

CITY OF SACRAMENTO

Permit No: 9809640

1231 I Street, Sacramento, CA 95814

Insp Area: 2

Site Address: 6442 DRIFTWOOD ST SAC

Sub-Type: AOTHR

Parcel No: 0300092004

Housing (Y/N): N

CONTRACTOR

CABINET CRAFTERS
5304 ROSEVILLE RD
NORTH HIGHLANDS CA

95660

OWNER

MERCER RICHARD O/DINA
6442 DRIFTWOOD ST
SACRAMENTO CA

95831

ARCHITECT

Nature of Work: NOTCH FOUNDATION AND ROOF LINE TO ACCOMADATE EXISTING TREE ROOT

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 B License Number 535126 Date 9/25/98 Contractor Signature [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.)

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 9/29/98 Applicant/Agent Signature [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 STATE FUND Policy Number 405 WIT 238-98

(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 9/29/98 Applicant Signature [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.

Structural Calculations
for

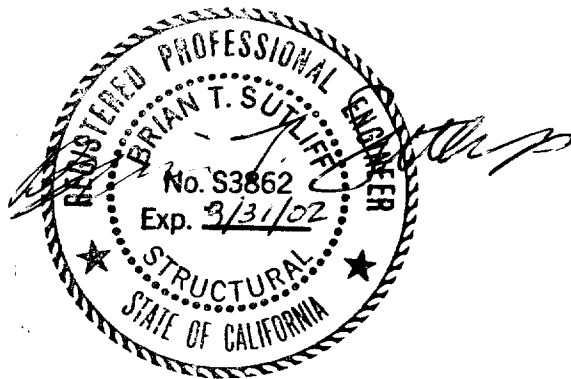
Mercer Residence

Roof Modification

ISSUED

SEP 29 1998

CITY OF SACRAMENTO
DEVELOPMENT SERVICES DIV



Brian T. Sutliff
Structural Engineer



This set of plans and specifications must be kept on the job at all times and it is unlawful to alter or change or delete from these plans and specifications in any way without the written consent of the City of Sacramento.

The signatory of this plan and specification shall NOT be held to permit or approve the violation of any City Ordinance or State Law.

Loads

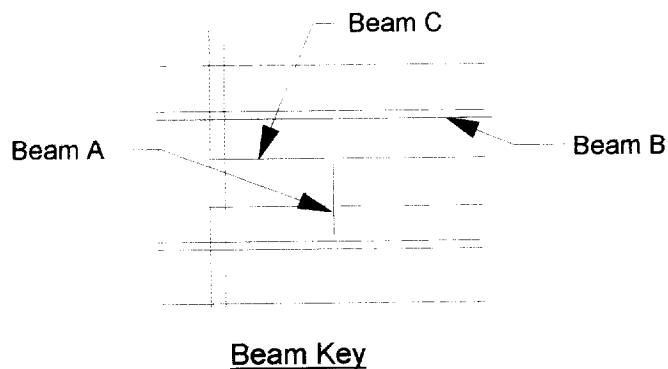
Roof

| | |
|-----------------|---------------|
| Roofing | 5 psf |
| Plywood | 1.5 |
| Framing | 2.5 |
| Gyp Board | 2.5 |
| Insul | 1 |
| Misc | <u>1.5</u> |
| Total DL | 14 psf |
| Total LL | 16 psf |

Floor

| | |
|-----------------|-----------------|
| Flooring | 5 psf |
| Plywood | 2 |
| Framing | 2 |
| Misc | <u>1.5</u> |
| Total DL | 10.5 psf |
| Total LL | 40 psf |

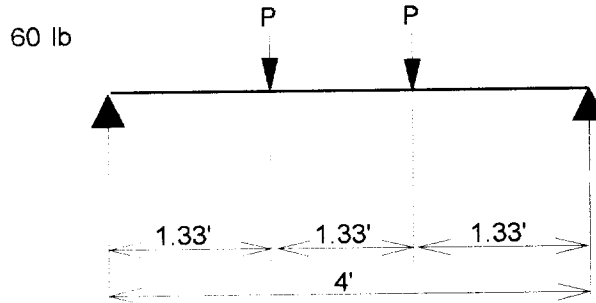
Roof Framing



Structural Calculations
 Mercer Residence
 Roof Modification
 9/28/98

Beam A Loading (L=4'-0")

$P = 1.33' (3/2) (14 + 16) =$

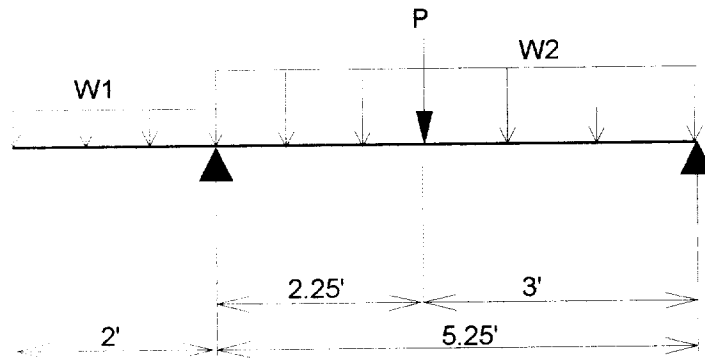


Beam B Loading (L=7'-3")

