# CITY OF SACRAMENTO
## 1231 I Street, Sacramento, CA 95814

**Permit No:** 0008011

**Insp Area:** 2

**Site Address: 6310 NORTH POINT WY SAC**
Parcel No:     030-0790-007

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

| **CONTRACTOR** | **OWNER** | **ARCHITECT** |
|---|---|---|
| ZIMMERMAN ROOFING | GOSWAMI RAMESH R/SAROJ R | |
| 3675 R ST | 6310 NORTH POINT WY | |
| SACRAMENTO CA 95816 | SACRAMENTO CA 95831 | |

**Nature of Work:** REROOF T/O RESHEET PIONEER TILE 41 SQ

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**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 _____

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**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 _____ License Number _____ Date 1/17/00 Contractor 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 herby authorize representative(s) of this city to enter upon the abovementioned property for inspection purposes.

Date 1/17/00 Applicant/Agent Signature _____

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**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.

__X__ 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 COMP INS FUND          Policy Number 713-99-2021          Exp Date     10/01/2000

____ (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 1/17/00 Applicant 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.**

ISSUED

JUL 17 2003

CITY OF SACRAMENTO
DEVELOPMENT SERVICES DIV

ROOF PLAN FOR:
6310 NORTH POINT WAY
SACRAMENTO, CA

ALL RAFTERS 2×6 2' O.C.
RIDGES, VALLEYS & PURLINS 2×8

NOTE: 2' OVERHANG ALL AROUND
NOT SHOWN

2×6 Rafter 4' Max 11' Span
per engineering Npt.

work required

GARAGE

1¾" × 14" Microlam PURLINS

PURLIN

BLIND VALLEY

FAMILY ROOM VAULT

FULL DIM 6×12 VAULT RIDGE BEAM

MAIN RIDGE

4×12 FULL DIM DOUGLAS FIR VAULT SUPPORT BEAMS

PURLIN

VALLEY

MAIN ROOF BLIND FRAMED ONTO VAULT AREA ROOF & CEILING

Matt R - 7/14/0

38'

21'6"

±8'   ±8'   ±8'   ±8'

4×12

32'

PURLIN

# SCHOEN ENGINEERING

9524 BEDINGTON WAY
SACRAMENTO, CA 95827
(916) 369 6866
Lic. # C042913

July 10, 2000

Ramesh Goswami
6310 North Point Way
Sacramento, CA 95831

**SUBJECT:** Reroof at 6310 North Point Way, Sacramento, CA 95831

Dear Ramesh:

On July 7th 1998 I inspected the roof structure of your residence at the above mentioned address. I found the roof of the house to be made up of 2x6 Douglas fir No. 2 rafters @ 2' o.c. with a max span of 11' in the attic areas of the house and 9' in the vault area of the living room and family room. The garage had 2x6 rafters @ 2' o.c. spanning 19'. The garage door header was a 4x12 spanning 16'-3". In the vault area of family room there were full dimensioned 4x12 support beams with a max trib area of 8' spanning a max of 14'-6" and cantilevering out 6'-6" in the front overhang. In the vault area of the family room there was a full dimensioned 6x12 ridge beam spanning 18'6" supported at one end by a 6x12 carry beam spanning 18'-5".

The following modifications should be made prior to reroofing.

* The garage rafters are overspan. To remedy this install two 1-3/4"x14" Microlam purlins, one about 6'-4" back from the front wall of the garage and one about 12'-8". Support these off of the side walls of the garage(see attached detail).

It is my finding that with the above mentioned modifications this structure is adequate for the proposed reroof system which is comprised of: 1/2" plywood or O.S.B. sheathing installed over the existing skip sheathing; 30lb. tarred felt; 1x2 battens; lightweight concrete tile weighing 5.8 lbs./sq.ft..
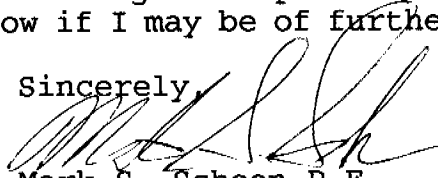
**NOTE:** It is possible when reroofing that the increased load to structural elements also supporting wall, ceiling and floor finishes could cause some minor cosmetic cracking of these finishes. This is not untypical of a wood framed house and does not necessarily constitute structural inadequacy of these members.

