

CITY OF SACRAMENTO

1231 I Street, Sacramento, CA 95814

Permit No: 0403534

Insp Area: 3

Thos Bros: 317D4

Site Address: 4970 HELEN WY SAC

Parcel No: 018-0163-013

Sub-Type: RES

Housing (Y/N): N

CONTRACTOR

MALANOSKY ROOFING
8193 DESCRET AVE
FAIR OAKS CA 95628

OWNER

RODDA MARGARET A
2705 13TH ST
SACRAMENTO CA 95815

ARCHITECT

Nature of Work: REPLACE EXIST. OLD TILE ROOF WITH NEW CONCR.TILE ROOF, 13 SQ

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 _____ License Number 727041 _____ 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 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.)

WR 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 3/10/04 Owner Signature *Margaret A Rodda*

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 3/10/04 Applicant/Agent Signature *Margaret A Rodda*

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: 0 2004

Carrier NO EMPLOYEES Policy Number _____ Exp Date _____

This section need not be completed if the permit is for \$100,000 or less. I, as owner of the property, am exclusively contracting with licensed contractors to construct the project 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 3/10/04 Applicant Signature *Margaret A Rodda*

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.

OWNER-BUILDER VERIFICATION

ATTENTION PROPERTY OWNERS

An owner-builder building permit has been applied for in your name and bearing your signature.

Please complete and return this information in the envelope provided at your earliest opportunity to avoid unnecessary delay in processing and issuing your building permit. No building permit will be issued until this verification is received.

- (1) I personally plan to provide the major labor and materials for construction of the proposed Improvement (yes or no) NO
- (2) I ~~have~~ have not _____ signed an application for A building permit for the proposed work.

(3) I have contracted with the following person (firm) to provide the proposed construction:

Name RICHARD MALANOSKI Address _____

City _____ Telephone _____

Contractors License No. _____

4. I plan to provide portions of the work, but I have hired the following person to coordinate, Supervise, and provide the major work.

Name _____ Address _____

City _____ Telephone _____

Contractors License No. _____

5. I will provide some of the work but I have contracted (hired) the following to provide the Work indicated:

| Name | Address | Phone | Type of work |
|------|---------|-------|--------------|
| | | | |
| | | | |

Signed *Mayant*

Job Address 0403534

Permit No: 4970 HELEN. WY

Rodda

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

TEL: 916.961.3960
FAX: 916.961.6552



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March 2, 2004

Rodda
2705 13th Street
Sacramento, CA 95818
TEL: (916) 442-8365

Attn.: Ms. Rodda,

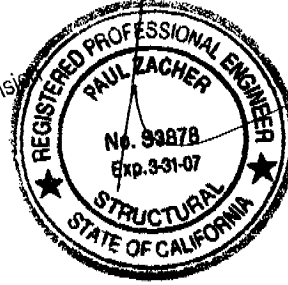
re: Job 2004016: RODDA

Subject: Structural Investigation Report of the Roof for the Residence located at 4970 Helen Way,
Sacramento, CA 95822.

ISSUED

MAR 10 2004

Sacramento Building Division

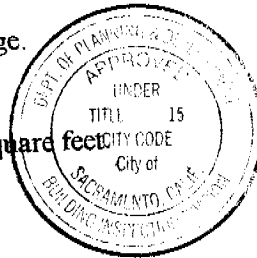


As requested by Ms. Rodda, this is a report to determine what needs should be addressed to correct any structural deficiencies of the roof. Paul Zacher visited the site March 2, 2004. The investigation was made to determine the existing condition of the structure. All information, data and analysis contained within this report are based on the 1997 Uniform Building Code with 2001 CBC Title 24 Amendments.

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. |



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 of State law.

CONSTRUCTION:

Roof:
The roof covering will consist of a Light Weight Concrete Tile over 7/16" solid sheathing. The roof structure is conventionally framed with 2x6 rafters spaced at 24" on center with 2x6 purlins supported at no more than 6'-0" on center by 2x4 struts bearing on walls below.

CONCLUSIONS:

Roof:
The roof structure currently lacks sufficient structural capacity for the applied live and dead loads. See "Recommendations" for location and repair to bring the roof structure up to the required capacity.

Rodda



Paul Zacher - Structural Engineers, Inc
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.