$P = 60 \text{ lb}$ (see Beam A)

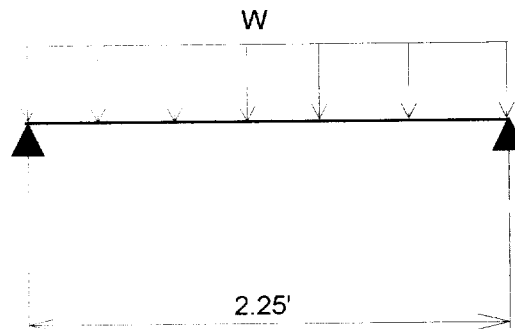
$W1 = (1.33'/2)(14 + 16) = 19.95 \text{ plf}$

$W2 = 1.33(14 + 16) = 39.99 \text{ plf}$

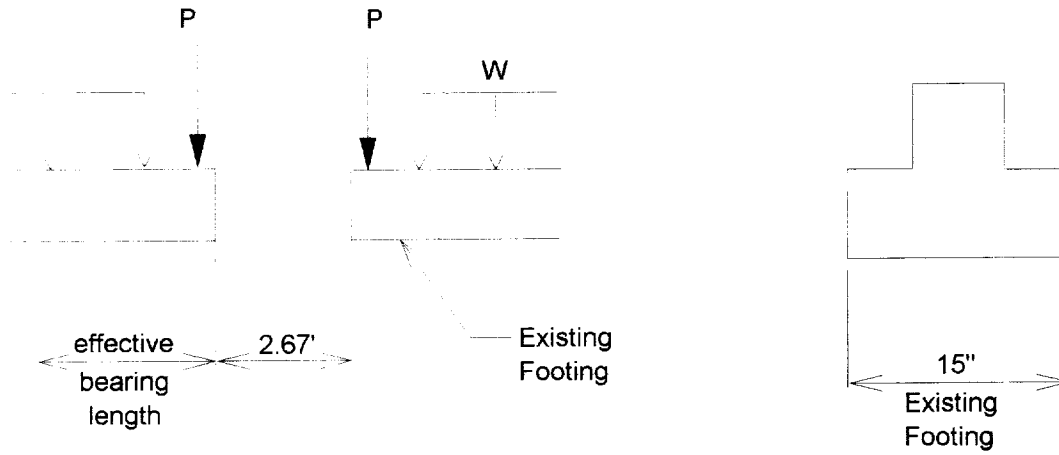


Beam C Loading (L=2'-3")

$W = 1.33(14 + 16) = 39.99 \text{ plf}$



Foundation



Effective Bearing Length = 2'-0"

$$P = \{4' \times (10.5 + 40) + 6' \times (14 + 16) + 8' \times (10)\} \times 2.667/2 =$$

617 lb

$$W_{eq} = P / 2' =$$

308 plf

$$W = 4 \times (10.5 + 40) + 6 \times (14 + 16) + 8' \times 10 =$$

462 plf

$$W_{tot} = W_{eq} + W =$$

770 plf

$$\text{Soil Pressure} = W_{tot} / 15" =$$

616 psf

616 < 1000 ok

General Timber Beam

Description Beam A

General Information

| | | | | | |
|----------------------|------------|-------------------------|-------------|---------|---------|
| Section Name | 2x10 | Center Span | 4.00 ft |Lu | 0.00 ft |
| Beam Width | 1.500 in | Left Cantilever | ft |Lu | 0.00 ft |
| Beam Depth | 9.250 in | Right Cantilever | ft |Lu | 0.00 ft |
| Member Type | Sawn | DOUGLAS FIR-LARCH, No.2 | | | |
| LL & ST Act Together | | Fb Allow | 875.0 psi | | |
| Load Dur. Factor | 1.000 | Fv Allow | 95.0 psi | | |
| Beam End Fixity | Pin-Pin | Fc Allow | 1,300.0 psi | | |
| Wood Density | 34.000 pcf | E | 1,600.0 ksi | | |

Point Loads

| | | | | | | |
|-------------|----------|----------|----------|----------|----------|----------|
| Dead Load | 28.0 lbs | 60.0 lbs | lbs | lbs | lbs | lbs |
| Live Load | 32.0 lbs | lbs | lbs | lbs | lbs | lbs |
| ...distance | 1.330 ft | 2.667 ft | 0.000 ft | 0.000 ft | 0.000 ft | 0.000 ft |

Summary

Beam Design OK

Span= 4.00ft, Beam Width = 1.500in x Depth = 9.25in, Ends are Pin-Pin

| | | | | | | |
|--------------------------|-----------|-------------|-------------------------------|----------|----------|--------|
| Max Stress Ratio | 0.073 : 1 | | | | | |
| Maximum Moment Allowable | 0.1 k-ft | 1.7 k-ft | Maximum Shear * 1.5 Allowable | 0.1 k | 1.3 k | |
| Max. Positive Moment | 0.09 k-ft | at 2.016 ft | Shear: | @ Left | 0.07 k | |
| Max. Negative Moment | 0.00 k-ft | at 4.000 ft | | @ Right | 0.07 k | |
| Max @ Left Support | 0.00 k-ft | | Camber: | @ Left | 0.000 in | |
| Max @ Right Support | 0.00 k-ft | | | @ Center | 0.002 in | |
| Max. M allow | 1.72 | | | @ Right | 0.000 in | |
| fb 48.49 psi | | | Reactions... | | | |
| Fb 962.50 psi | | | Left DL | 0.05k | Max | 0.07k |
| | | | Right DL | 0.06 k | Max | 0.07 k |

