

**CITY OF SACRAMENTO**

1231 I Street, Sacramento, CA 95814

Permit No: **0301650**

Insp Area: 2

Thos Bros: 336 J2

Site Address: **6 PRINCEVILLE CR SAC**

Parcel No: 031-0500-037

Sub-Type: RES

Housing (Y/N): N

**CONTRACTOR**

AGUIRRE ROOFING  
3515 BINGHAMPTON DR  
SAC CA

**OWNER**

LANDEROS OCTAVIO/ALICIA  
6 PRINCEVILLE CR  
SACRAMENTO CA 95831

**ARCHITECT**

**Nature of Work:** REROOF T/O RESHT 40 SQ SINGLE STORY INSTALL LT WT 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 237 License Number 765880 Date 2-5-03 Contractor Signature [Signature]

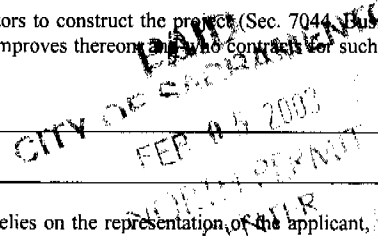
**OWNER-BUILDER DECLARATION:** I hereby affirm under penalty of perjury that I am exempt from the contractors License Law for the following reason (Sec. 7031.5, Business and Professions Code; any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior 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 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 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 2-5-03 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 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 1656828 Exp Date 10/01/2003

(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 2-5-03 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.**

Banderos

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

TEL: 916.961.3960  
FAX: 916.961.6552

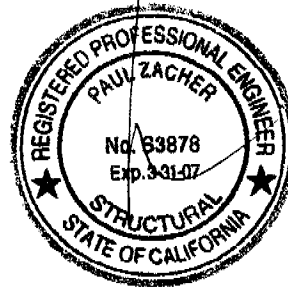
March 25, 2004

Banderos  
6 Princeville Court  
Sacramento, CA 95831  
TEL: (916) 424-5140  
FAX:

Attn.: Mr. Banderos,

re: Job 2004138: BANDEROS

Subject: Structural Investigation Report of the Roof for the Residence located at 6 Princeville Court,  
Sacramento, CA 95831.



As requested by Mr. Banderos, this is a report to determine what needs should be addressed to correct any structural deficiencies of the roof. Paul Zacher visited the site March 25, 2004. 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: One.  
Dimensions: Approximately 3000 square feet.

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 2x6, 2x8 and 2x10 rafters spaced at 24" on center. The garage area is framed with 2x6 rafters spaced at 24" on center and 2x10 cross ties spaced at 4'-0" on center.

CONCLUSIONS:

Roof:  
The roof structure has sufficient structural capacity for the applied live and dead loads.

RECEIVED  
MAR 25 2004  
BANDEROS  
6 PRINCEVILLE COURT  
SACRAMENTO, CA 95831  
TEL: (916) 424-5140  
FAX: (916) 424-5140

Banderos



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

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FAX: 916.961.6552

RECOMMENDATIONS:

None.

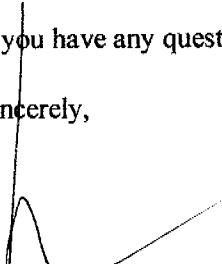
It shall be noted that small hairline cracking may occur at exterior stucco and interior gypboard finished walls that are load bearing or distributing roof strut loads. These cracks are a natural occurrence as the existing structure re-distributes the new roof weight. They are cosmetic in nature and 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
2x6 rafters @ 24" oc	<u>1.00</u>	psf
	Load	11.0 psf
Roof Pitch Adjustment	<u>1.30</u>	psf
Total Load	12.3	psf

Job #: 04\_138

Date: 03/25/2004

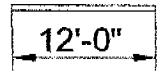
LOADING:

Rafter:

Dr = 12.3 psf x 2'-0" = 24.6 plf  
 Lr = 16.0 psf x 2'-0" = 32.0 plf

2x6 #2

24.6 / 32.0

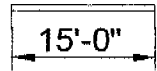


Rafter:

Dr = 12.3 psf x 2'-0" = 24.6 plf  
 Lr = 16.0 psf x 2'-0" = 32.0 plf

2x8 #2

24.6 / 32.0

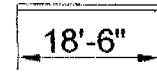


Rafter:

Dr = 12.3 psf x 2'-0" = 24.6 plf  
 Lr = 16.0 psf x 2'-0" = 32.0 plf

2x10 #2

24.6 / 32.0

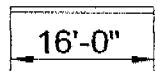


B1:

