

**CITY OF SACRAMENTO**

**Permit No: 9807202**

**1231 I Street, Sacramento, CA 95814**

**Insp Area: 3**

**Site Address: 2511 ATLAS AV SAC**

**Sub-Type: ASFR**

**Parcel No: 0190113016**

**Housing (Y/N): N**

**CONTRACTOR**

PETERSON ROOFING  
240 THORNDIKE WY  
SACRAMENTO, CA 95630

**OWNER**

NORTON DARLENE L  
2511 ATLAS AV  
SACRAMENTO CA 95820

**ARCHITECT**

**Nature of Work: 13SQS REROOF MONIER TILE & STRUCTURAL WORK**

**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 719415 Date 7/30/98 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 7/30/98 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 000446-98

\_\_\_\_\_, (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 7/30/98 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.**

*11/1/99  
BE*

Boroski

**Paul Zacher-Structural Engineers**

4701 Lakeside Way  
Fair Oaks, CA 95628

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

August 27, 1998

Peterson Roofing Company  
240 Thorndike Way  
Folsom, CA 95630  
TEL: 916.852.7800  
FAX: 916.852.0132

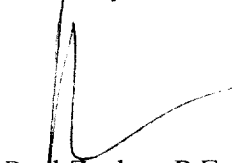
Attn.: Mr. Mike Peterson,

re: Job ~~98136~~ BOROSKI Residence located at 2511 Atlas Avenue, Sacramento, CA  
Subject: Addendum to the Structural Investigation Report of the Roof

The gusset plates only need to be applied to those struts, either existing or new, that have a minimum slope of less than 45 degrees from the horizontal. The total number of gusset plates to be installed should be approximately four (4).

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

Sincerely,



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



**Paul Zacher-Structural Engineers**

4701 Lakeside Way  
Fair Oaks, CA 95628

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

July 5, 1998

Peterson Roofing Company  
240 Thorndike Way  
Folsom, CA 95630  
TEL: 916.852.7800  
FAX: 916. 852.0132

Attn.: Mr. Mike Peterson,

re: Job 98136: BOROSKI

Subject: Structural Investigation Report of the Roof for the Residence located at 2511 Atlas Avenue, Sacramento, CA

As requested by Mr. Mike Peterson, 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 3, 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 1400 square feet with a first story plate height of 8 feet.

CONSTRUCTION:

Roof:  
The roof covering will consist of Monier Hacienda Light Weight Tile over 1/2" solid sheathing. The living area is conventionally framed with 2x4 rafters spaced at 24" on center with 2x4 purlins supported at no more than 10'-0" on center by 2x4 struts bearing on walls below.

CONCLUSIONS:

Roof:

1/9

B Nakashima

Roof:

The living area lacks 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:

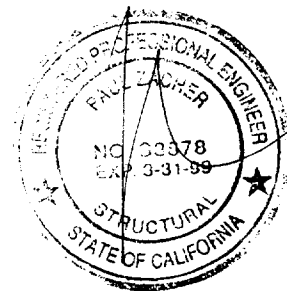
1. Scab a 2x10 DF#2 x 10'-0" long purlin to the existing 2x4 purlin which spans 10'-0". Attach it with 16d's @ 3" on center. Support the 2x10 to the bearing walls below with 2x4 struts. See details 1 and 2.
2. Scab a 2x8 DF#2 x 10'-0" long purlin to the existing 2x4 purlin which spans 8'-0". Attach it with 16d's @ 3" on center. Support the 2x8 to the bearing walls below with 2x4 struts. See details 1 and 2.
3. Add a 1/2" OSB gusset plate adjacent to each existing strut and rafter connection (4'-0" on center) and attach it with 8d's at 6" on center at the edges. See details 1 and 3.
4. 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.

