

CITY OF SACRAMENTO
1231 I Street, Sacramento, CA 95814

Permit No: 0011222
Insp Area: 3

Site Address: 6810 RANCHO ADOBE DR SAC
Parcel No: 040-0200-012

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

CONTRACTOR
MG ROOFING
7596 MACFINLEY WY
SAC CA 95828

OWNER
HUYNH LESLIE THUAN/SUA VAN
6810 RANCHO ADOBE DR
SACRAMENTO CA 95828

ARCHITECT

Nature of Work: T/O, RESHEET, APPLY LIGHT WGHT 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 034 License Number _____ Date 9/20/00 Contractor Signature Eduardo Gonzalez

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 abovementioned property for inspection purposes.

Date 9/20/00 Applicant/Agent Signature Eduardo Gonzalez

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.

E.B. 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 9/20/00 Applicant Signature Eduardo Gonzalez

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.

Nuynh

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

TEL: 916.961.3960
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	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	
2x6 rafters @ 24" oc	<u>1.00</u>	psf	
	Load	10.9	psf
	Roof Pitch Adjustment	<u>0.59</u>	psf
	Total Load	11.5	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	<u>0.64</u>	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	<u>2.50</u>	psf	
	Load	4.3	psf

DESIGN LOADING:

Roof Pitch	10	in 12
Pitch Adjustment Factor	1.30	

LOCATION: VAULT

<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
4x6 rafters @ 48" oc	1.00	psf
Batt/blown insul	0.50	psf
1/2" Gypboard	2.50	psf
	Load	13.9 psf
Roof Pitch Adjustment	4.19	psf
Total Load	18.1	psf

P.K. Zacher S.E.

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

Job # 22-6/05

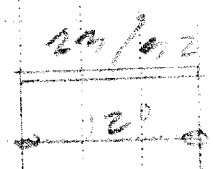
Date 9/14/05

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22-115 4" 207 PF
22-109 4"

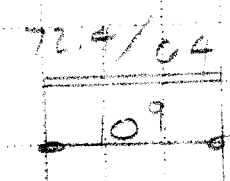
2" 11" 2



~~22-115~~

22-19 12" 4" = 72.4 PF
22-6/05 64

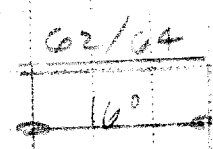
4" 6" 1



~~22-115~~

22-15 4" PF 4" 63 PF
22-115 64

4" 12" 2



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

Title :
 Dsgnr:
 Description :
 Scope :

Job #
 Date: 4:16PM, 13 SEP 00

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

		rafter 2x6	rafter 4x6	B1 4x12
Timber Section		2x6	4x6	4x12
Beam Width	in	1.500	3.500	3.500
Beam Depth	in	5.500	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	1,000.0	875.0
Fv - Basic Allow	psi	95.0	95.0	95.0
Elastic Modulus	ksi	1,600.0	1,700.0	1,600.0
Load Duration Factor		1.250	1.250	1.250
Member Type		Sawn	Sawn	Sawn
Repetitive Status		Repetitive	No	No

Center Span Data

		12.00	10.75	16.00
Span	ft	12.00	10.75	16.00
Dead Load	#/ft	23.00	72.40	62.00
Live Load	#/ft	32.00	64.00	64.00

Results Ratio = 0.9607 0.8246 0.5447

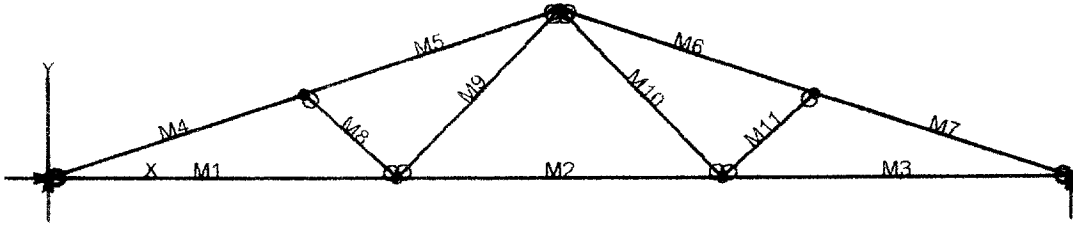
Mmax @ Center	in-k	11.88	23.64	48.38
@ X =	ft	6.00	5.37	8.00
Fb: Actual	psi	1,570.9	1,339.9	655.4
Fb: Allowable	psi	1,635.2	1,625.0	1,203.1
		Bending OK	Bending OK	Bending OK
Fv: Actual	psi	55.7	52.6	34.1
Fv: Allowable	psi	118.8	118.8	118.8
		Shear OK	Shear OK	Shear OK

