CITY OF SACRAMENTO
1231 I Street, Sacramento, CA 95814

Permit No: 0109172
Insp Area: 2

Site Address: 559 RIVERGATE WY SAC
Parcel No: 031-0770-039

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

CONTRACTOR
NOR CAL ROOFING
8322 YVONNE WY
FAIR OAKS CA 95628

OWNER
HALL ALONZO D/LENA N
559 RIVERGATE WY
SACRAMENTO CA 95831

ARCHITECT

Nature of Work: REROOF T/O RESHT 31 SQ HOUSE & GARAGE. INSTALL LIGHT 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'sAddress_____

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 C39 License Number 684832 Date 7-19-01 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 isexempt 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 7-19-01 Applicant/Agent 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 Policy Number Exp Date

____ (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 7-19-01 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.

#9633

ISSUED

SCHOEN ENGINEERING

9524 BEDINGTON WAY
SACRAMENTO, CA 95827
Licensed by the California State
Board for Engineers and Land Surveyors
(916) 369 6866
LIC.# C042913

REGISTERED PROFESSIONAL ENGINEER
MARK S. SCHOEN
No. C42913
Exp. 3/31/04
CIVIL
STATE OF CALIFORNIA

July 10, 2001

Al Hall
559 Rivergate Way
Sacramento, CA 95831

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.

SUBJECT: Reroof at 559 Rivergate Way, Sacramento, CA 95831

Al:

On June 28th 2001 I inspected the roof structure of your residence at the above mentioned address. The roof was made up of 2x6 D.F. No. 2 rafters @ 2' o.c. with a max. span of 10'-4" in the garage and 11' in the house. There was a 4x16 front porch beam spanning 19'. There was a 4x14 garage door header spanning 16'-3".

The following modifications will be necessary prior to reroofing:

* Along the main ridge of the house the existing ridge braces should be doubled. Also, along the main ridge the rafters should be tied across the top of the ridge with Simpson MSTA18 steel strap ties and nailed to each rafter with 5-10d common nails(see sketch for details).

* In the back slope of the main wing of the house there was a purlin brace at the end of the 2x8 purlin that was removed. This purlin brace should be reinstalled(see plan for location and sketch for details).

* In the East hip of the main wing in back of the garage fire wall there is a rafter that is cracked. This rafter should be replaced or have a second 2x6 rafter laminated along side it with 16d nails @ 16" o.c.(see plan for location).

* In the West slope of the house install an additional purlin brace to reduce the purlin span to no more than 6'(see plan for location and sketch for details).

7/19/01

* In the garage the intersection of the hip and valley at the end of the garage ridge is not properly supported. In this area install a doubled 1-3/4"x14' Microlam beam between the side walls of the garage. The valley rater, hip rafter and ridge board can be supported off of this beam(see plan for location and sketch for details).

It is my finding that with the above mentioned modifications that this structure is adequate for the following : ½" plywood or OSB installed over the existing skip sheathing; 30lb. tarred felt; 1x2 batts; Concrete tile weighing 7.3 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 typical of wood framed structures and does not of itself indicate 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 observable. Any such structures were assumed to conform to standard construction specifications in the Uniform Building Code. Also, it does not address any existing deflection or warping of roof surfaces, nor is it guaranteed that any structural modifications that may be listed in this report will remove such deflections or warping. The repair of such deflections or warping to improve architectural appearance is at the option of the building 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.

