

CITY OF SACRAMENTO
1231 I Street, Sacramento, CA 95814

Permit No: 0106455

Insp Area: 2

Site Address: 9 VIERRA CT SAC

Parcel No: 031-0750-041

Sub-Type: RES

Housing (Y/N): N

CONTRACTOR

ZIMMERMAN ROOFING, INC
3675 R STREET
SACRAMENTO, CA 95816

OWNER

GLEN WATANABE
9 VIERRA CT
SAC, CA, 95831

ARCHITECT

Nature of Work: T.O REROOF WITH 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 C39 License Number 557559 Date 5/24/01 Contractor Signature Lilly Coy

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 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, 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 5/24/01 Applicant/Agent Signature Lilly Coy

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 713-00-2021 Exp Date 10/01/2001

____ (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 5/24/01 Applicant Signature Lilly Coy

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.

ROOF PLAN - WATANABE

1

Not to Scale

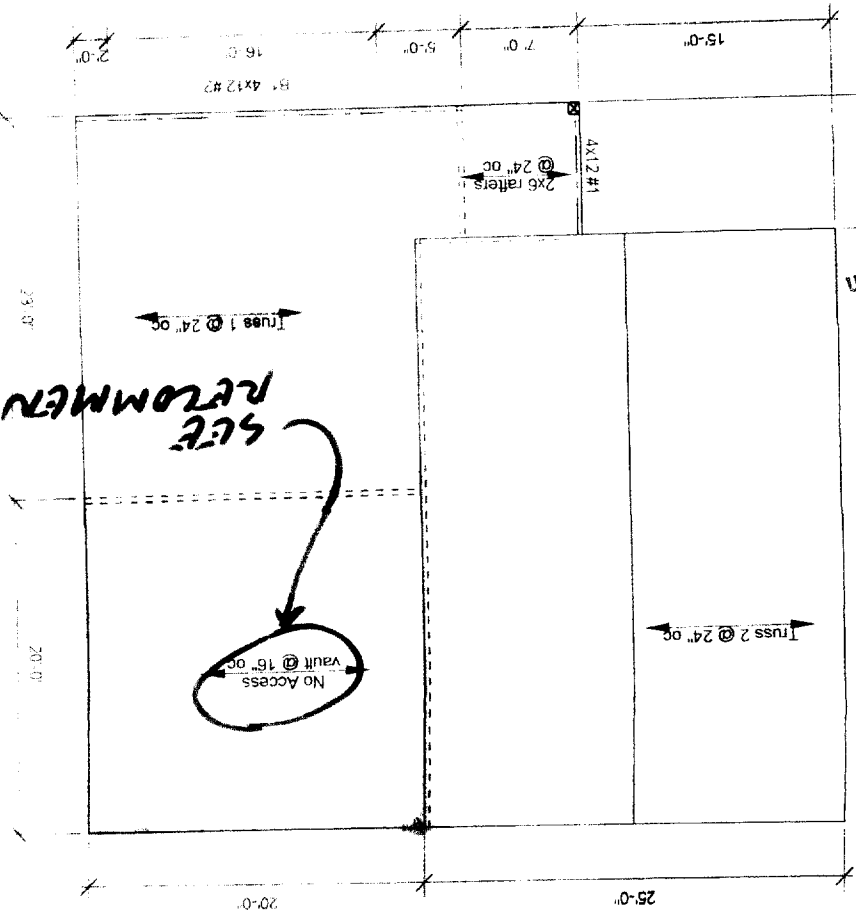
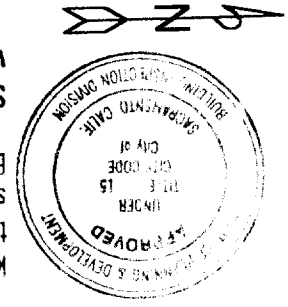
15

- Notes:**
- 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
 - All structural wood members that were observed appear to be in sound condition and without structural defect.



Paul Zacher
5/21/01

This set of plans and specifications shall be kept on the job at all times and no changes shall be made 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.