Roof Structure:

1. Scab a 2x6 rafter to the existing 2x6 rafters with 16d's @ 12" on center where the span is greater than 12'-0". The rafter to be scabbed to the existing rafter may be held short of the intersecting bearing wall, hip, valley, ridge or purlin by no more than 4". See detail 1.
2. Bolt 3 - 1 3/4" x 9 1/4" LVL's to the existing double 2x8 header with 5/8" diameter machine bolts spaced at 16" on center. See details 1 and 2.

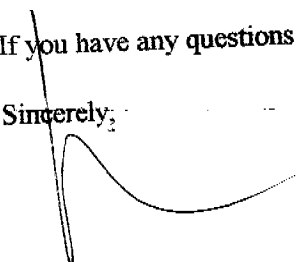
It shall be noted that small hairline cracking may occur at exterior stucco and interior gypboard finished walls that are load bearing or distributing roof strut loads. These cracks are a natural occurrence as the existing structure re-distributes the new roof weight. They are cosmetic in nature and 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

Job #: 04_016

Date: 03/02/2004

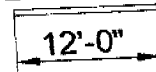
LOADING:

Rafter:

Dr = 12.3 psf x 2'-0" = 24.6 plf
 Lr = 16.0 psf x 2'-0" = 32.0 plf

2x6 #2

24.6 / 32.0

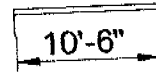


Vault:

Dr = 15.6 psf x 2'-0" = 31.2 plf
 Lr = 16.0 psf x 2'-0" = 32.0 plf

2x6 #2

31.2 / 32.0

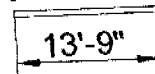


Vault:

Dr = 15.6 psf x 2'-0" = 31.2 plf
 Lr = 16.0 psf x 2'-0" = 32.0 plf

2-2x6 #2

31.2 / 32.0

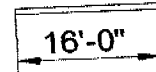


B1:

Dr = 15.6 psf x 12'-0" = 187 plf
 Lr = 16.0 psf x 12'-0" = 192 plf
 Dw = 15.0 psf x 6'-0" = 90 plf

3 - 1 3/4" x 9 1/4" LVL's

277 / 192

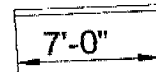


B2:

Dr = 12.3 psf x 3'-0" = 37 plf
 Lr = 16.0 psf x 3'-0" = 48 plf

2x4 #2 + 2x6 #2

37 / 48



Paul Zacher - Structural Engr's
 4701 Lakeside Way
 Fair Oaks, CA 95628
 TEL: (916) 961-3960
 FAX: (916) 961-6552

Title :
 Dsgnr:
 Description :

Job #
 Date: 6:52AM, 3 MAR 04

Scope :

Timber Beam & Joist

c:\documents and settings\paul zacher\desktop

Rev: 560100
 User: KW-0802844, Ver 5.6.1, 25-Oct-2002
 (c)1983-2002 ENERCALC Engineering Software

Description RAFTERS AND BEAMS

Calculations are designed to 1997 NDS and 1997 UBC Requirements

Timber Member Information

| Timber Section | | rafter | vault | vault | B1 | B2 |
|----------------------|-----|---|------------|------------|------------|-----------|
| | | 2x6 | 2x6 | 2-2x6 | MicroLam: | 2x4 + 2x6 |
| Beam Width | in | 1.500 | 1.500 | 3.000 | 5.250 | 3.000 |
| Beam Depth | in | 5.500 | 5.500 | 5.500 | 9.250 | 4.897 |
| Le: Unbraced Length | ft | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Timber Grade | | Douglas Fir - Larch, Douglas Fir - Larch, Douglas Fir - Larch, Truss Joist - MacMill Douglas Fir - Larch, | | | | |
| Fb - Basic Allow | psi | 875.0 | 875.0 | 875.0 | 2,600.0 | 875.0 |
| Fv - Basic Allow | psi | 95.0 | 95.0 | 95.0 | 285.0 | 95.0 |
| Elastic Modulus | ksi | 1,600.0 | 1,600.0 | 1,600.0 | 1,900.0 | 1,600.0 |
| Load Duration Factor | | 1.250 | 1.250 | 1.250 | 1.000 | 1.250 |
| Member Type | | Sawn | Sawn | Sawn | Manuf/Pine | Sawn |
| Repetitive Status | | Repetitive | Repetitive | Repetitive | No | No |