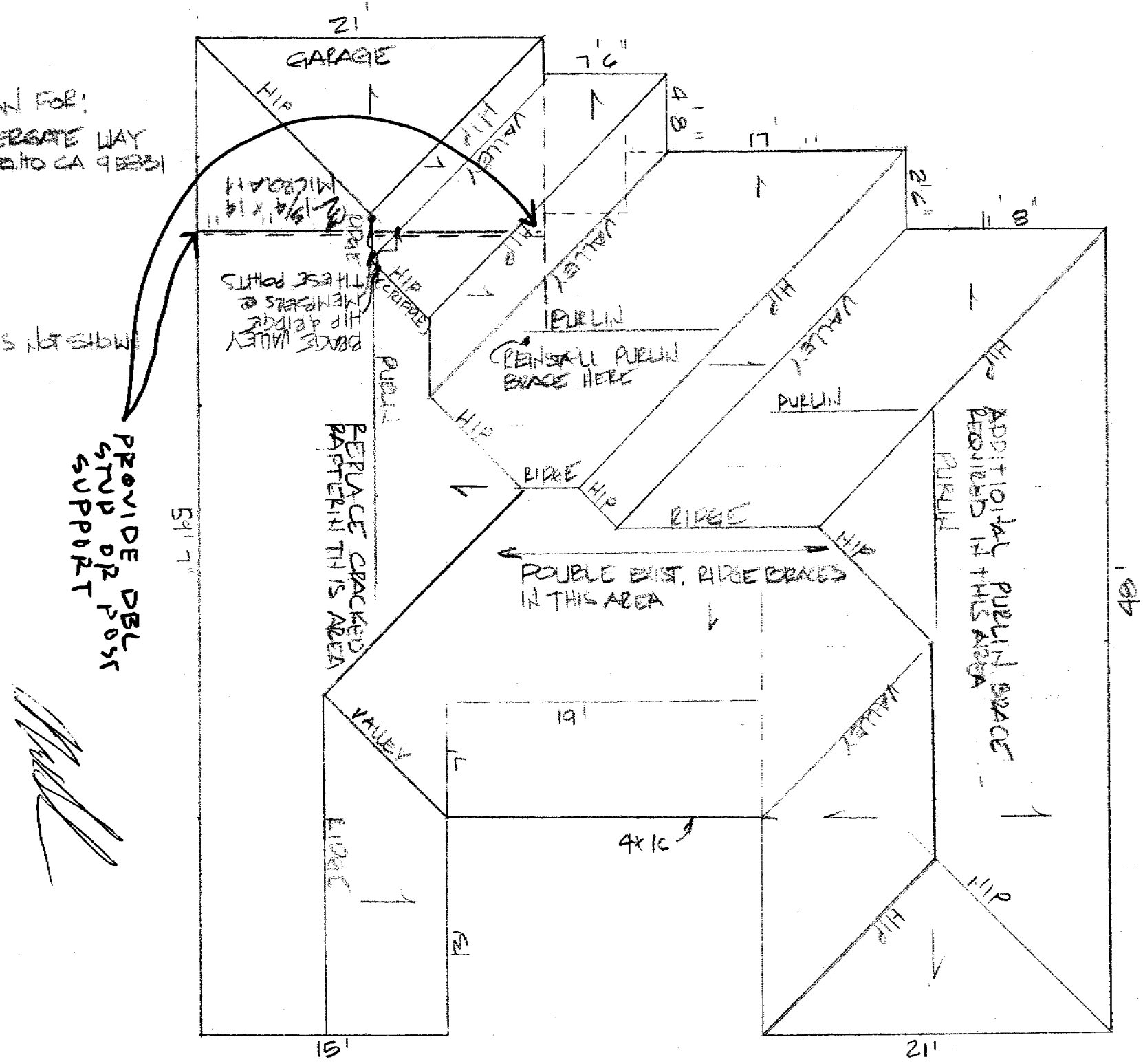
Sincerely,

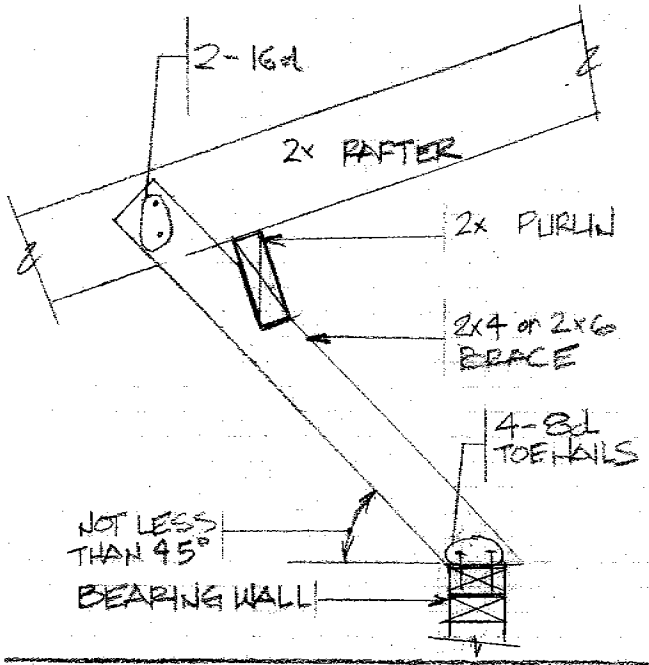
Mark S. Schoen P.E.