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 Villa Duralite		5.80	psf
Roofing felt		0.30	psf
1x4 skip sht'g		1.09	psf
1/2" OSB/ plywood		1.50	psf
2x4 rafters @ 24" oc		<u>0.64</u>	psf
	Load	9.3	psf
	Roof Pitch Adjustment	<u>0.50</u>	psf
	Total Load	9.8	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	8 feet
Dead load roof	9.8 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	19.6 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, $C_d$	1.25
Size Factor, $C_f$	1.50
Repetitive factor, $C_r$	1.15

Dead load reaction	78 lbs
Live load reaction	128 lbs
Total load reaction	206 lbs

Allowable shear, $F_v'$	119 psi
Actual shear, $f_v$	55 psi
Allowable bending, $F_b'$	1887 psi
Actual bending, $f_b$	1618 psi
Allowable live load defl	0.40 inches
Actual live load defl	0.32 inches
Allowable total load defl	0.53 inches
Actual total load defl	0.52 inches

Bearing length req'd	0.22 inches
----------------------	-------------

Horizontal Shear OK

Bending OK

Live Load Deflection OK

Total Load Deflection OK

**BEAM DESIGN FOR UNIFORM LOAD: 2x8 purlin**

(Values for DF Larch #2)

Width, b	1.5 inches
Depth, d	7.25 inches
Length of beam	8 feet
Dead load roof	9.8 psf
Live load roof	16 psf
Contributory width of roof load	6.5 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	63.7 plf
Total live load	104 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, $C_d$	1.25
Size Factor, $C_f$	1.20
Repetitive factor, $C_r$	1.15

Dead load reaction	255 lbs
Live load reaction	416 lbs
Total load reaction	671 lbs

Allowable shear, $F_v'$	119 psi	Horizontal Shear	OK
Actual shear, $f_v$	79 psi		
Allowable bending, $F_b'$	1509 psi	Bending	OK
Actual bending, $f_b$	1225 psi		
Allowable live load defl	0.40 inches	Live Load Deflection	OK
Actual live load defl	0.12 inches		
Allowable total load defl	0.53 inches	Total Load Deflection	OK
Actual total load defl	0.19 inches		
Bearing length req'd	0.72 inches		

**BEAM DESIGN FOR UNIFORM LOAD: 2x10 purlin**

(Values for DF Larch #2)

Width, b	1.5 inches
Depth, d	9.25 inches
Length of beam	10 feet
Dead load roof	9.8 psf
Live load roof	16 psf
Contributory width of roof load	6.5 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	63.7 plf
Total live load	104 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, $C_d$	1.25
Size Factor, $C_f$	1.10
Repetitive factor, $C_r$	1.15

Dead load reaction	319 lbs
Live load reaction	520 lbs
Total load reaction	839 lbs

Allowable shear, $F_v'$	119 psi
Actual shear, $f_v$	77 psi
Allowable bending, $F_b'$	1384 psi
Actual bending, $f_b$	1176 psi
Allowable live load defl	0.50 inches
Actual live load defl	0.14 inches
Allowable total load defl	0.67 inches
Actual total load defl	0.22 inches

Bearing length req'd	0.89 inches
----------------------	-------------

Horizontal Shear OK

Bending OK

Live Load Deflection OK

Total Load Deflection OK



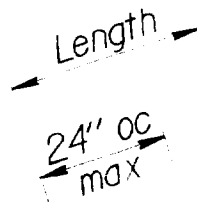
Add 2x4 shim as req'd w/ 16d @ 8" oc to existing member