Dr = 12.3 psf x 7'-0" = 86 plf  
 Lr = 16.0 psf x 7'-0" = 112 plf

4x12 #2

86 / 112



Paul Zacher - Structural Engr's  
 4701 Lakeside Way  
 Fair Oaks, CA 95628  
 TEL: (916) 961-3960  
 FAX: (916) 961-6552

Title :  
 Dsgnr:  
 Description :

Job #  
 Date: 5:01PM, 25 MAR 04

Scope :

Rev: 560100  
 User: KW-0602844, Ver 5.6.1, 25-Oct-2002  
 (c)1983-2002 ENERCALC Engineering Software

**Timber Beam & Joist**

c:\documents and settings\paul zacher\desktop

Description RAFTERS AND BEAMS

**Timber Member Information**

Calculations are designed to 1997 NDS and 1997 UBC Requirements

Timber Section		rafter 2x6	rafter 2x8	rafter 2x10	B1 4x12
Beam Width	in	1.500	1.500	1.500	3.500
Beam Depth	in	5.500	7.250	9.250	11.250
Le: Unbraced Length	ft	0.00	0.00	0.00	0.00
Timber Grade		Douglas Fir - Larch	Douglas Fir - Larch	Douglas Fir - Larch	Douglas Fir - Larch
Fb - Basic Allow	psi	875.0	875.0	875.0	875.0
Fv - Basic Allow	psi	95.0	95.0	95.0	95.0
Elastic Modulus	ksi	1,600.0	1,600.0	1,600.0	1,600.0
Load Duration Factor		1.250	1.250	1.250	1.250
Member Type		Sawn	Sawn	Sawn	Sawn
Repetitive Status		Repetitive	Repetitive	Repetitive	No

**Center Span Data**

	ft	12.00	15.00	18.50	16.00
Span	ft	12.00	15.00	18.50	16.00
Dead Load	#/ft	24.60	24.60	24.60	86.00
Live Load	#/ft	32.00	32.00	32.00	112.00

**Results**

Ratio = 0.9887 0.9631 0.9818 0.8560

Mmax @ Center	in-k	12.23	19.10	29.06	76.03
@ X =	ft	6.00	7.50	9.25	8.00
fb : Actual	psi	1,616.6	1,453.7	1,358.4	1,029.9
Fb : Allowable	psi	1,635.2	1,509.4	1,383.6	1,203.1
		Bending OK	Bending OK	Bending OK	Bending OK
fv : Actual	psi	57.3	53.9	52.1	53.6
Fv : Allowable	psi	118.8	118.8	118.8	118.8
		Shear OK	Shear OK	Shear OK	Shear OK

