CITY OF SACRAMENTO

Permit No: 9800013

1231 I Street, Sacramento, CA 95814

Insp Area: 2

Site Address: 625 RIVERLAKE WY SAC

Sub-Type: RES

Parcel No: 0300402012

Housing (Y/N): N

CONTRACTOR		***OWNER***		***ARCHITECT***
ZIMMERMAN ROOFING		CLARK DANIEL IRVING/BEATRI		
3560 RAMONA AV		625 RIVERLAKE WY		
SACRAMENTO, CA	95826	SACRAMENTO CA	95831	
Phone: 916-454-3667		Phone:		Phone:

Nature of Work: REROOF 43 SQ WITH MONIER LITEWEIGHT 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_____ License Number_____ Date_____ 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 Law does not apply to an owner of property who builds or imporves thereon, and who does such work himself or herself or through his or 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 or 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.

Date_____ 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, forthe 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_____

_____ (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_____ 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.

STATE COMPENSATION INSURANCE FUND

P.O. BOX 420807, SAN FRANCISCO, CA 94142-0807

CERTIFICATE OF WORKERS' COMPENSATION INSURANCE

OCTOBER 7, 1997

POLICY NUMBER: 713-97 UNIT 0002021
CERTIFICATE EXPIRES: 10-1-98

DEPARTMENT OF CONSUMER AFFAIRS
CONTRACTORS STATE LICENSE BOARD
WORKERS COMPENSATION - UNIT
P.O. BOX 26000 SACRAMENTO, CA 95826

JOB: LICENSE #557559
POLICY INCEPTION: 10-1-9
STATE FUND - SACRAMENTO

This is to certify that we have issued a valid Workers' Compensation insurance policy in a form approved by the California Insurance Commissioner to the employer named below for the policy period indicated.

This policy is not subject to cancellation by the Fund except upon 30 days' advance written notice to the employer.

We will also give you TEN days' advance notice should this policy be cancelled prior to its normal expiration.

This certificate of insurance is not an insurance policy and does not amend, extend or alter the coverage afforded by the policies listed herein. Notwithstanding any requirement, term, or condition of any contract or other document with respect to which this certificate of insurance may be issued or may pertain, the insurance afforded by the policies described herein is subject to all the terms, exclusions and conditions of such policies.

Thom Hansen
AUTHORIZED REPRESENTATIVE

K.C. Bollier
PRESIDENT

EMPLOYER'S LIABILITY LIMIT INCLUDING DEFENSE COSTS: $1,000,000 PER OCCURRE

ENDORSEMENT #2065 ENTITLED CERTIFICATE HOLDERS' NOTICE EFFECTIVE 10/01/97 IS ATTACHED TO AND FORMS A PART OF THIS POLICY.

EMPLOYER

ZIMMERMAN ROOFING, INC.
3560 RAMONA AVENUE
SACRAMENTO CA 95826

SCIF 10262 (REV.

Paul Zacher-Structural Engineer
4701 Lakeside Way
Fair Oaks, CA 95628
TEL: 916.961.3960
FAX: 916.961.3960

ok
-ST
1-2-98

November 17, 1997

Zimmerman Roofing
3560 Ramona Avenue
Sacramento, CA 95826
TEL: 916.454.3667
FAX: 916.455.3784
TEL (Jeff) : 916.427.1971
FAX (Framer) : 916.383.5308

Attn.: Mr. Jeff Tucker,

re: Job 97218; CLARK

Subject: Structural Investigation Report of the Roof for the Residence located at 625 Riverlake Way, Sacramento, CA.

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 November 14, 1997. The investigation was made to determine the existing condition of the structure.

The following is based on visual observations with no subsurface investigation being made.

DESCRIPTION:

Type of Facility: Residence.
Year Built: Estimated 1970's vintage.
Occupancy: Residential.
No. of Stories: One.
Dimensions: Approximately 1800 square feet with a first story plate height of 8 feet.

CONSTRUCTION:

Roof:

Monier Tile indicated on application less than 7 P.S.F ok -ST

The roof covering will consist of Pioneer Everwest Light Weight Tile over 1/2" solid sheathing. The living area is conventionally framed with 2x6 rafters spaced at 24" on

center with 2x8 purlins supported at no more than 6'-0" on center by 2x4 struts bearing on walls below except over the family room, living room and entry areas. The vaulted ceilings in these areas are constructed of 2x10 rafters spaced at 16" on center. The garage area is framed with 2x6 rafters spaced at 16" on center and is supprted at the ridge by a 6x14 beam.