Deflections

| Center Span... | Dead Load | Total Load | Left Cantilever... | Dead Load | Total Load |
|----------------|-----------|------------|---------------------|-----------|------------|
| Deflection | -0.001 in | -0.002 in | Deflection | 0.000 in | 0.000 in |
| ...Location | 2.064 ft | 2.000 ft | ...Length/Defl | 0.0 | 0.0 |
| ...Length/Defl | 39,639.6 | 29,892.93 | Right Cantilever... | | |
| | | | Deflection | 0.000 in | 0.000 in |
| | | | ...Length/Defl | 0.0 | 0.0 |

Stress Calcs

Bending Analysis

| | | | | | | | |
|-----------------|--------|----|-------------------|-----|------------------|------|---------------------|
| Ck | 34.680 | Rb | 0.000 | Sxx | 21.391 in3 | Area | 13.875 in2 |
| Cf | 1.100 | | | | | | |
| | | | <u>Max Moment</u> | | <u>Sxx Req'd</u> | | <u>Allowable fb</u> |
| @ Center | | | 0.09 k-ft | | 1.08 in3 | | 962.50 psi |
| @ Left Support | | | 0.00 k-ft | | 0.00 in3 | | 962.50 psi |
| @ Right Support | | | 0.00 k-ft | | 0.00 in3 | | 962.50 psi |

Shear Analysis

| | | |
|--------------------|----------------|-----------------|
| | @ Left Support | @ Right Support |
| Design Shear | 0.10 k | 0.10 k |
| Area Required | 1.012 in2 | 1.010 in2 |
| Actual Stress : fv | 95.00 psi | 95.00 psi |

Bearing @ Supports

| | | | |
|--------------------|--------|----------------------|----------|
| Max. Left Reaction | 0.07 k | Bearing Length Req'd | 0.034 in |
|--------------------|--------|----------------------|----------|

Scope :

General Timber Beam

Description Beam B

General Information

| | | | | | |
|----------------------|------------|-------------------------|-------------|---------|---------|
| Section Name | 2x8 | Center Span | 5.25 ft |Lu | 0.00 ft |
| Beam Width | 1.500 in | Left Cantilever | 2.00 ft |Lu | 0.00 ft |
| Beam Depth | 7.250 in | Right Cantilever | ft |Lu | 0.00 ft |
| Member Type | Sawn | DOUGLAS FIR-LARCH, No.2 | | | |
| LL & ST Act Together | | Fb Allow | 875.0 psi | | |
| Load Dur. Factor | 1.000 | Fv Allow | 95.0 psi | | |
| Beam End Fixity | Pin-Pin | Fc Allow | 1,300.0 psi | | |
| Wood Density | 34.000 pcf | E | 1,600.0 ksi | | |

Uniform Loads

Uniform Loads Over Full Span

| | | | | |
|------------------|----|------------|----|------------|
| Center | DL | 19.00 #/ft | LL | 21.00 #/ft |
| Left Cantilever | DL | 9.50 #/ft | LL | 10.50 #/ft |
| Right Cantilever | DL | #/ft | LL | #/ft |

Point Loads

| | | | | | | |
|-------------|----------|----------|----------|----------|----------|----------|
| Dead Load | 28.0 lbs | lbs | lbs | lbs | lbs | lbs |
| Live Load | 32.0 lbs | lbs | lbs | lbs | lbs | lbs |
| ...distance | 2.250 ft | 0.000 ft | 0.000 ft | 0.000 ft | 0.000 ft | 0.000 ft |

Summary

Beam Design OK

Span= 5.25ft, Left Cant= 2.00ft, Beam Width = 1.500in x Depth = 7.25in, Ends are Pin-Pin

| | | | | |
|--------------------------|----------------------|-----------------|---------------------|-------------------|
| Max Stress Ratio | 0.189 : 1 | | Maximum Shear * 1.5 | 0.2 k |
| Maximum Moment Allowable | 0.2 k-ft 1.1 k-ft | | Allowable | 1.0 k |
| Max. Positive Moment | 0.21 k-ft | at 2.250 ft | Shear: | @ Left 0.15 k |
| Max. Negative Moment | -0.02 k-ft | at 0.000 ft | | @ Right 0.13 k |
| Max @ Left Support | -0.05 k-ft | | Camber: | @ Left 0.008 in |
| Max @ Right Support | 0.00 k-ft | | | @ Center 0.009 in |
| Max. M allow | 1.15 | | | @ Right 0.000 in |
| fb 189.05 psi | fv 17.94 psi | Reactions... | Left DL 0.10k | Max 0.20k |
| Fb 1,050.00 psi | Fv 95.00 psi | Right DL 0.06 k | Max | 0.13 k |