MSS:mss
S-ENG2001/AH001

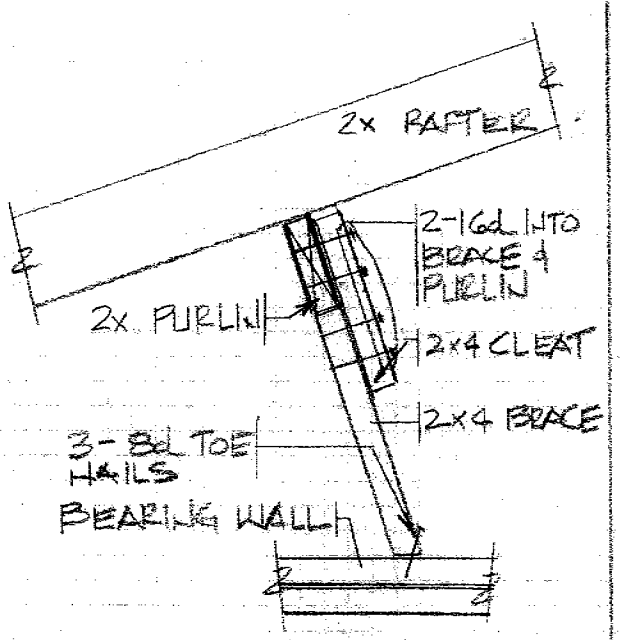
ROOF PLAN FOR:
559 RIVERGATE WAY
SACRAMENTO CA 95831