Center Span Data

| | ft | 12.00 | 10.50 | 13.75 | 16.00 | 7.00 |
|-----------|------|-------|-------|-------|--------|-------|
| Span | | | | | | |
| Dead Load | #/ft | 24.60 | 31.20 | 24.60 | 277.00 | 37.00 |
| Live Load | #/ft | 32.00 | 32.00 | 32.00 | 192.00 | 48.00 |

Results

| | Ratio = | 0.9887 | 0.8452 | 0.6490 | 0.9252 | 0.3403 |
|----------------------------|---------|------------|------------|------------|------------|------------|
| Mmax @ Center | in-k | 12.23 | 10.45 | 16.05 | 180.10 | 6.25 |
| @ X = | ft | 6.00 | 5.25 | 6.87 | 8.00 | 3.50 |
| f _b : Actual | psi | 1,616.6 | 1,382.0 | 1,061.2 | 2,405.5 | 521.0 |
| F _b : Allowable | psi | 1,635.2 | 1,635.2 | 1,635.2 | 2,600.0 | 1,531.3 |
| | | Bending OK | Bending OK | Bending OK | Bending OK | Bending OK |
| f _v : Actual | psi | 57.3 | 55.5 | 33.1 | 104.8 | 27.0 |
| F _v : Allowable | psi | 118.8 | 118.8 | 118.8 | 285.0 | 118.8 |
| | | Shear OK | Shear OK | Shear OK | Shear OK | Shear OK |

Reactions

| | DL | LL | Max. DL+LL | DL | LL | Max. DL+LL | DL | LL | Max. DL+LL | DL | LL | Max. DL+LL |
|-------------|----------|----------|------------|----------|----------|------------|----------|----------|------------|----------|----------|------------|
| @ Left End | 147.60 | 192.00 | 339.60 | 147.60 | 192.00 | 339.60 | 147.60 | 192.00 | 339.60 | 147.60 | 192.00 | 339.60 |
| @ Right End | 163.80 | 168.00 | 331.80 | 163.80 | 168.00 | 331.80 | 163.80 | 168.00 | 331.80 | 163.80 | 168.00 | 331.80 |
| | 169.12 | 220.00 | 389.12 | 169.12 | 220.00 | 389.12 | 169.12 | 220.00 | 389.12 | 169.12 | 220.00 | 389.12 |
| | 2,216.00 | 1,536.00 | 3,752.00 | 2,216.00 | 1,536.00 | 3,752.00 | 2,216.00 | 1,536.00 | 3,752.00 | 2,216.00 | 1,536.00 | 3,752.00 |

Deflections

| | Ratio OK | Deflection OK | Deflection OK | Deflection OK | Deflection OK |
|-------------------|----------|---------------|---------------|---------------|---------------|
| Center DL Defl | -0.345 | -0.256 | -0.297 | -0.621 | -0.043 |
| L/Defl Ratio | 417.5 | 491.4 | 555.0 | 309.3 | 1,974.2 |
| Center LL Defl | -0.449 | -0.263 | -0.387 | -0.430 | -0.055 |
| L/Defl Ratio | 320.9 | 479.1 | 426.7 | 446.2 | 1,521.8 |
| Center Total Defl | -0.794 | -0.519 | -0.684 | -1.051 | -0.098 |
| Location | 6.000 | 5.250 | 6.875 | 8.000 | 3.500 |
| L/Defl Ratio | 181.5 | 242.6 | 241.2 | 182.7 | 859.4 |

BOLT DESIGN: (UBC 2336) - BEAM 23

SINGLE WOOD SIDE PLATE TO WOOD CONNECTION:

Assumptions:

1. 2x and 4x members are Douglas-fir larch #2, 6x members are Douglas-fir larch #1.
2. Maximum bolt diameter is 1.0 inch.
3. Max angle of load to grain for side member in the connection = 0 degrees
4. Bolts in adjacent rows are not staggered.