Deflections

| Center Span... | Dead Load | Total Load | Left Cantilever... | Dead Load | Total Load |
|----------------|-----------|------------|---------------------|-----------|------------|
| Deflection | -0.006 in | -0.013 in | Deflection | 0.006 in | 0.014 in |
| ...Location | 2.654 ft | 2.625 ft | ...Length/Defl | 8,517.4 | 3,456.7 |
| ...Length/Defl | 10,952.2 | 5,005.98 | Right Cantilever... | | |
| | | | Deflection | 0.000 in | 0.000 in |
| | | | ...Length/Defl | 0.0 | 0.0 |

Scope :

General Timber Beam

Description Beam B

Stress Calcs

Bending Analysis

Ck 34.680 Rb 0.000 Sxx 13.141 in3 Area 10.875 in2
 Cf 1.200

| | <u>Max Moment</u> | <u>Sxx Req'd</u> | <u>Allowable fb</u> |
|-----------------|-------------------|------------------|---------------------|
| @ Center | 0.21 k-ft | 2.37 in3 | 1,050.00 psi |
| @ Left Support | 0.05 k-ft | 0.52 in3 | 1,050.00 psi |
| @ Right Support | 0.00 k-ft | 0.00 in3 | 1,050.00 psi |

Shear Analysis

| | <u>@ Left Support</u> | <u>@ Right Support</u> |
|--------------------|-----------------------|------------------------|
| Design Shear | 0.20 k | 0.16 k |
| Area Required | 2.054 in2 | 1.710 in2 |
| Actual Stress : fv | 95.00 psi | 95.00 psi |

Bearing @ Supports

| | | | |
|---------------------|--------|----------------------|----------|
| Max. Left Reaction | 0.20 k | Bearing Length Req'd | 0.102 in |
| Max. Right Reaction | 0.13 k | Bearing Length Req'd | 0.068 in |

Query Values

| <u>M, V, & D @ Specified Locations</u> | | <u>Moment</u> | <u>Shear</u> | <u>Deflection</u> |
|--|---------|---------------|--------------|-------------------|
| @ Center Span Location = | 0.00 ft | -0.05 k-ft | 0.15 k | 0.0000 in |
| @ Right Cant. Location = | 0.00 ft | 0.00 k-ft | 0.00 k | 0.0000 in |
| @ Left Cant. Location = | 0.00 ft | -0.05 k-ft | 0.15 k | 0.0000 in |

General Timber Beam

Description Beam C

General Information

| | | | | | |
|----------------------|------------|-------------------------|-------------|---------|---------|
| Section Name | 2x4 | Center Span | 2.25 ft |Lu | 0.00 ft |
| Beam Width | 1.500 in | Left Cantilever | ft |Lu | 0.00 ft |
| Beam Depth | 3.500 in | Right Cantilever | ft |Lu | 0.00 ft |
| Member Type | Sawn | DOUGLAS FIR-LARCH, No.2 | | | |
| LL & ST Act Together | | Fb Allow | 875.0 psi | | |
| Load Dur. Factor | 1.150 | Fv Allow | 95.0 psi | | |
| Beam End Fixity | Pin-Pin | Fc Allow | 1,300.0 psi | | |
| Wood Density | 34.000 pcf | E | 1,600.0 ksi | | |

Uniform Loads

Uniform Loads Over Full Span

| | | | | |
|------------------|----|------------|----|------------|
| Center | DL | 19.00 #/ft | LL | 21.00 #/ft |
| Left Cantilever | DL | #/ft | LL | #/ft |
| Right Cantilever | DL | #/ft | LL | #/ft |

Summary

Beam Design OK

Span= 2.25ft, Beam Width = 1.500in x Depth = 3.5in, Ends are Pin-Pin

| | | | | |
|----------------------|---------------|--------------|---------------------|----------|
| Max Stress Ratio | 0.090 : 1 | | Maximum Shear * 1.5 | 0.1 k |
| Maximum Moment | 0.0 k-ft | | Allowable | 0.6 k |
| Allowable | 0.4 k-ft | | | |
| Max. Positive Moment | 0.03 k-ft | at 1.125 ft | Shear: @ Left | 0.05 k |
| Max. Negative Moment | 0.00 k-ft | at 0.000 ft | @ Right | 0.05 k |
| Max @ Left Support | 0.00 k-ft | | Camber: @ Left | 0.000 in |
| Max @ Right Support | 0.00 k-ft | | @ Center | 0.002 in |
| Max. M allow | 0.39 | | @ Right | 0.000 in |
| fb 102.26 psi | fv 9.86 psi | Reactions... | Left DL | 0.02k |
| Fb 1,509.38 psi | Fv 109.25 psi | | Right DL | 0.02 k |
| | | | Max | 0.05k |
| | | | Max | 0.05 k |

Deflections

| Center Span... | Dead Load | Total Load | Left Cantilever... | Dead Load | Total Load |
|----------------|-----------|------------|----------------------------|-----------|------------|
| Deflection | -0.001 in | -0.003 in | Deflection | 0.000 in | 0.000 in |
| ...Location | 1.125 ft | 1.125 ft | ...Length/Defl | 0.0 | 0.0 |
| ...Length/Defl | 19,837.9 | 9,736.04 | Right Cantilever... | | |
| | | | Deflection | 0.000 in | 0.000 in |
| | | | ...Length/Defl | 0.0 | 0.0 |