This report deals with the structural adequacy of roof supporting members that were readily observable. It does not address any

structure that was covered by wall finishes, buried in the ground or was otherwise not directly observable. These structures were assumed to be of standard construction as called for in the Uniform Building Code. Also, it does not address any existing deflection or warping of roof members. The repair of such deflections to improve architectural appearance, is at the option of the home owner and the roofing contractor.

I would like to thank you for allowing me to provide my services in this matter. Please let me know if I may be of further assistance.

Sincerely,

Mark S. Schoen P.E.

MSS:mss
C:\WP51\S-ENG98\RG001.002

NOTCH FOR RAFTER

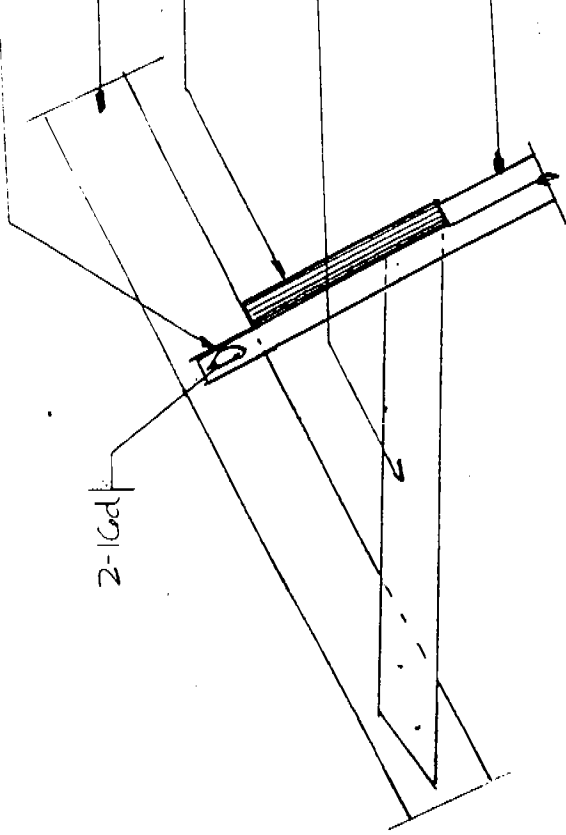2x6 RAFTER

1¾" x 14" MICROLAM PURLIN W/ 3-16d TO BRACE

2x4 BRACE 4' O.C. W/ 2-16d TO RAFTER & PURLIN

2-16d

DOUBLED 2x4 PURLIN BRACE @ LOAD BEARING WALLS NAIL EA. 2x4 TO L.B.W. W/ 4-8d TOENAILS

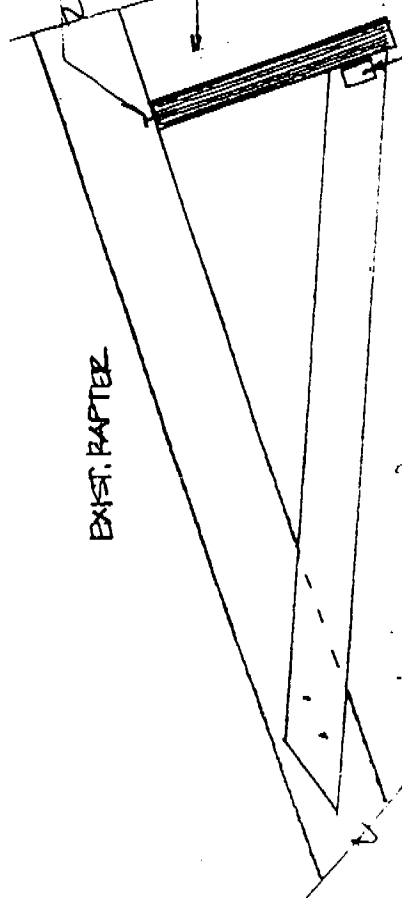DOUBLE PLATE OF LOAD BEARING WALL OR TOP OF BEAM

**MICROLAM PURLIN & BRACING**

8d TOE NAILS RAFTER TO MICROLAMS

MICROLAM

2x4 BRACE 4'O.C. W/2-16d TO RAFTER & A34 W/SCREWS TO MICROLAM

EXIST. RAFTER

**BRACING OF MICROLAM PURLIN IN THE FIELD**

Calculation for the required area, section modulus and moment of inertia for simple span wood beams. Dead load(dl) and Live load(ll) are in pounds per square ft., Spans(l) and Tributary load length or spacing(sp) are in ft., Areas are in sq.in., Section moduli are in inches cubed and Moments of inertia are in inches to the 4th power. Allowable stresses (Fy),(Fb),(Fv) are in lbs./sq.in. per 1991 U.B.C.