NOTE:
OVERHANGS NOT SHOWN

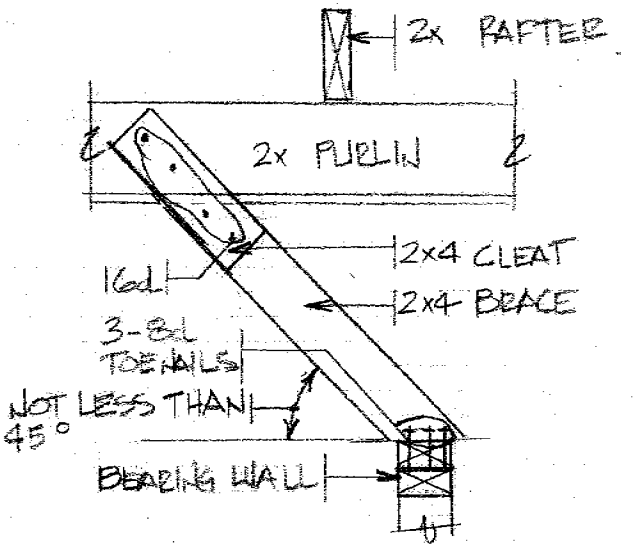




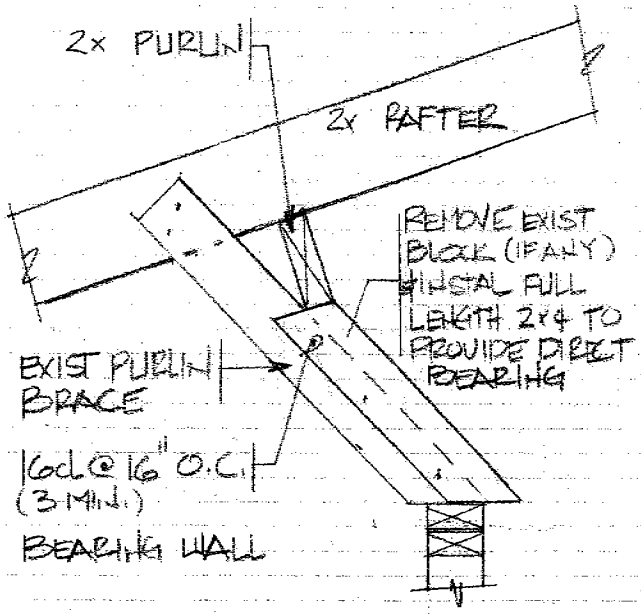
NOTCHED PURLIN BRACE



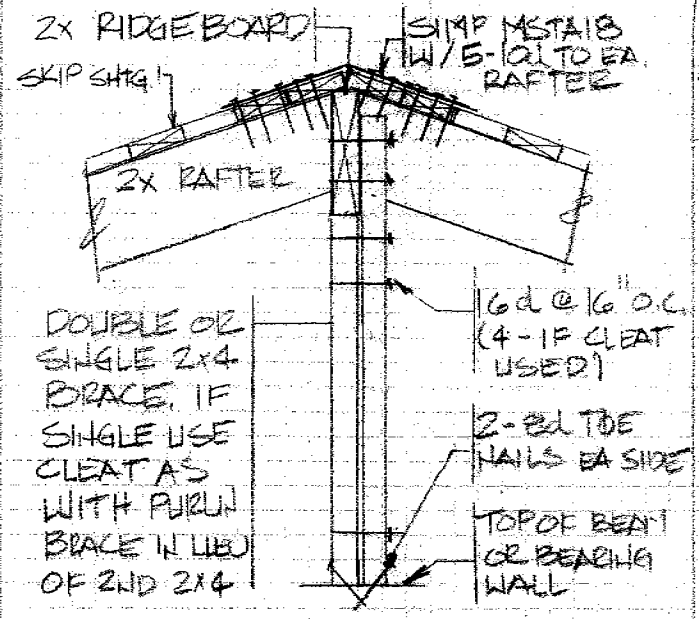
CLEATED PURLIN BRACE (END VIEW)



CLEATED PURLIN BRACE (SIDE VIEW)