Stress Calcs

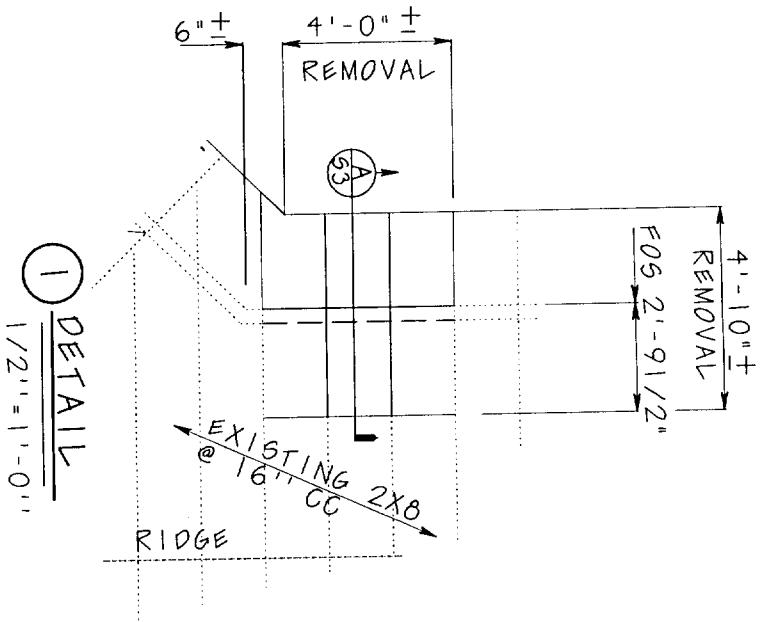
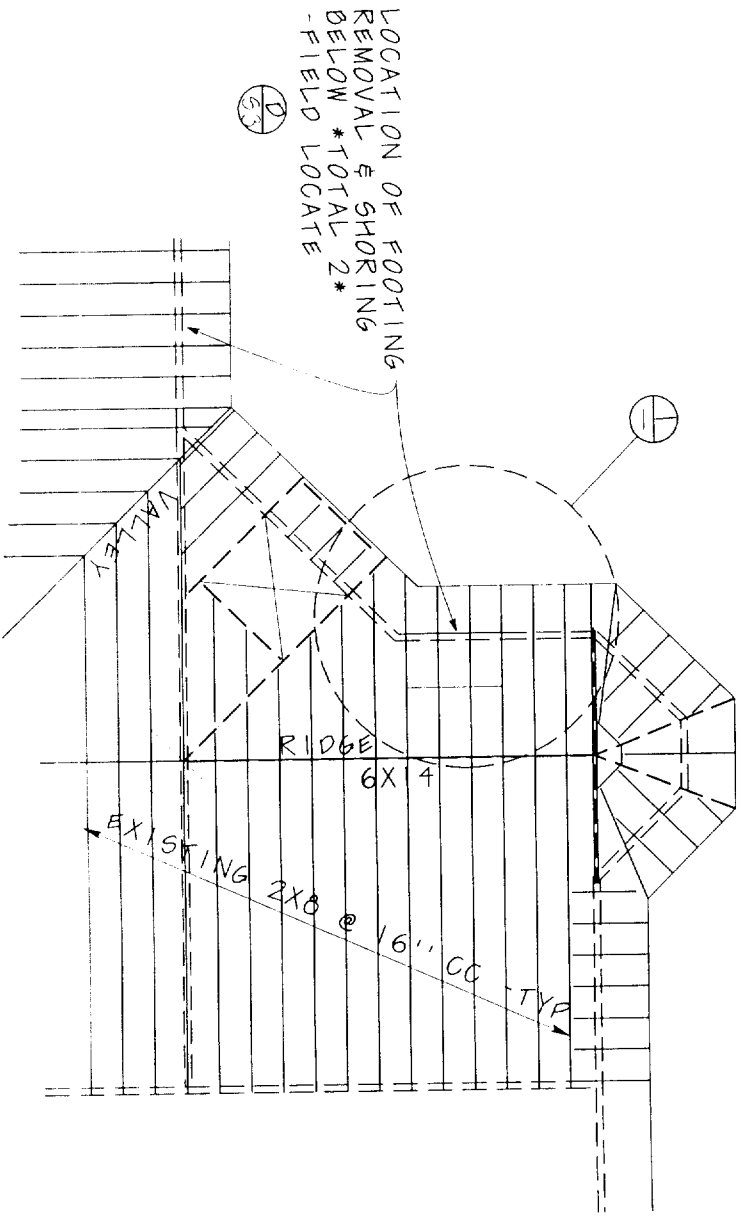
Bending Analysis

| | | | | | | | |
|-----------------|--------|-------------------|-------|------------------|-----------|---------------------|-----------|
| Ck | 32.339 | Rb | 0.000 | Sxx | 3.063 in3 | Area | 5.250 in2 |
| Cf | 1.500 | | | | | | |
| | | <u>Max Moment</u> | | <u>Sxx Req'd</u> | | <u>Allowable fb</u> | |
| @ Center | | 0.03 k-ft | | 0.21 in3 | | 1,509.38 psi | |
| @ Left Support | | 0.00 k-ft | | 0.00 in3 | | 1,509.38 psi | |
| @ Right Support | | 0.00 k-ft | | 0.00 in3 | | 1,509.38 psi | |