CONCLUSIONS:

Roof:

The living area lacks sufficient structural capacity for the applied live and dead loads.
The garage area has 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. 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 6'-0" on center and the minimum slope of the struts shall not be less than 45 degrees from the horizontal. See detail 1.

Garage:

2. The owner shall unload and remove the stored material in the attic over the garage.

The inspection consisted of visual observation only, made solely to determine the structural capacity of the existing roof. 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

REGISTERED PROFESSIONAL ENGINEER
PAUL ZACHER
NO. S3878
EXP. 3-31-99
STRUCTURAL
STATE OF CALIFORNIA

DESIGN LOADING:

Roof Pitch	4	in 12
Pitch Adjustment Factor	1.05	

LOCATION: ROOF

MATERIAL	WEIGHT	
Pioneer Everwest Light Wt	7.00	psf
Roofing felt	0.30	psf
1/2" OSB/ plywood	1.50	psf
1x4 skip sht'g	1.09	psf
2x6 rafters @ 24" oc	1.00	psf
Load	10.9	psf
Roof Pitch Adjustment	0.59	psf
Total Load	11.5	psf

LOCATION: VAULT

MATERIAL	WEIGHT	
Pioneer Everwest Light Wt	7.00	psf
Roofing felt	0.30	psf
1/2" OSB/ plywood	1.50	psf
1x4 skip sht'g	1.09	psf
2x6 rafters @ 24" oc	1.00	psf
Batt/blown insul	0.50	psf
1/2" Gypboard	2.50	psf
Load	13.9	psf
Roof Pitch Adjustment	0.75	psf
Total Load	14.6	psf

BEAM DESIGN FOR UNIFORM LOAD: RAFTER

(Values for DF Larch #2)

Width, b	1.5	inches	
Depth, d	5.5	inches	
Length of beam	12.17	feet	
Dead load roof	11.5	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		
Toal load defl ratio	180		
Total dead load	23	plf	
Total live load	32	plf	
Base design values:			
Shear, Fv	95	psi	
Bending, Fb	875	psi	
Comp. perp. to grain, Fc	625	psi	
Mod of Elasticity, E	1700000	psi	
Load duration factor, Cd	1.25		
Size Factor, Cf	1.30		
Repetitive factor, Cr	1.15		
Dead load reaction	140	lbs	
Live load reaction	195	lbs	
Total load reaction	335	lbs	
Allowable shear, Fv'	119	psi	Horizontal Shear OK
Actual shear, fv	56	psi	
Allowable bending, Fb'	1635	psi	Bending OK
Actual bending, fb	1616	psi	
Allowable live load defl	0.61	inches	Live Load Deflection OK
Actual live load defl	0.45	inches	
Allowable total load defl	0.81	inches	Total Load Deflection OK
Actual total load defl	0.77	inches	
Bearing length req'd	0.36	inches	

BEAM DESIGN FOR UNIFORM LOAD: RAFTER

(Values for DF Larch #2)

Width, b	1.5	inches	
Depth, d	5.5	inches	
Length of beam	12.25	feet	
Dead load roof	15.1	psf	
Live load roof	16	psf	
Contributory width of roof load	1.33	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	360		
Toal load defl ratio	240		
Total dead load	20.083	plf	
Total live load	21.28	plf	
Base design values:			
Shear, Fv	95	psi	
Bending, Fb	875	psi	
Comp. perp. to grain, Fc	625	psi	
Mod of Elasticity, E	1700000	psi	
Load duration factor, Cd	1.25		
Size Factor, Cf	1.30		
Repetitive factor, Cr	1.15		
Dead load reaction	123	lbs	
Live load reaction	130	lbs	
Total load reaction	253	lbs	
Allowable shear, Fv'	119	psi	Horizontal Shear OK
Actual shear, fv	43	psi	
Allowable bending, Fb'	1635	psi	Bending OK
Actual bending, fb	1231	psi	
Allowable live load defl	0.41	inches	Live Load Deflection OK
Actual live load defl	0.30	inches	
Allowable total load defl	0.61	inches	Total Load Deflection OK
Actual total load defl	0.59	inches	
Bearing length req'd	0.27	inches	