Existing rafter

Existing ceiling joist

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

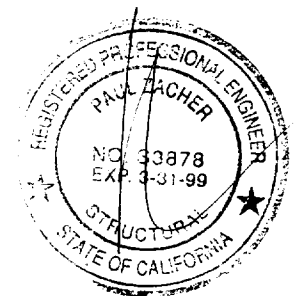
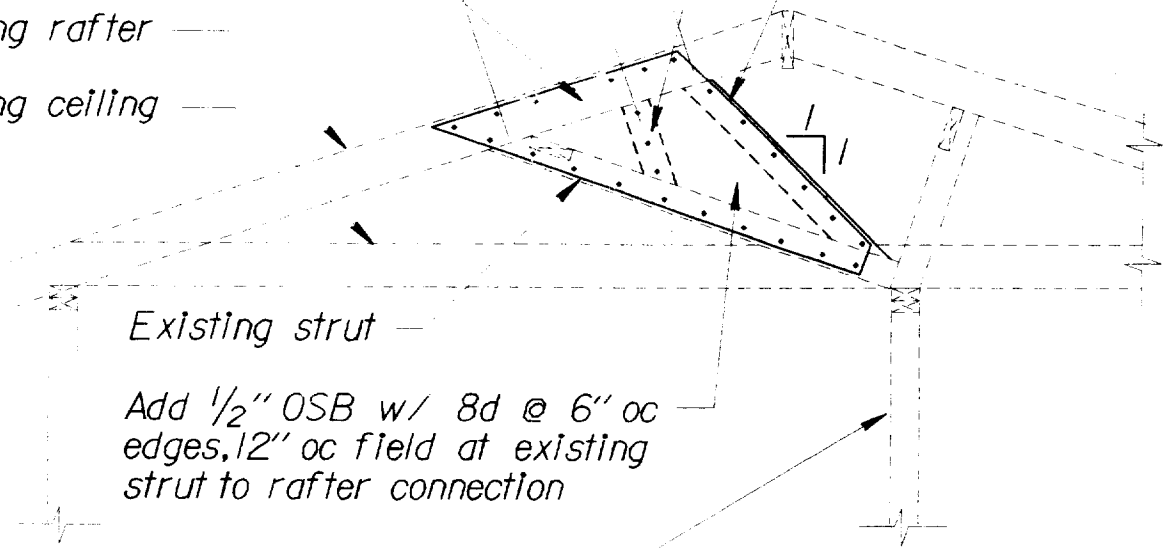
Add 2x4 to brace edge of OSB panel



Existing strut

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

Existing bearing wall

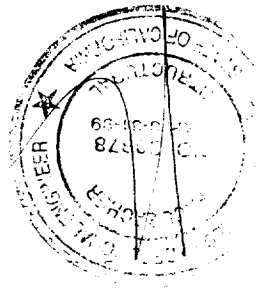
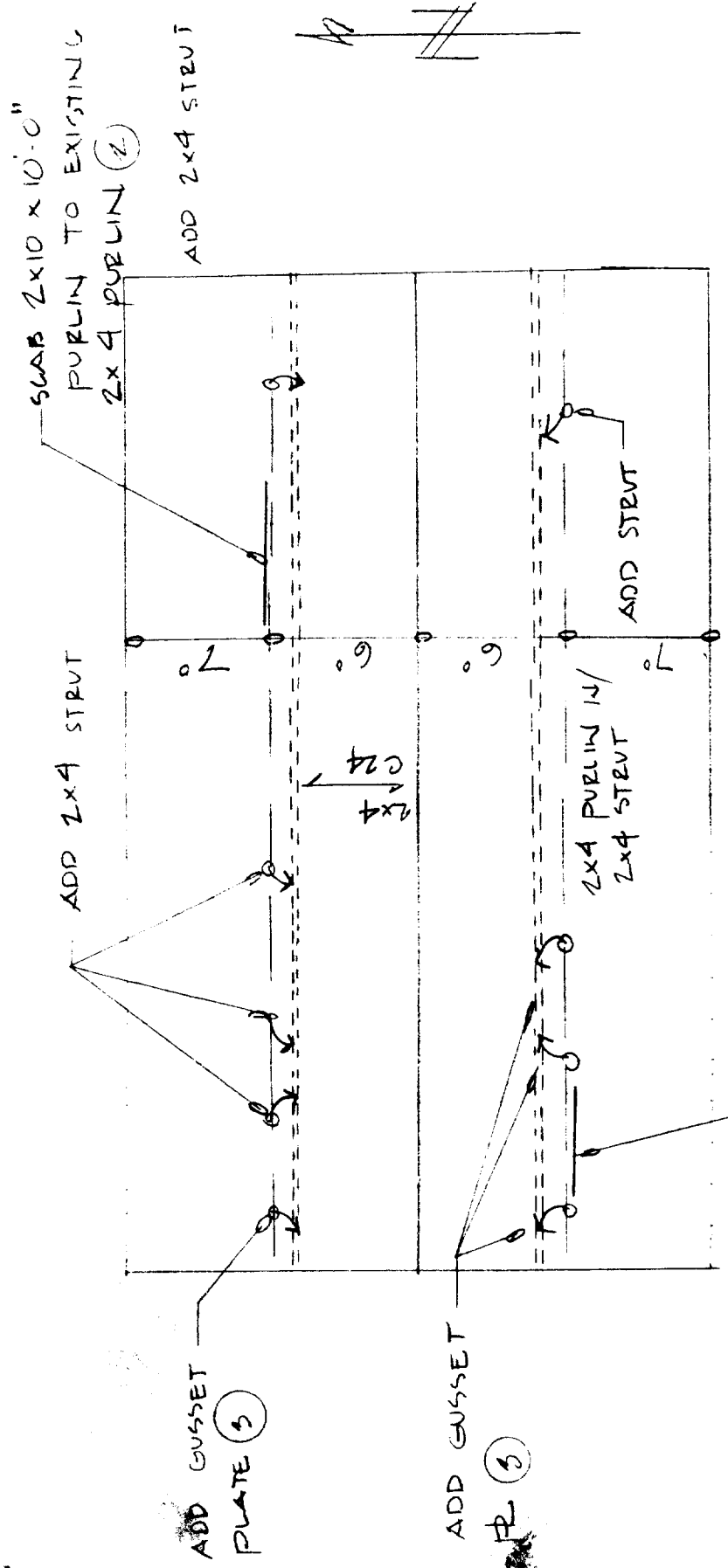