### FAMILY ROOM VAULT BEAM

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$rdl := 10$        $rll := 16$        $rta := \dfrac{19}{2}$        $l := 18$

$fdl := 9$        $fll := 40$        $fta := \dfrac{0}{2}$        $rta \cdot l = 171$

$wt := (rta \cdot (rdl + rll) + fta \cdot (fdl + fll))$        $Cd := 1.25$        $Cf := 1.$

$Fb := 1250$     $Cr := 1$     $Fbp := Fb \cdot Cd \cdot Cf \cdot Cr$     $Fbp = 1562.5$     $Ew := 1700000$     $Fv := 195 \cdot Cd$

A min. required =
$$\dfrac{l \cdot \dfrac{wt}{2}}{Fv} \cdot \left(\dfrac{3}{2}\right) = 13.68$$

S min. required =
$$wt \cdot l^2 \cdot \dfrac{1.5}{Fbp} = 76.827$$

I min. required =
$$5 \cdot wt \cdot \dfrac{(l \cdot 12)^4}{12 \cdot 384 \cdot Ew \cdot l \cdot \dfrac{12}{240}} = 381.31$$

Check Beam properties:

$w := 6$      $d := 12$

$CF := \left(\dfrac{12}{d}\right)^{\frac{1}{9}}$     $A := w \cdot d$     $S := w \cdot CF \cdot \dfrac{d^2}{6}$     $I := w \cdot \dfrac{d^3}{12}$     $Stiffw := I \cdot Ew$

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$A = 72$    $> 13.68$    $S = 144$    $> 77$    $I = 864$    $> 381$    therefore O.K.

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Actual stress:    $wt \cdot l^2 \cdot \dfrac{1.5}{S} = 833.625$    Actual deflections:    $5 \cdot wt \cdot \dfrac{(l \cdot 12)^4}{12 \cdot 384 \cdot Ew \cdot I} = 0.397$

Reactions:    $wt \cdot \dfrac{l}{2} = 2223$
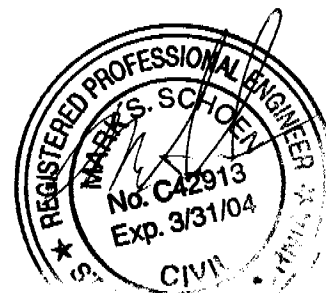
Calculation for the required section modulus and moment of inertia for simple span wood beams. Dead load(dl) and Live load(ll) are in pounds per square ft., Spans(l) and Tributary load length or spacing(sp) are in ft., Section moduli are in inches cubed and Moments of inertia are in inches to the 4th power. Allowable stress (Fy) is in lbs./sq.in. per Manufacturer's specifications Section modulus shape factor reduction and load modification are per U.B.C. 1997 edition .

## POINT LOADED CARRY BEAM FOR VAULT RIDGE BEAM:

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$$l := 18.25 \cdot 12 \qquad ta := 18 \cdot 19 \cdot .5 \qquad ta = 171$$

$pl := 2490$ (reaction from beam plus ceiling loads)  $\quad a := 8.5 \cdot 12 \qquad b := l - a$

$$Fy := 1250 \cdot 1.25 \qquad E := 1700000 \qquad Fv := 95 \cdot 1.25$$

End reactions: $\quad R1 := pl \cdot \dfrac{b}{l} \quad R1 = 1330.274 \quad R2 := pl \cdot \dfrac{a}{l} \qquad R2 = 1159.726$

A min. required= $\quad R1 \cdot \dfrac{3}{2} \cdot \dfrac{1}{Fv} = 16.8035 \qquad R2 \cdot \dfrac{3}{2} \cdot \dfrac{1}{Fv} = 14.6492$

S min. required = $\quad pl \cdot a \cdot \dfrac{b}{l \cdot Fy} = 86.8403$

I min. required = $\quad pl \cdot a \cdot b \cdot (a + 2 \cdot b) \cdot \dfrac{(3 \cdot a \cdot (a + 2 \cdot b))^{.5}}{27 \cdot E \cdot \dfrac{1}{240} \cdot l} = 349.0321$