BEAM DESIGN FOR UNIFORM LOAD: RAFTER

(Values for DF Larch #2)		
Width, b	1.5 inches	
Depth, d	9.25 inches	
Length of beam	17.75 feet	
Dead load roof	15.1 psf	
Live load roof	16 psf	
Contributory width of roof load	1.33 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	360	
Toal load defl ratio	240	
Total dead load	20.083 plf	
Total live load	21.28 plf	
Base design values:		
Shear, Fv	95 psi	
Bending, Fb	875 psi	
Comp. perp. to grain, Fc	625 psi	
Mod of Elasticity, E	1700000 psi	
Load duration factor, Cd	1.25	
Size Factor, Cf	1.10	
Repetitive factor, Cr	1.15	
Dead load reaction	178 lbs	
Live load reaction	189 lbs	
Total load reaction	367 lbs	
Allowable shear, Fv'	119 psi	Horizontal Shear OK
Actual shear, fv	36 psi	
Allowable bending, Fb'	1384 psi	Bending OK
Actual bending, fb	914 psi	
Allowable live load defl	0.59 inches	Live Load Deflection OK
Actual live load defl	0.28 inches	
Allowable total load defl	0.89 inches	Total Load Deflection OK
Actual total load defl	0.55 inches	
Bearing length req'd	0.39 inches	

BEAM DESIGN FOR UNIFORM LOAD: 6x10 D.F. No.1

(Values for DF Larch #1)

Width, b	5.5	inches
Depth, d	9.5	inches
Length of beam	14.25	feet
Dead load roof	14.6	psf
Live load roof	16	psf
Contributory width of roof load	15.5	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	360	
Toal load defl ratio	240	
Total dead load	226.3	plf
Total live load	248	plf

Base design values:

Shear, Fv	85	psi
Bending, Fb	1350	psi
Comp. perp. to grain, Fc	625	psi
Mod of Elasticity, E	1600000	psi
Load duration factor, Cd	1.25	
Size Factor, Cf	1.00	

Dead load reaction	1612	lbs
Live load reaction	1767	lbs
Total load reaction	3379	lbs

Allowable shear, Fv'	106	psi	Horizontal Shear OK
Actual shear, fv	86	psi	
Allowable bending, Fb'	1688	psi	Beam Fails in Bending
Actual bending, fb	1746	psi	OK, 3% over close enough o.k.
Allowable live load defl	0.48	inches	Live Load Deflection OK
Actual live load defl	0.37	inches	
Allowable total load defl	0.71	inches	Total Load Deflection OK
Actual total load defl	0.70	inches	
Bearing length req'd	0.98	inches	

BEAM DESIGN FOR UNIFORM LOAD:

6x14 DF. No.1

(Values for DF Larch #1)		
Width, b	5.5	inches
Depth, d	13.5	inches
Length of beam	23.5	feet
Dead load roof	14.6	psf
Live load roof	16	psf
Contributory width of roof load	10.5	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	360	
~~Toal load defl ratio~~	240	
Total dead load	153.3	plf
Total live load	168	plf