Shear Analysis

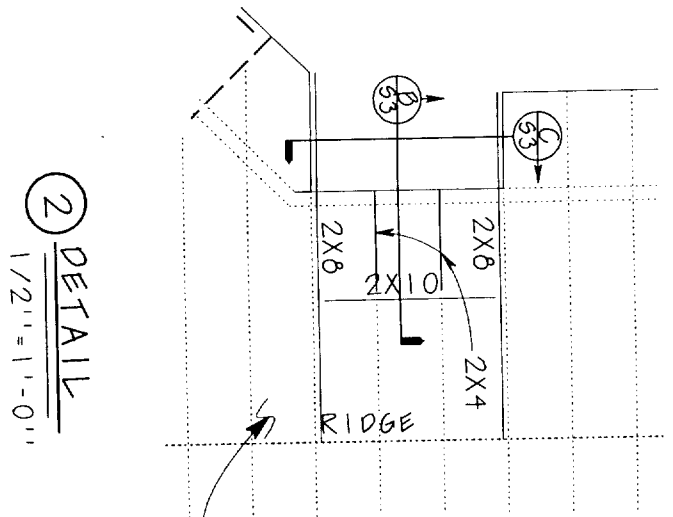
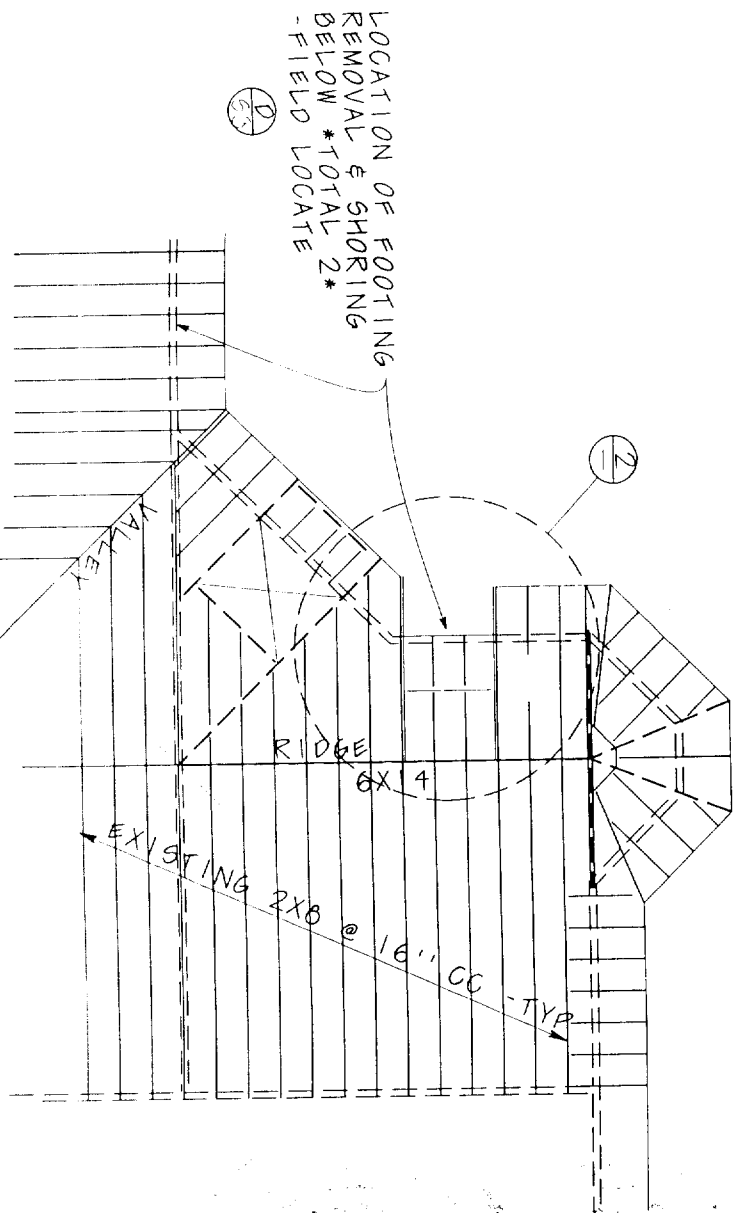
| | | |
|--------------------|----------------|-----------------|
| | @ Left Support | @ Right Support |
| Design Shear | 0.05 k | 0.05 k |
| Area Required | 0.474 in2 | 0.474 in2 |
| Actual Stress : fv | 109.25 psi | 109.25 psi |

ROOF FRAMING PLAN - REMOVAL
1/4" = 1'-0"



① DETAIL
1/2" = 1'-0"

ROOF FRAMING PLAN - NEW
1/4" = 1'-0"



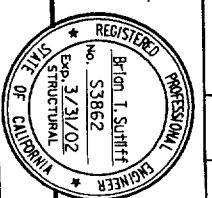
② DETAIL
1/2" = 1'-0"

CITY OF SACRAMENTO
DEVELOPMENT SERVICES DIV

SEP 29 1998

ISSUED

BRIGGS T. SUTHER
REGISTERED ENGINEER
STRUCTURAL



The engineer of this plan and specification shall not be held to permit or approve the violation of any City Ordinance or State Law.