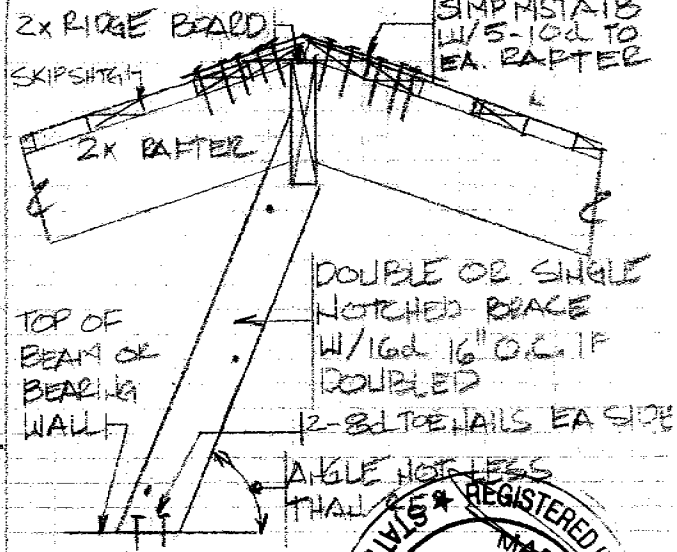


EXISTING BRACE MODIFIED FOR DIRECT BEARING

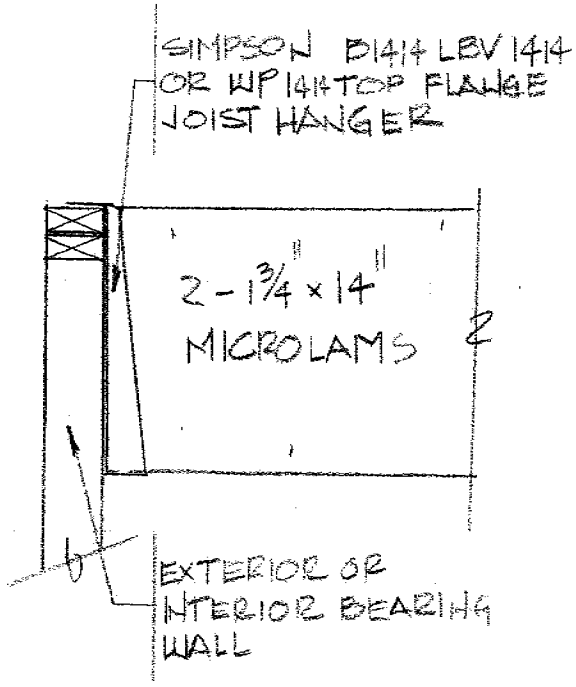


NOTE: BRACE MAY LEAN IN LINE W/ RIDGE BUT @ ANGLE NOT FLATTER THAN 45°

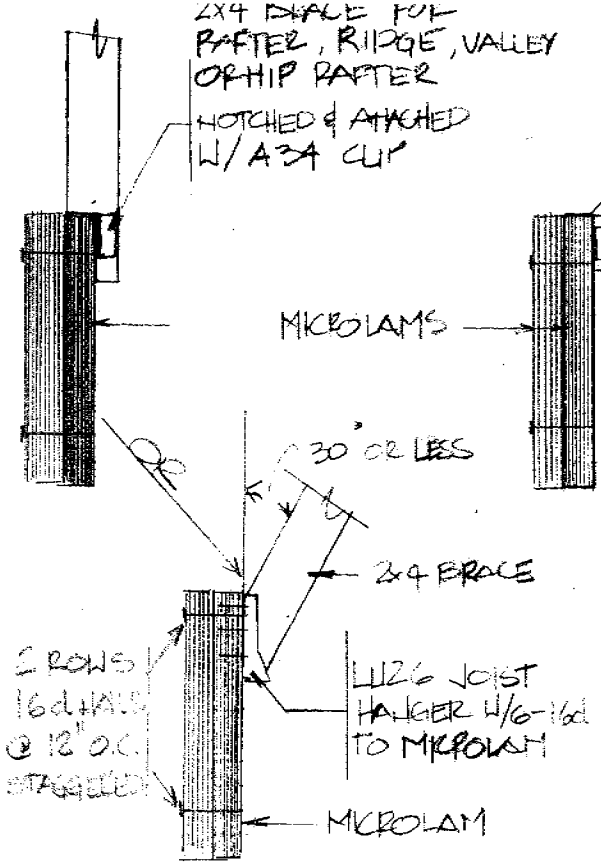
RIDGE BRACE W/ BEARING WALL DIRECTLY UNDER RIDGE



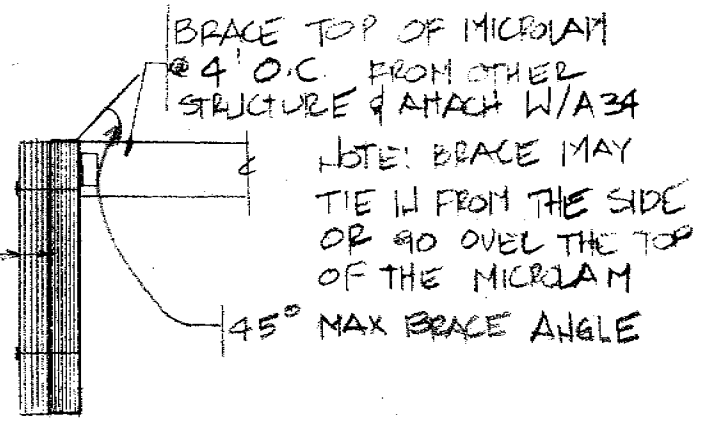
NOTCHED RIDGE BRACE W/BEARING WALL DISPLACED TO SIDE OF RIDGE