SEE RECOMMENDATIONS

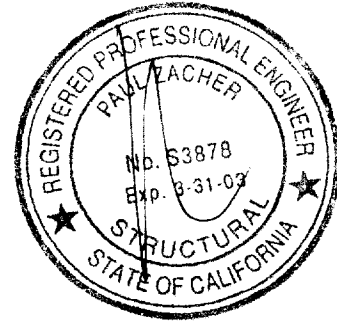
ISSUED
MAY 23 2001
Sacramento Building Division

Watanabe

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

TEL: 916.961.3960
FAX: 916.961.6552

May 14, 2001
Zimmerman Roofing
3675 R Street
Sacramento, CA 95816
TEL: 916 454 3667
FAX: 916 455 3784



Attn: Mr. Jeff Tucker.

re: Job 2001 119: WATANABE

Subject: Structural Investigation Report of the Roof for the Residence located at 9 Vierra Court,
Sacramento, CA 95831

As requested by Mr. Jeff Tucker, this is a report to determine what needs should be addressed to correct any structural deficiencies of the roof. Paul Zacher visited the site May 14, 2001. 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.

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 with a first story plate height of 8 feet.

CONSTRUCTION:

Roof
The roof covering will consist of a Light Weight Concrete Tile over 1/2" solid sheathing. The living and garage areas are framed with pre-engineered wood trusses spaced at 24" on center except for the vaulted ceiling area. The vaulted ceiling is inaccessible.

CONCLUSIONS:

Roof
The living and garage areas have sufficient structural capacity for the applied live and dead loads except for the vaulted ceiling area which is inaccessible and therefore no conclusions are drawn for this area.

Watanabe

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

TEL: 916.961.3960
FAX: 916.961.6552

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. After the roofing material has been removed, the contractor shall verify that the framing in the inaccessible portion of the structure does not exceed the following:

Vaulted Ceiling Portion

- a. 2x10 @ 16" oc - max span = 20'-0"

If the framing differs from the above, the contractor shall supply the engineer with diagrams showing the member sizes and span lengths. The engineer shall then determine if the structure can adequately support the applied dead and live loads and a supplemental report shall be issued. See detail 1


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: 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
2x10 rafters @ 16" oc	2.54	psf
Batt/blown insul	0.50	psf
1/2" Gypboard	<u>2.50</u>	psf
Load	15.4	psf
Roof Pitch Adjustment	<u>0.83</u>	psf
Total Load	16.3	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

P.K. Zacher, S.E.

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

Job #: 00-119

Date: 5/10/00

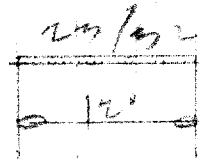
LOADING

RAFTER

DR. 11' 0" PUF 2 1/2" 12" PUF

LR. 12' 0"

2 x 6" 2

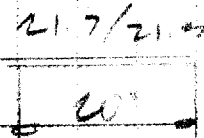


VAULT

DR. 16' 0" PUF 2 1/2" 21.7" PUF

LR. 12' 0"

2 x 10" 2



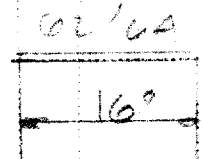
OK < 1% OVERSTRESS BENDING

PI

DR. 8' 0" PUF 4" 16" PUF

LR. 12' 0"

4 x 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: 1:01PM, 14 MAY 01

Timber Beam & Joist

Description RAFTERS AND BEAMS

G:\enercalc\test.ecw\Calculations

Timber Member Information

Calculations are designed to 1997 NDS and 1997 UBC Requirements

Timber Section	rafter	vault	B1
Beam Width	2x6	2x10	4x12
Beam Depth	in 1.500	1.500	3.500
Le. Unbraced Length	in 5.500	9.250	11.250
Timber Grade	0.00	0.00	0.00
Fb - Basic Allow	psi 875.0	875.0	875.0
Fv - Basic Allow	psi 95.0	95.0	95.0
Elastic Modulus	ksi 1,600.0	1,600.0	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

Span	ft	12.00	20.00	16.00
Dead Load	#/ft	23.00	21.70	62.00
Live Load	#/ft	32.00	21.30	64.00