MERCER RESIDENCE

6442 DRIFTWOOD WAY

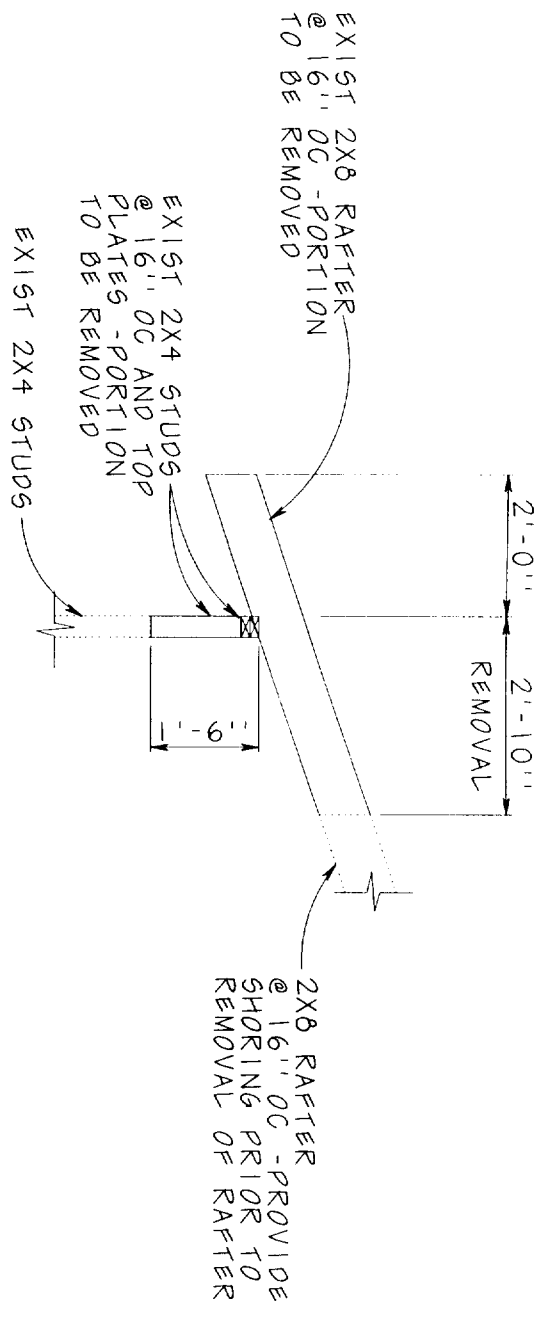
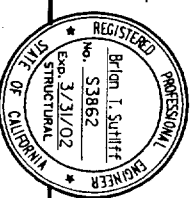
S2

