

CITY OF SACRAMENTO

Permit No: 0306309

1231 I Street, Sacramento, CA 95814

Insp Area: 2

Thos Bros: 336 F1

Site Address: 7055 WARBLER WY SAC

Sub-Type: RES

Parcel No: 031-0290-041

Housing (Y/N): N

CONTRACTOR

ACE HOME IMPROVEMENT
6729 WALNUT AV
ORANGEVALE, CA 95662

OWNER

LATHROP JAMES R/MARTHA C
7055 WARBLER WY
SACRAMENTO CA 95831

ARCHITECT

Nature of Work: T/O SHAKE RRROOF W/LT WT TILE AND SOME STRUCTURAL; 40 SQS 1 STORY HOUSE&GARAGE

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 0602864 Date 5/8/03 Contractor Signature Gay Legum

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 a ny 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 5/8/03 Applicant/Agent Signature Gay Legum

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 is:

Carrier STATE FUND

CITY OF SACRAMENTO
PAID
CITY NUMBER 1497387
MAY 11 8 2003

Exp Date 07/30/2003

(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 the provisions.

Date 5/8/03 Applicant Signature Legum

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.

Lathrop

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

TEL: 916.961.3960  
FAX: 916.961.6552

**ISSUED**  
MAY 08 2003  
Sacramento Building Division

May 6, 2003

Ventilated Roofing Systems  
6729 Walnut Avenue  
Orangevale, CA 95662  
TEL: (916) 988-4139; M: (916) 628-5530  
FAX: (916) 987-1078



Attn.: Mr. Gary Ferguson,

re: Job 2003153: LATHROP

Subject: Structural Investigation Report of the Roof for the Residence located at 7055 Warbler,  
Sacramento, CA 95831.

As requested by Mr. Gary Ferguson, 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 6, 2003. 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.

**CONSTRUCTION:**

Roof:  
The roof covering will consist of a Light Weight Concrete Tile over a batten system. The roof structure is conventionally framed with 2x6 and 2x8 rafters spaced at 16" and 24" on center with 2x6 purlins supported at no more than 10'-0" on center by 2x4 struts bearing on walls below except for the vaulted ceiling areas. The vaulted ceiling is constructed of 2x8 rafters spaced at 16" on center supported at the ridge by a 6x beam. The garage area is framed with 2x8 rafters spaced at 24" on center and 2x8 cross ties spaced at 4'-0" on center.

**CONCLUSIONS:**

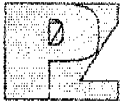
Roof:  
The roof structure currently lacks sufficient structural capacity for the applied live and dead loads. See "Recommendations" for location and repair to bring the roof structure up to the required capacity.



This set of plans and specifications shall be kept on the job at all times and shall not be removed therefrom without the same without written permission from the Building Inspection Division. The approval of this set of plans and specifications SHALL NOT be held to constitute an approval of the violation of any City Ordinance or State Law.

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Lathrop



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4701 Lakeside Way  
Fair Oaks, CA 95628

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### 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. 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. The unbraced length of the struts shall not exceed 8'-0" and the minimum slope of the struts shall not be less than 45 degrees from the horizontal. See detail 1.
2. Add a 2x6 DF#2 x 8'-0" long purlin with 2x4 struts to the bearing walls below. See detail 1.
3. Scab a 2x12 DF#2 x 14'-0" long purlin to the existing 2x6 purlin which spans 10'-0". Attach it with 16d's @ 3" on center. Support the 2x12 to the bearing walls below with 2x4 struts. See details 1 and 2.
4. Double the 2x6 rafters on each side of the existing skylights and nail together with 16d's @ 12" on center. 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.