Beam section properties: $\qquad w := 5.5 \qquad d := 11.25$

$$A := w \cdot d \qquad S := w \cdot \dfrac{d^2}{6} \qquad I := w \cdot \dfrac{d^3}{12}$$

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$-A = 61.875 \quad > \quad 17 \qquad S = 116.0156 \quad > 86 \qquad I = 652.5879 \quad > 349 \qquad$ therefore  O.K.
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Calculation for the required area, section modulus and moment of inertia for simple span wood beams. Dead load(dl) and Live load(ll) are in pounds per square ft., Spans(l) and Tributary load length or spacing(sp) are in ft., Areas are in sq.in., Section moduli are in inches cubed and Moments of inertia are in inches to the 4th power. Allowable stresses (Fy),(Fb),(Fv) are in lbs./sq.in. per 1997 U.B.C.

### FRONT ENTRY CANTILEVER BEAMS

$rdl := 10$         $rll := 16$            $rta := 8$              $l := 6.5$

$fdl := 9$          $fll := 40$      $fta := \dfrac{0}{2}$            $rta \cdot l = 52$

$wt := (rta \cdot (rdl + rll) + fta \cdot (fdl + fll)) + 10$        $Cd := 1.25$            $Cf := 1.$

$Fb := 1250$      $Cr := 1$       $Fbp := Fb \cdot Cd \cdot Cf \cdot Cr$      $Fbp = 1562.5$      $Ew := 1700000$      $Fv := 95 \cdot Cd$

A min. required =                                      $\dfrac{l \cdot \dfrac{wt}{2}}{Fv} \cdot \left(\dfrac{3}{2}\right) = 8.949$

S min. required =                                      $wt \cdot l^2 \cdot \dfrac{6}{Fbp} = 35.368$

I min. required =                                      $wt \cdot \dfrac{(l \cdot 12)^4}{12 \cdot 8 \cdot Ew \cdot l \cdot \dfrac{12}{120}} = 76.068$

Check Beam properties:

                                                  $w := 4$        $d := 12$

$CF := \left(\dfrac{12}{d}\right)^{\frac{1}{9}}$      $A := w \cdot d$      $S := w \cdot CF \cdot \dfrac{d^2}{6}$      $I := w \cdot \dfrac{d^3}{12}$      $Stiffw := I \cdot Ew$

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$A = 48$      $> 9$      $S = 96$      $> 35$      $I = 576$      $> 76$      therefore O.K.

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Calculation for the required section modulus and moment of inertia for simple span wood beams. Dead load(dl) and Live load(ll) are in pounds per square ft., Spans(l) and Tributary load length or spacing(sp) are in ft., Section moduli are in inches cubed and Moments of inertia are in inches to the 4th power. Allowable stress (Fy) is in lbs./sq.in. per Manufacturer's specifications  Section modulus shape factor reduction and load modification are per U.B.C. 1994 edition .

### MICROLAM PURLIN

$rdl := 10$     ---     $rll := 16$     $rta := 7$     $l := 20.875$

$fdl := 8$     $fll := 40$     $fta := \dfrac{0}{2}$     $rta \cdot l = 146.125$

$Wdl := 14 \cdot \dfrac{1.75}{144} \cdot 35$     $Wdl = 5.955$    $E := 1900000$     $Fb := 2600 \cdot 1.25$

$wt := rta \cdot (rdl + rll) + fta \cdot (fdl + fll) + Wdl$

S min. required =              $(wt) \cdot l^2 \cdot \dfrac{1.5}{Fb} = 37.802$

I min. required =              $5 \cdot (wt) \cdot \dfrac{(l \cdot 12)^4}{12 \cdot 384 \cdot E \cdot l \cdot \dfrac{12}{180}} = 303.706$

Use 1-3/4"x14" MicroLam beam:

$w := 1.75$      $d := 14$      $Cf := \left(\dfrac{12}{d}\right)^{\frac{1}{9}}$

$S := Cf \cdot w \cdot \dfrac{d^2}{6}$      $I := w \cdot \dfrac{d^3}{12}$

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$S = 56.196$    > 37.8      $I = 400.167$    > 304      therefore 1-3/4"x14" MLB is O.K.

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