Reactions

@ Left End	DL	lbs	138.00	389.15	496.00
	LL	lbs	192.00	344.00	512.00
	Max. DL+LL	lbs	330.00	733.15	1,008.00
@ Right End	DL	lbs	138.00	389.15	496.00
	LL	lbs	192.00	344.00	512.00
	Max. DL+LL	lbs	330.00	733.15	1,008.00

Deflections Ratio OK Deflection OK Deflection OK

Center DL Defl	in	-0.322	-0.264	-0.138
L/Defl Ratio		446.5	489.2	1,395.5
Center LL Defl	in	-0.449	-0.233	-0.142
L/Defl Ratio		320.9	553.4	1,351.9
Center Total Defl	in	-0.771	-0.497	-0.280
Location	ft	6.000	5.375	8.000
L/Defl Ratio		186.7	259.7	686.7



VisualAnalysis 3.50.c Report

09/13/00 16:21:26

Project: Truss 1

File: C:\Program Files\IES\VA35\truss 1.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	7.50	0.00	No		No		"	
N3	14.50	0.00	"		"		"	
N4	22.00	0.00	"		Yes		"	
N5	5.50	1.83	"		No		"	
N6	16.50	1.83	"		"		"	
N7	11.00	3.67	"		"		"	

Member Elements

Member	Section	Material	Length ft
M1	SS2x4	Wood	7.50
M2	"	"	7.00
M3	"	"	7.50
M4	"	"	5.80
M5	"	"	5.80
M6	"	"	5.80
M7	"	"	5.80
M8	"	"	2.71
M9	"	"	5.07
M10	"	"	5.07
M11	"	"	2.71

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	723.11	-NA-
N4	"	-NA-	723.11	-NA-

Member Results

Member	Axial lbs	Vy lbs	Mz lb-ft	Dy in
M1	1716.98	-36.02	-28.31	-0.1483
"	1716.98	-14.52	34.7444	-0.1385
"	1716.98	6.9758	44.1800	-0.0928
"	1716.98	28.4758	0.0000	-0.0000
M2	1077.16	-30.10	-28.31	-0.1483
"	1077.16	-10.03	18.3984	-0.1633
"	1077.16	10.0333	18.3984	-0.1633
"	1077.16	30.1000	-28.31	-0.1483
M3	1716.98	-28.48	0.0000	-0.0000
"	1716.98	-6.9758	44.1800	-0.0928
"	1716.98	14.5242	34.7444	-0.1385
"	1716.98	36.0242	-28.31	-0.1483
M4	-1848.47	117.04	0.0000	-0.0000
"	-1815.41	17.6694	129.66	-0.1123
"	-1782.35	-81.70	67.7999	-0.1440
"	-1749.29	-181.06	-185.57	-0.1388
M5	-1546.31	181.05	-185.57	-0.1388
"	-1513.07	81.6798	67.9045	-0.1935
"	-1479.83	-17.69	129.76	-0.2111
"	-1446.58	-117.05	0.0000	-0.1480
M6	-1546.31	-181.05	-185.57	-0.1246
"	-1513.07	-81.68	67.9045	-0.1793
"	-1479.83	17.6869	129.76	-0.1969
"	-1446.58	117.05	0.0000	-0.1338
M7	-1848.47	-117.04	-0.0000	0.0141
"	-1815.41	-17.67	129.66	-0.0981
"	-1782.35	81.6973	67.7999	-0.1299
"	-1749.29	181.06	-185.57	-0.1247
M8	-417.47	0.0000	0.0000	-0.0977
"	-417.47	0.0000	0.0000	-0.0918
"	-417.47	0.0000	0.0000	-0.0858
"	-417.47	0.0000	0.0000	-0.0798
M9	480.80	0.0000	0.0000	-0.1187
"	480.80	0.0000	0.0000	-0.1175
"	480.80	0.0000	0.0000	-0.1162
"	480.80	0.0000	0.0000	-0.1149
M10	480.80	-0.0000	0.0000	-0.0864
"	480.80	-0.0000	-0.0000	-0.0851
"	480.80	-0.0000	-0.0000	-0.0838
"	480.80	-0.0000	-0.0000	-0.0825
M11	-417.47	-0.0000	0.0000	-0.1279
"	-417.47	-0.0000	-0.0000	-0.1220
"	-417.47	-0.0000	-0.0000	-0.1160
"	-417.47	-0.0000	-0.0000	-0.1100