SHEET

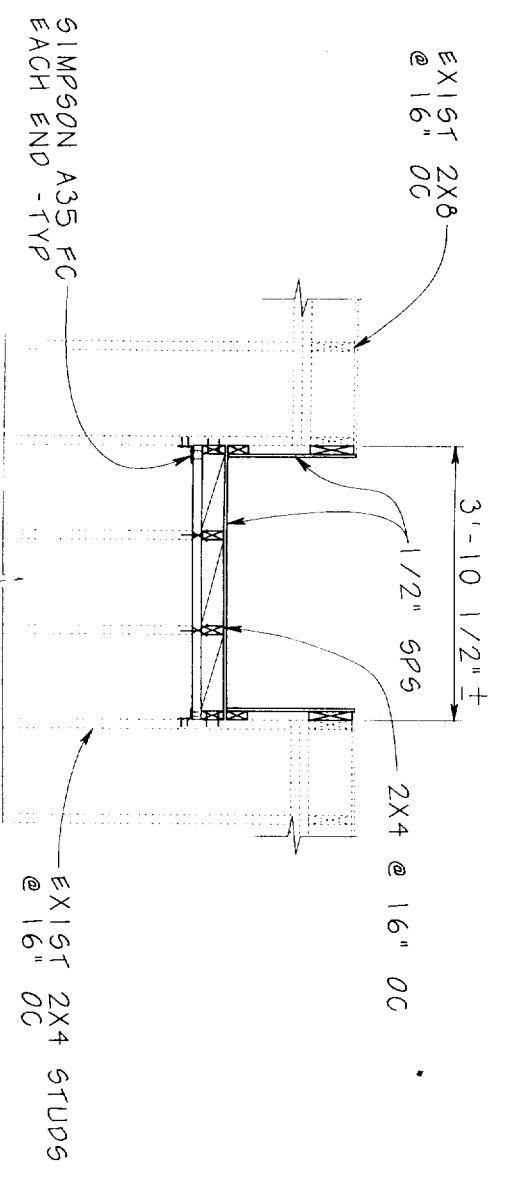
DR. WATH 9/29/93

SHEET TOTAL
NO. SHEETS

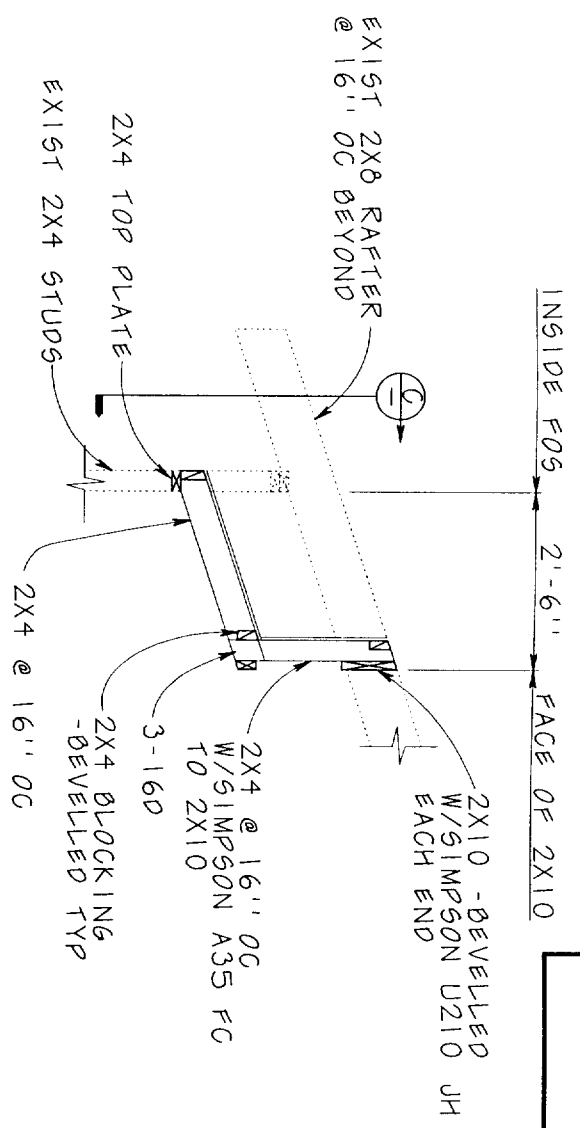
Richard T. Shiffert
REGISTERED ENGINEER
STRUCTURAL



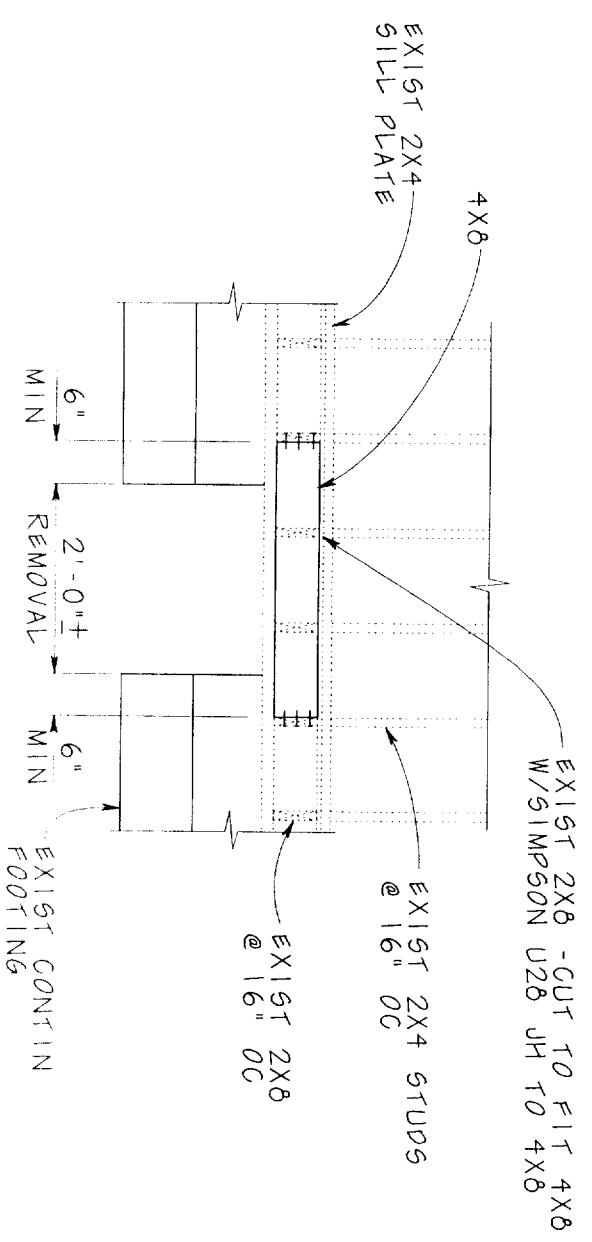
A SECTION
3/4" = 1'-0"



C SECTION
3/4" = 1'-0"



B SECTION
3/4" = 1'-0"



D SECTION
3/4" = 1'-0"

MERCER RESIDENCE
6442 DRIFTWOOD WAY
SACRAMENTO, CA. 95831