3

### GUSSET PLATE DETAIL

1/2" = 1'-0"

2

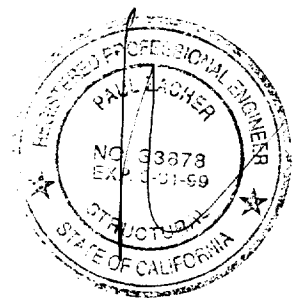
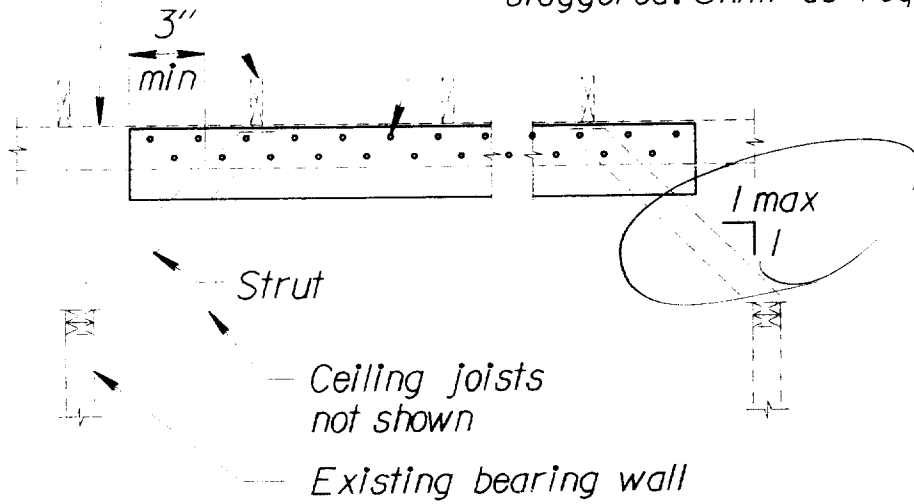


1 ROOF PLAN  
N.T.S.

Existing rafters

Existing purlin

Purlin. Nail to existing purlin w/ 16d @ 3" oc, staggered. Shim as required.



2

### PURLIN DETAIL