BENDING & COMP: TRUSS 1 - MEMBER 4

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

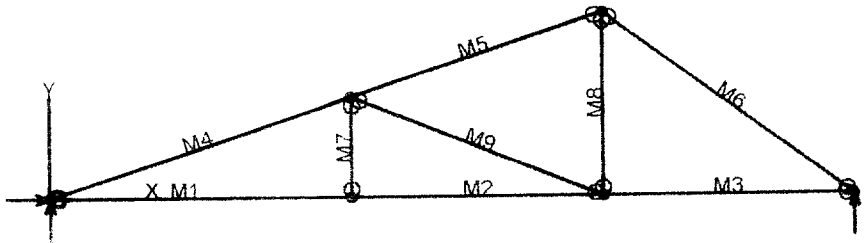
Grading:

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	5.8 feet
Max Axial Comp. C	1749 lbs
Max Reaction, R	181 lbs
Max Moment, M	185 ft-lbs
Max LL Deflection	0.06 inches
Max TL Deflection	0.13 inches
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 =	1.16
fc =	333 psi
Fce=	1496 psi
Fc*=	2084 psi
F'c=	1184 psi
fb=	725 psi
F'b=Fb*=	2156 psi
Shear D/C ratio	0.44 < 1.0, Member OK
Interaction equation:	
(fc/F'c)^2 +	
fb/ (F'b(1-fc/Fce)) =	0.51 < 1.0, Member OK
Live Load defl ratio	0.21 < 1.0, Member OK
Total Load defl ratio	0.34 < 1.0, Member OK



VisualAnalysis 3.50.c Report

09/13/00 16:24:53

Project: Truss 2

File: C:\Program Files\IES\VA35\truss 2.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	6.00	0.00	No	No	"
N3	11.00	0.00	"	"	"
N4	16.00	0.00	"	Yes	"
N5	6.00	2.00	"	No	"
N6	11.00	3.67	"	"	"

Member Elements

Member	Section	Material	Length ft
M1	SS2x4	Wood	6.00
M2	"	"	5.00
M3	"	"	5.00
M4	"	"	6.32
M5	"	"	5.27
M6	"	"	6.20
M7	"	"	2.00
M8	"	"	3.67
M9	"	"	5.39

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	533.77	-NA-
N4	"	-NA-	568.50	-NA-

Member Results

Member	Axial lbs	Vy lbs	Mz lb-ft	Dy in
M1	1112.40	-26.74	-5.6571	-0.0654
"	1112.40	-9.5428	30.5426	-0.0651
"	1112.40	7.6572	32.4283	-0.0438
"	1112.40	24.8572	0.0000	-0.0000
M2	1112.40	-24.52	-20.78	-0.0401
"	1112.40	-10.19	8.0933	-0.0527
"	1112.40	4.1431	13.1327	-0.0620
"	1112.40	18.4764	-5.6571	-0.0654
M3	521.90	-17.34	-0.0000	-0.0000
"	521.90	-3.0116	16.9041	-0.0200
"	521.90	11.3217	9.9790	-0.0322
"	521.90	25.6550	-20.78	-0.0401
M4	-1216.25	131.03	0.0000	-0.0000
"	-1180.11	22.6290	161.40	-0.1233
"	-1143.98	-85.77	94.8411	-0.1266
"	-1107.85	-194.17	-199.67	-0.0655
M5	-608.15	173.38	-199.67	-0.0655
"	-577.97	83.0442	25.2196	-0.0759
"	-547.80	-7.2891	91.7770	-0.0791
"	-517.63	-97.62	0.0000	-0.0361
M6	-746.85	-135.50	0.0000	0.0118
"	-680.55	-45.17	186.29	-0.1413
"	-614.24	45.1667	186.29	-0.1560
"	-547.94	135.50	0.0000	-0.0322
M7	45.2192	-0.0000	-0.0000	0.0090
"	45.2192	-0.0000	-0.0000	0.0098
"	45.2192	-0.0000	-0.0000	0.0106
"	45.2192	-0.0000	0.0000	0.0113
M8	286.38	0.0000	0.0000	-0.0017
"	286.38	0.0000	0.0000	0.0043
"	286.38	0.0000	0.0000	0.0104
"	286.38	0.0000	0.0000	0.0165
M9	-635.99	0.0000	0.0000	-0.0564
"	-635.99	0.0000	0.0000	-0.0480
"	-635.99	0.0000	0.0000	-0.0396
"	-635.99	0.0000	0.0000	-0.0311