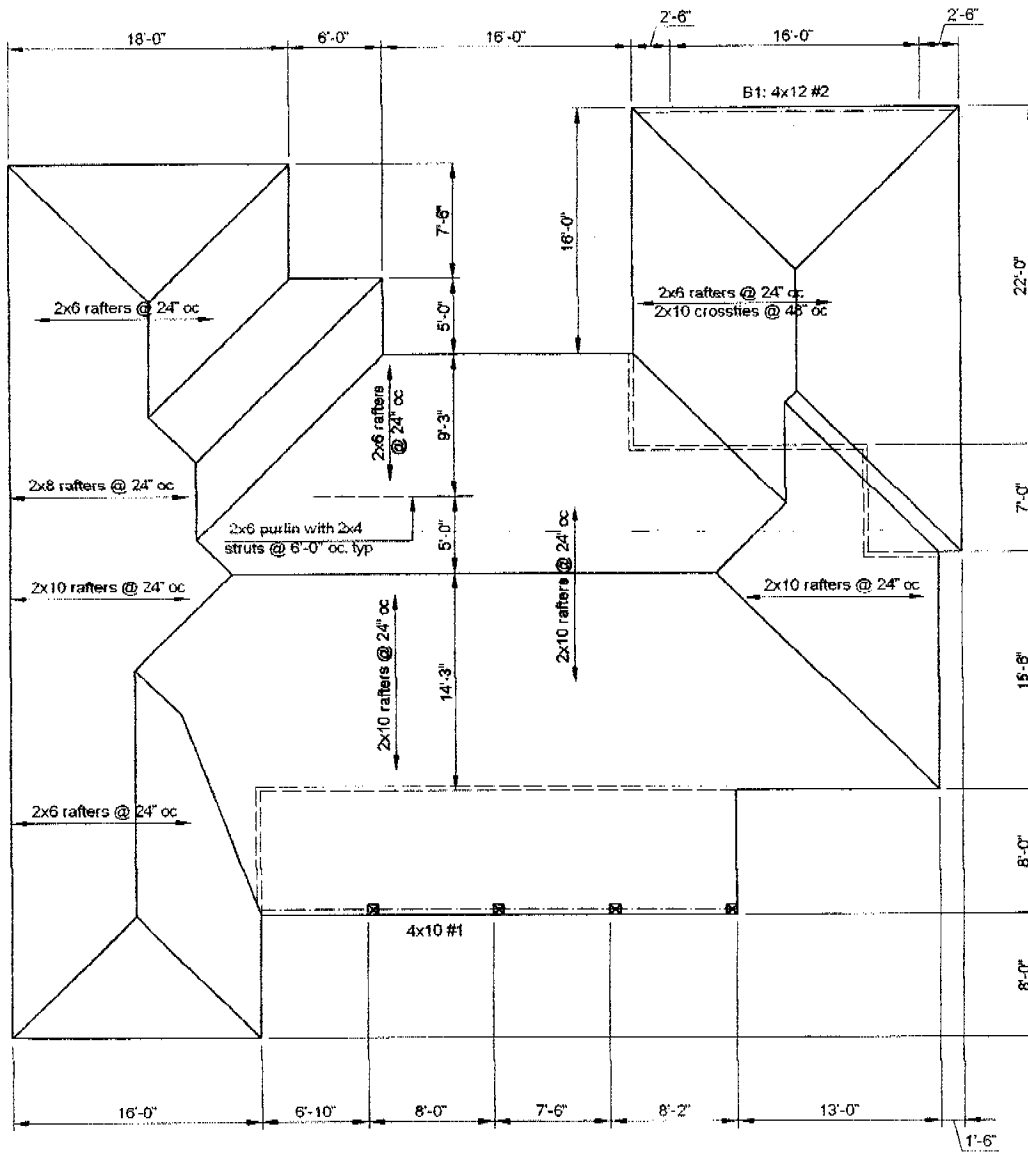
**Reactions**

@ Left End	DL	lbs	147.60	184.50	227.55	688.00
	LL	lbs	192.00	240.00	296.00	896.00
	Max. DL+LL	lbs	339.60	424.50	523.55	1,584.00
@ Right End	DL	lbs	147.60	184.50	227.55	688.00
	LL	lbs	192.00	240.00	296.00	896.00
	Max. DL+LL	lbs	339.60	424.50	523.55	1,584.00

**Deflections**

Ratio OK Deflection OK Deflection OK Deflection OK

Center DL Defl	in	-0.345	-0.368	-0.410	-0.191
L/Defl Ratio		417.5	489.6	542.0	1,006.0
Center LL Defl	in	-0.449	-0.478	-0.533	-0.249
L/Defl Ratio		320.9	376.4	416.7	772.5
Center Total Defl	in	-0.794	-0.846	-0.942	-0.439
Location	ft	6.000	7.500	9.250	8.000
L/Defl Ratio		181.5	212.8	235.6	437.0



**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 rafters are 2x6 DF#2 and hips and valleys are 2x8 DF#2 unless otherwise noted.
- C. All existing rafter, hips, valleys, rafter ties, and purlins are braced per UBC Section 2320.1 "Roof and Ceiling Framing" unless otherwise shown.
- D. All structural wood members that were observed appear to be in sound condition and without structural defect.

1

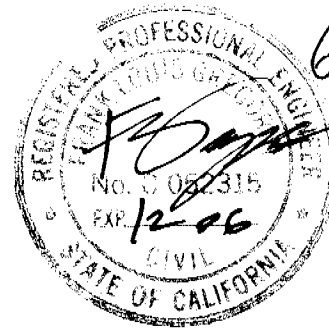
**ROOF PLAN - BANDEROS**

Not to Scale

Att Lorenzo

GREGORIN DESIGN  
9469 FORT WORTH WAY  
SACRAMENTO, CA 95827

PH/FAX: 916.362.3230  
PGR: 415.210.4080



665-1467

ISSUED  
City of Sacramento

FEB 17 2004

NORTH PERMIT  
CENTER

**Correction of RESIDENTIAL ROOF INSPECTION**

**#6 PRINCEVILLE CIRCLE  
SACRAMENTO, CA**

Revision Date: February 17, 2004

**Correction:** The roof system for this project was mistakenly cited as prefabricated roof trusses and was meant for another project. The following revised report reflects the actual roof condition for #6 Princeville Circle.

**For:** Aguirre Roofing  
3515 Binghampton Drive  
Sacramento, CA 95834

I, Frank L. Gregorin, P.E., has visually inspected readily accessible areas of the roof structure of the residence located at #6 Princeville Circle, Sacramento, California for Jose Aguirre, Owner of Aguirre Roofing, in compliance with Sacramento City Code, Section 9.03.146 (D) 3).