MICROLAM SUPPORT @ BEARING WALL



BRACE SUPPORT @ MICROLAM



NOTE: AS WITH PURLIN AND RIDGE BRACES, VALLEY & HIP RAFTER BRACES SHOULD PROVIDE DIRECT BEARING SUPPORT (SEE PURLIN BRACE DETAILS)

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. .

MICROLAM GARAGE ROOF SUPPORT BEAM SUPPORT BEAM

Superimposed roof dead and live loads:

Tile dead load: $DLt := 7.5$ Live load: $LL := 16$

Truss spacing: $sp := 2$ Truss dead load: $Rdl := \frac{2}{sp}$

Skip shtg. dead load: $skshtg := 1$ Plywood felt & batts dead load: $ply := 1.5$

Ceiling dead load: $clg := 0$ misl. dead load: $msl := 1$

Total dead load: $DL := DLt + Rdl + skshtg + ply + clg + msl$ $DL = 12$

Superimposed floor dead and live loads

$FLL := 9$ $FDL := 40$

Roof trib area: $rta := 120$ Floor trib area: $fta := 0$

Length: $l := 20.33 \cdot 12$ Trib area:

Point load: $pl := (DL + LL) \cdot rta + (FDL + FLL) \cdot fta$ Point load live load only: $pld := LL \cdot rta + FLL \cdot fta$

Appliciation of point load $a := \frac{l}{2}$ $b := l - a$

$Fy := 2600 \cdot 1.25$ $E := 1900000$ $Fv := 295 \cdot 1.25$

End reactions: $R1 := pl \cdot \frac{b}{l}$ $R1 = 1680$ $R2 := pl \cdot \frac{a}{l}$ $R2 = 1680$

A min. required= $R1 \cdot \frac{3}{2} \cdot \frac{1}{Fv} = 6.834$ $R2 \cdot \frac{3}{2} \cdot \frac{1}{Fv} = 6.834$

S min. required = $pl \cdot a \cdot \frac{b}{l \cdot Fy} = 63.054$

I min. required = $pl \cdot a \cdot b \cdot (a + 2 \cdot b) \cdot \frac{(3 \cdot a \cdot (a + 2 \cdot b))^{.5}}{27 \cdot E \cdot \frac{l}{240} \cdot l} = 526.251$

Beam section properties: $w := 3.5$ $d := 14$

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

A = 49 > 6.8 S = 114.333 > 63 I = 800.333 > 536 therefore O.K.

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.

4x16 DOUGLAS FIR NO. 2 PORCH BEAM

rdl := 12 rll := 14 rta := 7 l := 19

fdl := 30 fll := 40 fta := 0 rta·l = 133

wt := (rta·(rdl + rll) + fta·(fdl + fll)) + 14 Cd := 1.25

Fb := 1250 Fbp := Fb·Cd Fbp = 1562.5 Ew := 1700000 Fv := 95·Cd

A min. required = $\frac{l \cdot \frac{wt}{2}}{Fv} \cdot \left(\frac{3}{2}\right) = 23.52$

S min. required = $wt \cdot l^2 \cdot \frac{1.5}{Fbp} = 67.926$

I min. required = $5 \cdot wt \cdot \frac{(l \cdot 12)^4}{12 \cdot 384 \cdot Ew \cdot l \cdot \frac{12}{240}} = 355.861$

Check Beam properties:

w := 3.5 d := 15.25

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

--A = 53.375 > 23 S = 132.096 > 68 I = 1034.419 > 356 therefore O.K.