BENDING & COMP: TRUSS 2 - MEMBER 4

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

Grading:

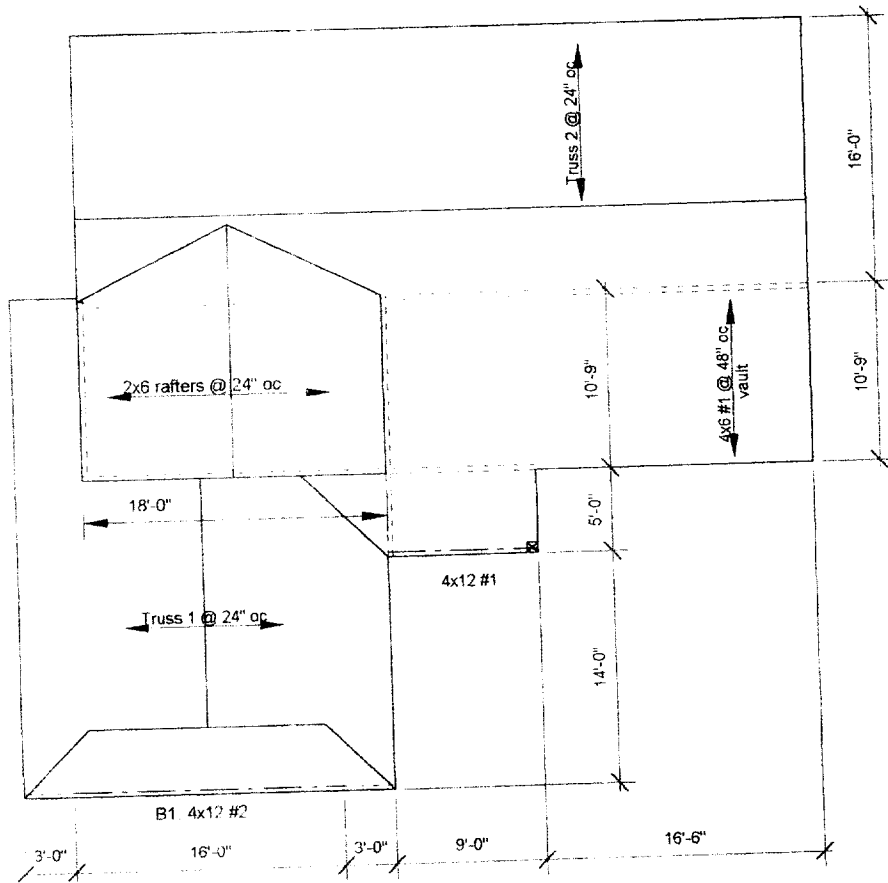
2x or 4x

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	1107 lbs
Max Reaction, R	194 lbs
Max Moment, M	199 ft-lbs
Max LL Deflection	0.03 inches
Max TL Deflection	0.06 inches
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 =	211 psi
Fcc =	1275 psi
Fc* =	2084 psi
F'c =	1057 psi
fb =	780 psi
F'b = Fb* =	2156 psi
Shear D/C ratio	0.47 < 1.0, Member OK
Interaction equation: (fc/F'c)^2 +	
fb / (F'b(1-fc/Fcc)) =	0.47 < 1.0, Member OK
Live Load defl ratio	0.09 < 1.0, Member OK
Total Load defl ratio	0.14 < 1.0, Member OK



Notes:

- 1 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.
- 2 All structural wood members that were observed appear to be in sound condition and without structural defect.



1

ROOF PLAN - NUYNH

Not to Scale

15