The structure is a single family one to two story house built in early 80's and it's roof structure is conventional framing comprised typically of 1x skip sheathing over 2x4 rafters at 24" o.c. with strut supports spanning no more than 10'. The eaves do not exceed 3'-0". The existing timber that I visually inspected showed no visible signs of distress or deterioration and is deemed to be in sound condition.

It is my professional opinion that the existing roof structure with it's rafters well distributed by strongbacks and struts to the interior partitons should adequately support the addition of "lightweight" tile (580#/square).

*The sole purpose of this report is to visually inspect the general conditions of the construction of the existing roof and to determine it's structural adequacy for supporting the roof loads of the newly proposed roofing work. The roofer will assume the responsibility to verify and repair any wood he witnesses during the course of his work showing any evidence of deterioration (dry rot, termite infestation). No testing and/or samples were taken during my inspection and thus no warranties or guarantees regarding the condition of the existing materials is expressed. I, Frank L. Gregorin, P.E. will not assume any liability associated with any claims related to damage resulting from deteriorated wood present in the existing house or damage related to the roofing work performed.*

CITY COPY



**GREGORIN DESIGN**  
9469 FORT WORTH WAY  
SACRAMENTO, CA 95827

PH/FAX: 916.362.3230  
PGR: 415.210.4080

The weight of the revised roof assembly will consist of:

(e) 2x4 @ 24" o.c.	0.70 psf
(e) 1x6 skip sheathing	0.30 psf
(n) 1/2 CDX Plywood sheathing	1.50 psf
(n) light-weight tile (580#/sq.)	5.80 psf
(n) roofing paper	0.28psf

$$\text{sum} = 8.58 \text{ psf} \times 12.65/12 \text{ (4:12 slope adjustment)} = \underline{9.05 \text{ psf}}$$

Check strength of typical 2x4 rafter at 24" o.c. for maximum span of 10' (assume DF No. 1 minimum).  
Using pre-1994 timber stress values which is present in this house. Reference: 1988 U.B.C.

Fb\* repetitive member use = 2050 psi, 2050x1.25LDF = 2562.5psi

$$\begin{aligned} V &= 10'/2 \times (9.05+16)\text{psf} \times 2' = 250\# & f_v &= 250 \times 1.5/5.25 = 72\text{psi} & < F_v &= 95\text{psi} \times 1.25 \\ M &= 2' (9.05+16)\text{psf} \times 10' \times 10' / 8 = 626'\# & f_b &= 626 \times 12/3.06 = 2455\text{psi} & < F_b^* &= 2562.5\text{psi} \end{aligned}$$

therefore strength O.K.

Check strength of overhang for maximum span of 3'-0" with 2x4 rafters at 24" o.c. maximum where may be occurring

(e) 2x4 min. @ 24" o.c.	0.70 psf
(e) 2x decking or (n) plywd. or 1x shthg	4.50 psf
(n) light-weight 580# per square tile	5.80 psf
(n) roofing paper	0.28 psf

$$\text{sum} = 11.00\text{psf} \times 12.65/12 \text{ (4:12 slope adjustment)} = 11.60 \text{ psf}$$

Distributed Load = (11.6 psf DL + 16 psf LL) (2' spacing) = 56 plf

$$\begin{aligned} V_{\text{max}} &= (1.5) (56 \text{ plf}) (3') = 252 \# \\ f_v &= (252 \#) / (5.25 \text{ sq. in.}) = \underline{48 \text{ psi}} < F_v = 95 \times 1.25\text{LDF} \\ M_{\text{max}} &= (56 \text{ plf}) (3') (3'/2) = 252 \# \\ f_b &= (252 \#) (12 \text{ in/ft}) / (3.0625 \text{ in}^3) = \underline{988 \text{ psi}} < F_b = 2050 \times 1.25\text{LDF} \end{aligned}$$

Therefore strength of existing 2x4 min. eave rafters @ 24" o.c. max. w/ 3'-0" max. span OK

Also compare weight of existing roof assembly with 3 layers of asphalt shingles allowable. (assume first two layers as worn and 2/3 their original weight.)

(e) 2x4 @ 24" o.c.	0.70 psf
(e) 1x6 skip sheathing	0.30 psf
Asphalt shingles x2.33	7.00 psf
3 layers of roofing paper	0.75psf

$$\text{sum} = 8.75 \text{ psf} \times 12.65/12 \text{ (4:12 slope adjustment)} = \underline{9.22 \text{ psf}} > 9.05 \text{ psf}$$

Therefore the roof weight allowable for conventional asphalt layering is as well compatible with one application of light weight tile.