M3	"	"	8.00
M4	"	"	6.32
M5	"	"	6.85
M6	"	"	6.85
M7	"	"	6.32
M8	"	"	2.83
M9	"	"	6.14
M10	"	"	6.14
M11	"	"	2.83

Section Properties

Category	Section	Ax in ²	Iz in ⁴	Sy+ in ³	Sy- in ³
Wood Sha	SS2x4	5.25	5.36	3.06	3.06

Material Properties

Material	Strength psi	Elasticity psi	Poisson	Density lb/ft ³
Wood	-NA-	1700000.00	0.36	40.47

Load Combination Summary

Equation Case: Equation Case 1

Combination: +1D+1L+1Lr

Contributing Cases & Source

Service Case 1 (Dead loads)

Service Case 2 (Roof Live loads)

Member Uniform Loads

This item is empty. Check the selection state, or report properties.

Nodal Reactions

Node	Load Case	FX lbs	FY lbs	MZ lb-ft
N1	Equation Case 1	-0.00	821.70	-NA-
N4	"	-NA-	821.70	-NA-

Member Results

Member	Axial lbs	Vy lbs	Mz lb-ft	Dy in
M1	1988.50	-39.94	-44.31	-0.1930
"	1988.50	-17.00	31.4660	-0.1710
"	1988.50	5.9285	46.2343	-0.1132
"	1988.50	28.8619	0.0000	-0.0000
M2	1221.36	-38.70	-44.31	-0.1930
"	1221.36	-12.90	32.9015	-0.2383
"	1221.36	12.9000	32.9015	-0.2383
"	1221.36	38.7000	-44.31	-0.1930
M3	1988.50	-28.86	-0.0000	-0.0000
"	1988.50	-5.9285	46.2343	-0.1132
"	1988.50	17.0048	31.4660	-0.1710
"	1988.50	39.9381	-44.31	-0.1930
M4	-2137.17	123.34	0.0000	-0.0000
"	-2101.04	14.9390	145.19	-0.1434
"	-2064.91	-93.46	62.4171	-0.1804
"	-2028.77	-201.86	-248.31	-0.1803
M5	-1821.33	212.39	-248.31	-0.1803
"	-1782.12	94.9520	102.03	-0.2911
"	-1742.92	-22.48	184.80	-0.3224
"	-1703.71	-139.91	0.0000	-0.1928
M6	-1821.33	-212.39	-248.31	-0.1621
"	-1782.12	-94.95	102.03	-0.2729
"	-1742.92	22.4813	184.80	-0.3041
"	-1703.71	139.91	0.0000	-0.1746
M7	-2137.17	-123.34	0.0000	0.0182
"	-2101.04	-14.94	145.19	-0.1252
"	-2064.91	93.4610	62.4171	-0.1622
"	-2028.77	201.86	-248.31	-0.1621
M8	-464.08	0.0000	0.0000	-0.1213
"	-464.08	0.0000	0.0000	-0.1130
"	-464.08	0.0000	0.0000	-0.1048
"	-464.08	0.0000	0.0000	-0.0965
M9	598.49	0.0000	0.0000	-0.1616
"	598.49	0.0000	0.0000	-0.1598
"	598.49	0.0000	0.0000	-0.1579
"	598.49	0.0000	0.0000	-0.1561
M10	598.49	0.0000	0.0000	-0.1225
"	598.49	0.0000	0.0000	-0.1207
"	598.49	0.0000	0.0000	-0.1188
"	598.49	0.0000	0.0000	-0.1170
M11	-464.08	-0.0000	0.0000	-0.1620
"	-464.08	-0.0000	-0.0000	-0.1537
"	-464.08	-0.0000	-0.0000	-0.1455
"	-464.08	-0.0000	-0.0000	-0.1372

BENDING & COMP: TRUSS 1 - MEMBER 4

Design based on 1997 UBC 2321 Division V and ANSI/TPI 1-1995

Grading:

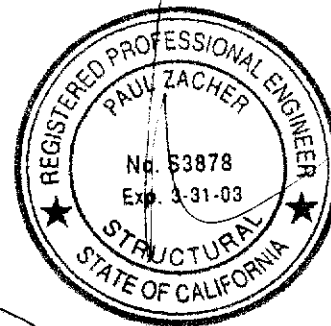
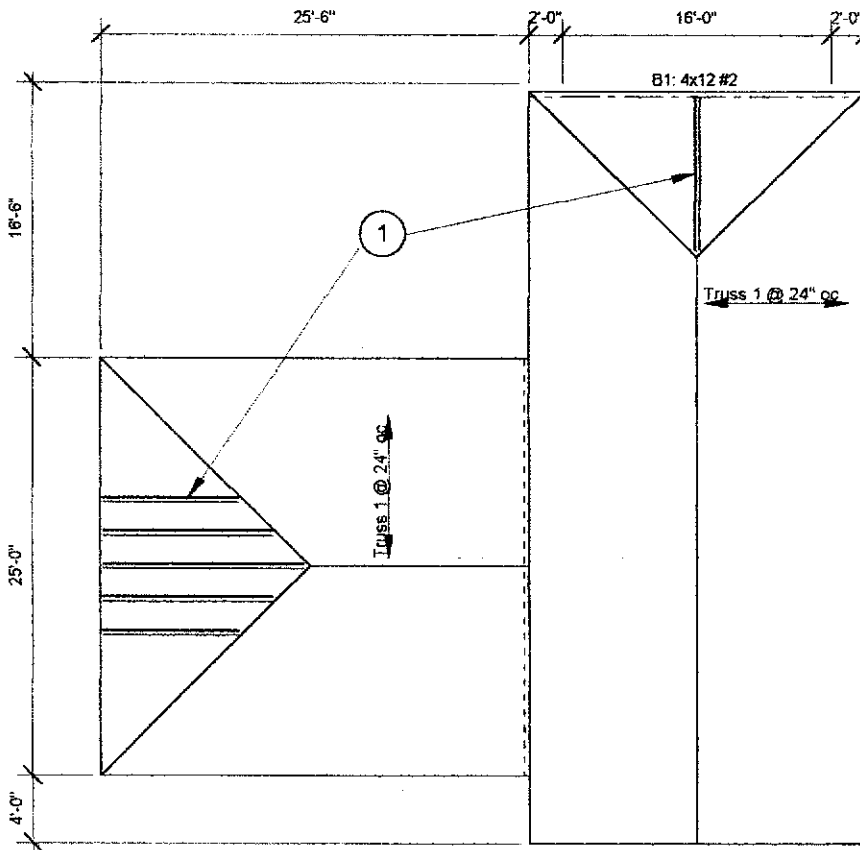
2x or 4x

Doug-fir larch: No. 2

Assumptions:

Solid sheathing on top chord of truss. Therefore,
continuous lateral support is provided along compression face
Maximum center-center spacing = 24"

Width, b	1.5 inches
Depth, d	3.5 inches
Length	6.32 feet
Max Axial Comp, C	2028 feet
Max Reaction, R	201 feet
Max Moment, M	248 feet
Max LL Deflection	0.09 feet
Max TL Deflection	0.18 feet
LL Defl Criteria = L/	240
TL Defl Criteria = L/	180
Duration factor, Cd	1.25
Repetitive Factor, Cr	1.15
Size Factor, Cf bending	1.5 1.5 for 2x4, 1.3 for 2x6
Size Factor, Cf comp	1.15 1.15 for 2x4, 1.1 for 2x6
Buckling Factor, CT =	1.17
fc =	386 psi
Fce =	1275 psi
Fc* =	2084 psi
F'c =	1057 psi
fb =	972 psi
F'b = Fb* =	2156 psi
Shear D/C ratio	0.48 < 1.0, Member OK
Interaction equation: (fc/F'c)^2 +	
fb / (F'b(1-fc/Fce)) =	0.78 < 1.0, Member OK
Live Load defl ratio	0.28 < 1.0, Member OK
Total Load defl ratio	0.43 < 1.0, Member OK



FRAMING NOTES:

1. Scab a 2x6 to existing 2x4 rafters where the span is greater than 7'-9" (total 6).

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 7.0 psf.
- B. All structural wood members that were observed appear to be in sound condition and without structural defect.



ROOF PLAN - AGUILERA

Not to Scale

10