Results

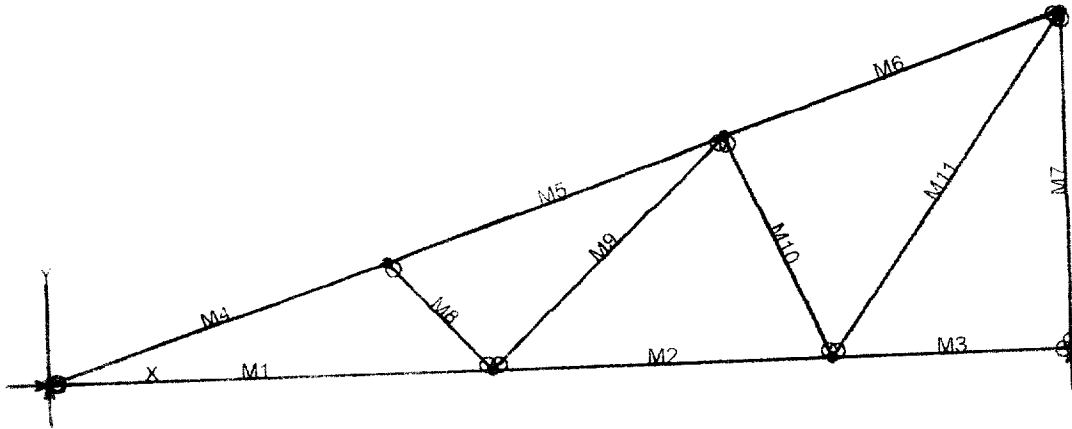
Ratio =	0.9607	1.0025	0.5447
Mmax @ Center @ X =	in-k ft 11.88	25.80	48.38
Fb Actual	psi 1,570.9	1,206.1	655.4
Fb Allowable	psi 1,635.2	1,203.1	1,203.1
Fv Actual	psi 55.7	43.1	34.1
Fv Allowable	psi 118.8	118.8	118.8
	Shear OK	Shear OK	Shear OK

Reactions

@ Left End DL	lbs	138.00	217.00	496.00
LL	lbs	192.00	213.00	512.00
Max. DL+LL	lbs	330.00	430.00	1,008.00
@ Right End DL	lbs	138.00	217.00	496.00
LL	lbs	192.00	213.00	512.00
Max. DL+LL	lbs	330.00	430.00	1,008.00

Deflections

	Ratio OK	Deflection OK	Deflection OK
Center DL Defl	in -0.322	-0.494	-0.138
L/Defl Ratio	446.5	486.3	1,395.5
Center LL Defl	in -0.449	-0.484	-0.142
L/Defl Ratio	320.9	495.4	1,351.9
Center Total Defl	in -0.771	-0.978	-0.280
Location	ft 6.000	10.000	8.000
L/Defl Ratio	186.7	245.4	686.7



VisualAnalysis 3.50.c Report

05/14/01 13:09:17

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	15.33	0.00	No		No			
N3	8.67	0.00	"		"			
N4	20.00	0.00	"		Yes			
N5	6.67	2.17	"		No			
N6	13.33	4.44	"		"			
N7	20.00	6.67	"		"			

Member Elements

Member	Section	Material	Length ft
M1	SS2x4	Wood	8.67
M2	"	"	6.67
M3	"	"	4.67
M4	"	"	7.01
M5	"	"	7.04
M6	"	"	7.03
M7	"	"	6.67
M8	"	"	2.95
M9	"	"	6.44
M10	"	"	4.87
M11	"	"	8.14

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
M1	Equation Case 1	-0.00	657.02	-NA-
M4	"	-NA-	657.70	-NA-