| | | |
|--|--------------------|--|
| Is loading perpendicular to grain? | Y Y or N | |
| Bolt diameter, D | 0.750 inches | |
| Number of bolts in a row, n | 1 | A row is two or more bolts aligned with the direction of load |
| C-C spacing of bolts along a row | 12.00 inches | Minimum spacing OK |
| Number of rows | 1 | Minimum spacing between outer rows of bolts on splice plate OK |
| Spacing between rows | 7.88 inches | Minimum spacing between rows of bolts OK |
| Bending yield strength of bolt, Fyb | 45,000 psi | |
| Thickness of side member, ts | 5.25 inches | |
| Width of side member | 11.88 inches | Minimum edge distance OK |
| Thickness of main member, tm | 5.25 inches | |
| Width of main member | 11.88 inches | |
| Load duration factor | 1.00 | Must be 4/3 or less for connections |
| Max angle of load to grain for main member in the connection | 90 0 to 90 degrees | |

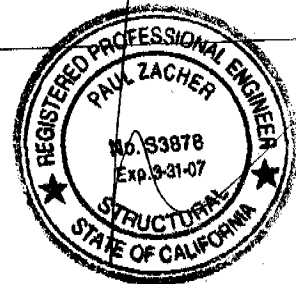
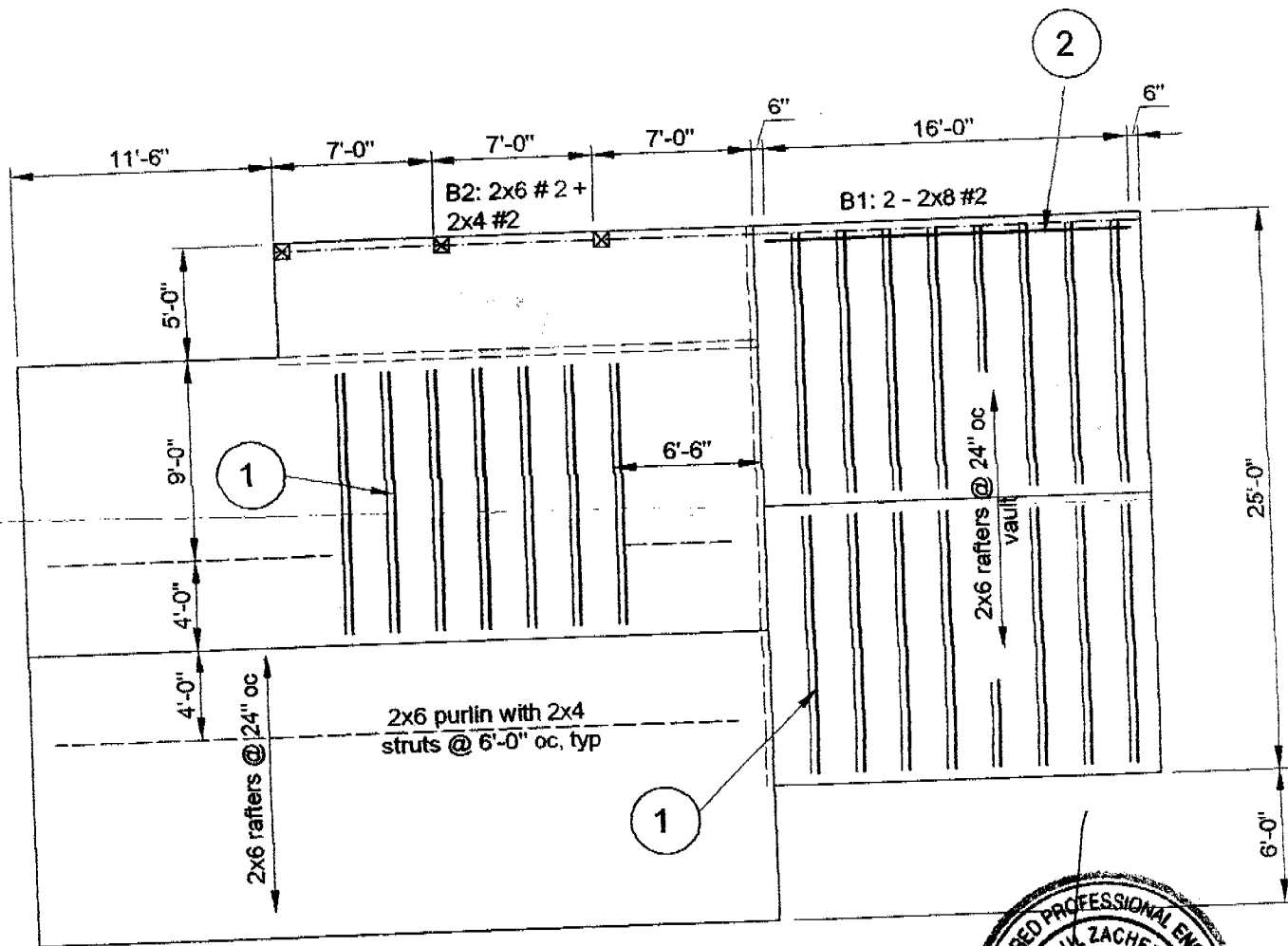
Allowable Bolt Design Values:

| | | |
|---------------|----------------|--|
| Z', Mode Im | 2048 lbs/ bolt | Bearing yield failure of main member |
| Z', Mode Is | 4410 lbs/ bolt | Bearing yield failure of side plate |
| Z', Mode II | 1454 lbs/ bolt | Pivoting of the fastener w/ limited localized crushing of the wood |
| Z', Mode III | 1114 lbs/ bolt | Fastener yield in bending and bearing yield of main member |
| Z', Mode IIIs | 1687 lbs/ bolt | Fastener yield in bending and bearing yield of side plate |
| Z', Mode IV | 1026 lbs/ bolt | Fastener yield in bending |

| | | |
|--|---------------|--------------|
| BOLT GEOMETRY FOR FULL DESIGN VALUES: | | |
| If minimum values are not met, see UBC 2336.5 for reduced allowables | | |
| Minimum Edge Distance (in direction of loading): | | |
| Parallel to grain | | 3.938 inches |
| Perpendicular to Grain | | |
| loaded edge | | 3.000 inches |
| unloaded edge | | 1.125 inches |
| Minimum End Distance (in direction of loading): | | |
| Parallel to grain: | Compression = | 3.00 inches |
| | Tension = | 5.25 inches |
| Perpendicular to Grain | | 3.000 inches |

Table 23-III-H

Therefore, use 5/8" dia MB spaced @ 16" oc staggered



FRAMING NOTES:

1. Scab a 2x6 to existing 2x6 rafters where the span is greater than 12'-0" (total 8).
2. Bolt 3 - 1 3/4" x 9 1/4" LVL's to the existing double 2x8 header with 5/8" diameter machine bolts spaced at 16" on center. See details 1 and 2.

NOTES:

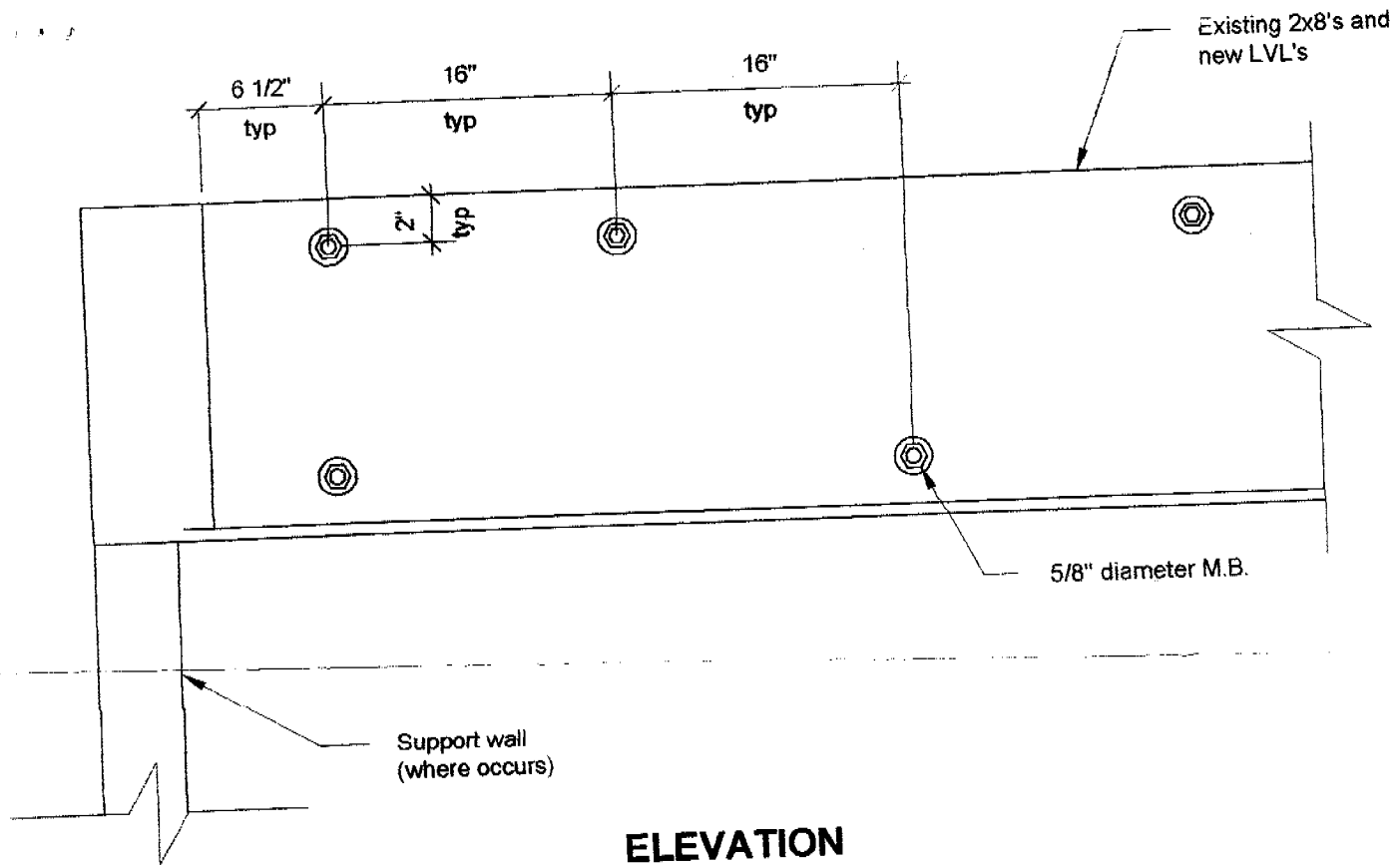
- A. This is a reroof project. The new roofing material shall be a Light Weight Concrete Tile. The tile shall weigh less than or equal to 7.3 psf.
- B. All rafters are 2x6 DF#2 and hips and valleys are 2x8 DF#2 unless otherwise noted.
- C. All existing rafter, hips, valleys, rafter ties, and purlins are braced per UBC Section 2320.1 "Roof and Ceiling Framing" unless otherwise shown.
- D. All structural wood members that were observed appear to be in sound condition and without structural defect.

1

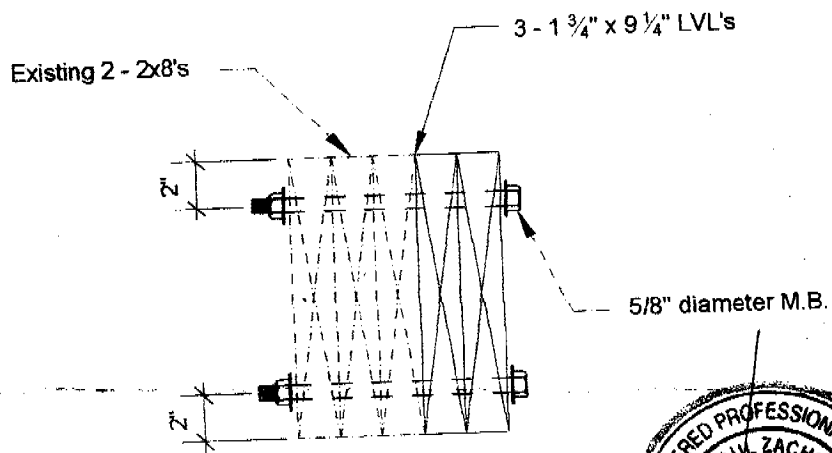
ROOF PLAN - RODDA

Not to Scale

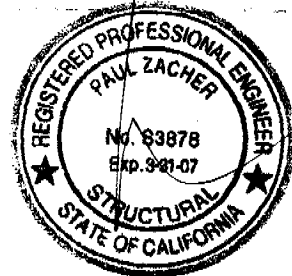
7



ELEVATION



SECTION



2

BOLTED BEAM DETAIL

scale: 1 1/2" = 1'-0"

8