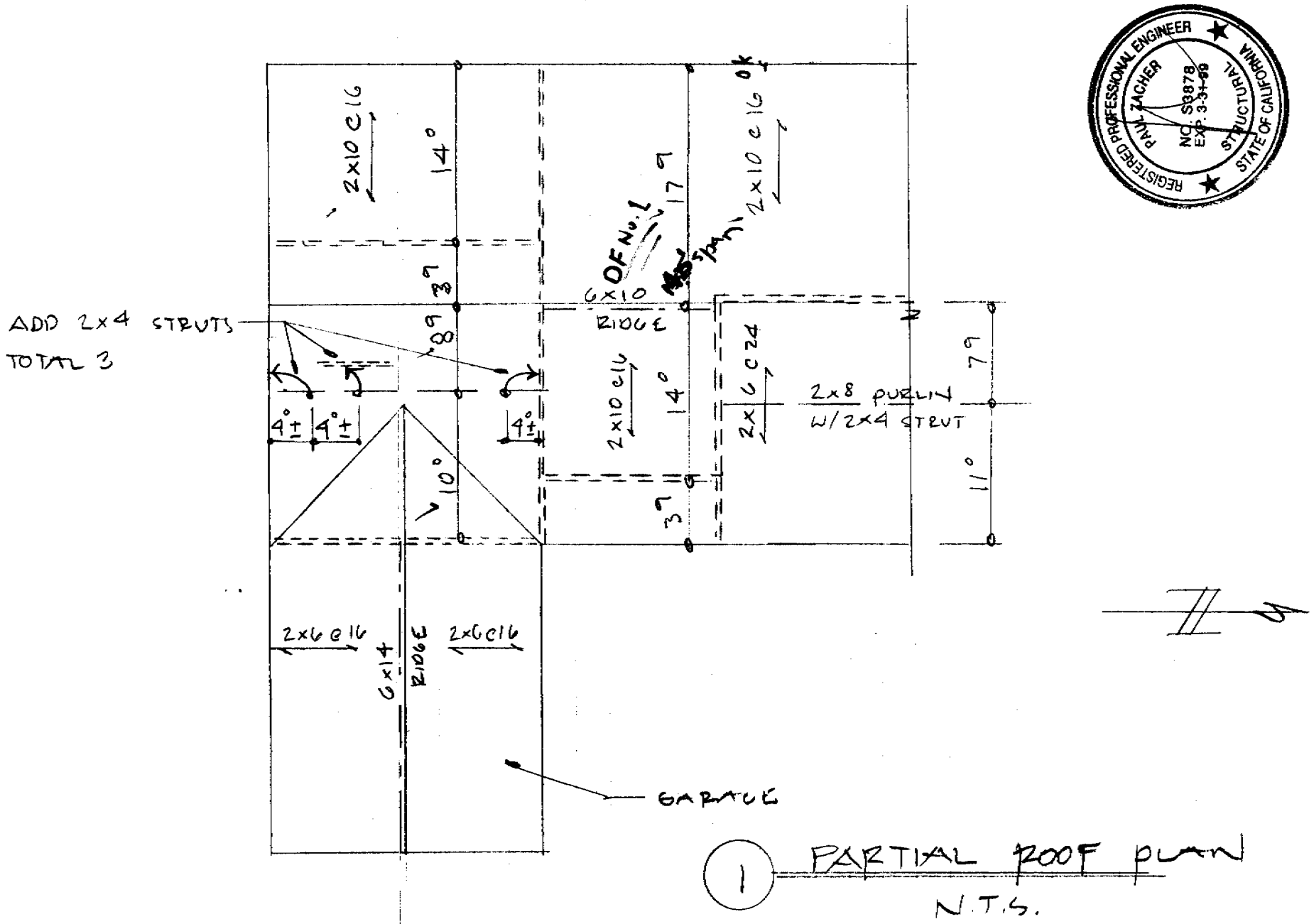
Base design values:		
Shear, Fv	85	psi
Bending, Fb	1350	psi
Comp. perp. to grain, Fc	625	psi
Mod of Elasticity, E	1600000	psi
Load duration factor, Cd	1.25	
Size Factor, Cf	0.99	

Dead load reaction	1801	lbs
Live load reaction	1974	lbs
Total load reaction	3775	lbs

Allowable shear, Fv'	106	psi	Horizontal Shear OK
Actual shear, fv	69	psi	
Allowable bending, Fb'	1666	psi	Bending OK
Actual bending, fb	1593	psi	
Allowable live load defl	0.78	inches	Live Load Deflection OK
Actual live load defl	0.64	inches	
Allowable total load defl	1.18	inches	Beam Fails under Total Load Deflection
Actual total load defl	1.22	inches	OK, 3% over
Bearing length req'd	1.10	inches	

Total Deflection $\frac{l}{240} = \frac{(23.5\ ft)(12\ in/ft)}{240} = 1.13$ in.

$\frac{l}{360} = \frac{(23.5\ ft)(12\ in/ft)}{360} = 1.57$ in.



1 PARTIAL ROOF PLAN
N.T.S.

REGISTERED PROFESSIONAL ENGINEER
PAUL ZACHER
NO. S3878
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