Member Results

Member	Axial lbs	Vy lbs	Mz lb-ft	Dy in
M1	1442.54	-42.26	-43.20	-0.1006
"	1442.54	17.41	42.8509	-0.1332
"	1442.54	1.4447	57.2497	-0.1072
"	1442.54	32.2987	0.0000	-0.0000
M2	712.73	-24.94	-18.58	-0.0541
"	712.73	-5.8501	15.4916	-0.0783
"	712.73	13.2419	7.2867	-0.0913
"	712.73	32.3339	-43.20	-0.1006
M3	0.0000	-16.10	0.0000	-0.0000
"	0.0000	-3.7147	14.5938	-0.0230
"	0.0000	10.6726	8.3996	-0.0401
"	0.0000	24.0600	-18.58	-0.0541
M4	-1565.04	147.78	0.0000	-0.0000
"	-1525.84	27.2769	203.94	-0.1948
"	-1486.62	-93.23	126.84	-0.2026
"	-1447.43	-213.73	-231.29	-0.1024
M5	-1262.60	177.21	-231.29	-0.1022
"	-1221.59	56.8853	42.5248	-0.1079
"	-1180.58	-63.44	34.8395	-0.0932
"	-1139.57	-183.76	-254.35	-0.0659
M6	-543.99	216.92	-254.35	-0.0661
"	-503.70	96.4179	112.23	-0.1650
"	-463.41	-24.09	197.01	-0.1708
"	-423.12	-144.59	-0.0000	0.0044
M7	-641.59	0.0000	0.0000	-0.0310
"	-641.59	0.0000	0.0000	-0.0129
"	-641.59	0.0000	0.0000	0.0051
"	-641.59	0.0000	0.0000	0.0232
M8	-449.48	0.0000	0.0000	-0.0558
"	-449.48	0.0000	0.0000	-0.0558
"	-449.48	0.0000	0.0000	-0.0557
"	-449.48	0.0000	0.0000	-0.0556
M9	587.28	-0.0000	0.0000	-0.0845
"	587.28	-0.0000	-0.0000	-0.0725
"	587.28	-0.0000	-0.0000	-0.0605
"	587.28	-0.0000	-0.0000	-0.0485
M10	-646.68	0.0000	0.0000	-0.0331
"	-646.68	0.0000	0.0000	-0.0224
"	-646.68	0.0000	0.0000	-0.0117
"	-646.68	0.0000	0.0000	-0.0011
M11	779.60	0.0000	0.0000	-0.0500
"	779.60	0.0000	0.0000	0.0260
"	779.60	0.0000	0.0000	-0.0020
"	779.60	0.0000	0.0000	0.0221

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

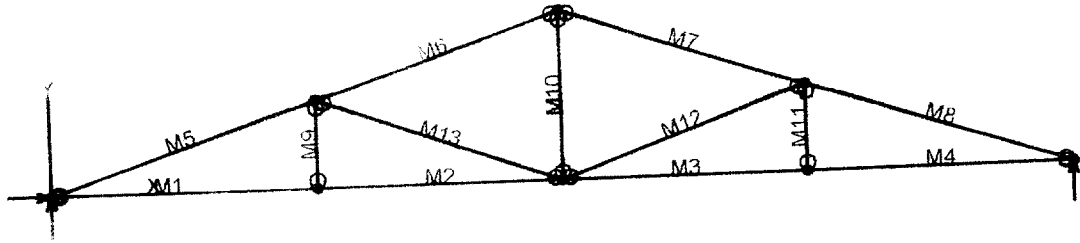
Assumptions:

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	7.01 feet
Max Axial Comp. C	1447 lbs
Max Reaction, R	213 lbs
Max Moment, M	231 ft-lbs
Max LL Deflection	0.04 inches
Max TL Deflection	0.10 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 =	1.19
fc =	276 psi
Fce =	1053 psi
Fc* =	2084 psi
F'c =	912 psi
fb =	905 psi
F'b = Fb* =	2156 psi
Shear D/C ratio	0.51 < 1.0, Member OK
Interaction equation (fc/F'c)^2 +	
fb / (F'b(1-fc/Fce)) =	0.66 < 1.0, Member OK
Live Load defl ratio	0.11 < 1.0, Member OK
Total Load defl ratio	0.21 < 1.0, Member OK



VisualAnalysis 3.50.c Report

08/14/01 13:12:28

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
M1	0.00	0.00	Yes		Yes		No	
M2	6.50	0.00	No		No			
M3	12.50	0.00	"		"			
M4	18.50	0.00	"		"			
M5	25.00	0.00	"		Yes			
M6	6.50	2.17	"		No			
M7	18.50	2.17	"		"			
M8	12.50	4.17	"		"			

Member Elements

Member	Section	Material	Length ft
M1	SS2x4	Wood	6.50
M2	"	"	6.00
M3	"	"	6.00
M4	"	"	6.50
M5	"	"	6.85
M6	"	"	6.32
M7	"	"	6.32
M8	"	"	6.85
M9	"	"	4.17
M10	"	"	4.17
M11	"	"	2.17
M12	"	"	2.38
M13	"	"	6.38

Section Properties

Category	Section	Ax in ²	Iz in ⁴	Sy+ in ³	Sy- in ³
Wood Sha	SS2x4	5.25	8.36	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	821.70	-NA-
N2	"	-NA-	821.70	-NA-

Member Results

Member	Axial lbs	Vy lbs	Mz lb-ft	Dy in
M1	1935.06	-27.84	0.6977	-0.1863
"	1935.06	-9.2093	40.7365	-0.1574
"	1935.06	9.4240	40.5039	-0.0953
"	1935.06	28.0573	0.0000	-0.0000
M2	1935.06	-31.79	35.22	-0.1950
"	1935.06	-14.59	11.0644	-0.2014
"	1935.06	2.6132	23.0381	-0.2015
"	1935.06	19.8132	0.6977	-0.1863
M3	1935.06	-19.81	0.6977	-0.1863
"	1935.06	-2.6132	23.0381	-0.2015
"	1935.06	14.5868	11.0644	-0.2014
"	1935.06	31.7868	-35.22	-0.1950
M4	1935.06	-28.06	0.0000	-0.0000
"	1935.06	9.4240	40.5039	-0.0953
"	1935.06	9.2093	40.7365	-0.1574
"	1935.06	27.8427	0.6977	-0.1863
M5	-2086.80	140.04	0.0000	-0.0000
"	-2047.59	22.6049	185.09	-0.1974
"	-2008.39	-94.83	102.60	-0.2338
"	-1969.18	-212.26	-247.46	-0.1901
M6	-1374.29	201.73	-247.46	-0.1695
"	-1338.16	93.3271	62.9816	-0.2514
"	-1302.03	-15.07	145.47	-0.2752
"	-1265.89	123.47	0.0000	-0.1923
M7	-1374.29	-201.73	-247.46	-0.1695
"	-1338.16	-93.33	62.9816	-0.2309
"	-1302.03	15.0729	145.47	-0.2546
"	-1265.89	123.47	0.0000	-0.1717
M8	-2086.80	140.04	0.0000	0.0206
"	-2047.59	-22.60	185.09	-0.1768
"	-2008.39	94.8284	102.60	-0.2132
"	-1969.18	212.26	-247.46	-0.1695
M9	47.6558	0.0000	0.0000	0.0169
"	47.6558	0.0000	0.0000	0.0254
"	47.6558	0.0000	0.0000	0.0339
"	47.6558	0.0000	0.0000	0.0425
M10	566.35	0.0000	0.0000	0.0325
"	566.35	0.0000	0.0000	0.0325
"	566.35	0.0000	0.0000	0.0325
"	566.35	0.0000	0.0000	0.0325
M11	47.6558	-0.0000	0.0000	0.0226
"	47.6558	-0.0000	-0.0000	0.0311
"	47.6558	-0.0000	-0.0000	0.0396
"	47.6558	-0.0000	-0.0000	0.0481

M01	-739.14	0.0000	0.0000	0.1824
	-739.14	0.0000	0.0000	0.186
	-739.14	0.0000	0.0000	0.1906
	-739.14	0.0000	0.0000	0.1945
M02	-739.14	-0.0000	-0.0000	0.1607
	-739.14	-0.0000	-0.0000	0.1646
	-739.14	-0.0000	-0.0000	0.1685
	-739.14	-0.0000	-0.0000	0.1724

BENDING & COMP: TRUSS 2 - MEMBERS

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 6.85 feet

Max Axial Comp. C 1969 lbs

Max Reaction, R 212 lbs

Max Moment, M 247 ft-lbs

Max LL Deflection 0.08 inches

Max TL Deflection 0.19 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 =

fc =

Fcc =

Fc* =

F'c =

fb =

F'b=Fb* =

Shear D/C ratio

Interaction equation:

$\frac{fb}{(F'b)(1-fc/Fce)} =$

$\frac{(fc/Fc)\sqrt{2} +$

Live Load defl ratio

Total Load defl ratio

0.84 > 1.0, Member OK

0.23 > 1.0, Member OK

0.42 > 1.0, Member OK

2156 psi

968 psi

943 psi

2084 psi

1099 psi

375 psi

1.19

1.15 1.15 for 2x4, 1.1 for 2x6

1.5 1.5 for 2x4, 1.3 for 2x6

1.15

1.25

1.15

0.19 inches

0.08 inches

247 ft-lbs

212 lbs

1969 lbs

6.85 feet

3.5 inches

1.5 inches