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 BATTEN SYTEM**

<u>MATERIAL</u>	<u>WEIGHT</u>	
Light Weight Tile	7.30	psf
Roofing felt	0.30	psf
1x4 skip sht'g	1.09	psf
Batten system	0.50	psf
2x6 rafters @ 24" oc	<u>1.00</u>	psf
	Load	10.2 psf
	Roof Pitch Adjustment	<u>0.55</u> psf
	Total Load	10.7 psf

**LOCATION: VAULT BATTEN SYSTEM**

<u>MATERIAL</u>	<u>WEIGHT</u>	
Light Weight Tile	7.30	psf
Roofing felt	0.30	psf
Batten system	0.50	psf
1x4 skip sht'g	1.09	psf
2x8 rafters @ 16" oc	1.99	psf
Batt/blown insul	0.50	psf
1/2" Gypboard	<u>2.50</u>	psf
	Load	14.2 psf
	Roof Pitch Adjustment	<u>0.77</u> psf
	Total Load	14.9 psf

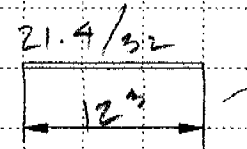
Job #: 03-152

Date: 5/6/02

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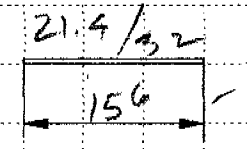
ROOF DECK

Dr = 10.7 psf  $\times 2^0 = 21.4$  psf      2x6 #2  
 Lr = 16.0'  $\times$   $\quad = 32$



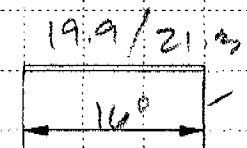
ROOF TERR

Dr = 10.7 psf  $\times 2^0 = 21.4$  psf      2x8 #2  
 Lr = 16.0'  $\times$   $\quad = 32$



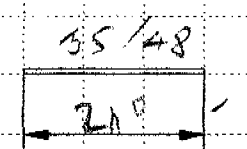
VAULT

Dr = 14.9 psf  $\times 4/13 = 19.9$  psf      2x8 #2  
 Lr = 16.0'  $\times$   $\quad = 21.3$



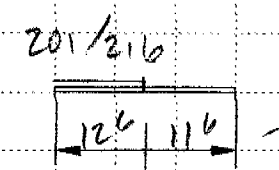
B1

Dr = 10.7 psf  $\times 3^0 = 35$  psf      4x12 #1  
 Lr = 16.0'  $\times$   $\quad = 48$



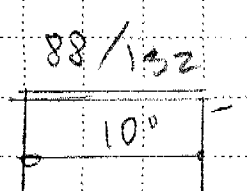
B2

Dr = 14.9 psf  $\times 13^0 = 201$  psf      6x14 #1  
 Lr = 16.0'  $\times$   $\quad = 216$



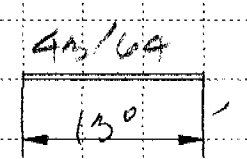
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Dr = 10.7 psf  $\times 8^3 = 88$  psf      2x12 #2  
 Lr = 16.0'  $\times$   $\quad = 132$



B3

Dr = 10.7 psf  $\times 4^0 = 43$  psf      4x12 #1  
 Lr = 16.0'  $\times$   $\quad = 64$



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

Title :  
 Dsgnr:  
 Description :

Job #  
 Date: 6:55PM, 6 MAY 03

Scope :

Rev. 560100  
 User: KW-0602844, Ver 5.6.1, 25-Oct-2002  
 (c)1983-2002 ENERCALC Engineering Software

### Timber Beam & Joist

c:\paul\pk and assoc\test.ecw:Calculations

#### Description RAFTERS AND BEAMS

#### Timber Member Information

Calculations are designed to 1997 NDS and 1997 UBC Requirements

Timber Section		rafter 2x6	rafter 2x8	vault 2x8	B1 4x12	B2 6x14	B3 4x12	LVL 2x12
Beam Width	in	1.500	1.500	1.500	3.500	5.500	3.500	1.500
Beam Depth	in	5.500	7.250	7.250	11.250	13.500	11.250	11.250
Le: Unbraced Length	ft	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Timber Grade		Douglas Fir - Larch, Douglas Fir - Larch, Douglas Fir - Larch, Douglas Fir - Larch, Douglas Fir - Larch, Douglas Fir - Larch, Douglas Fir - Larch, Douglas Fir - Larch						
Fb - Basic Allow	psi	875.0	875.0	875.0	1,000.0	1,350.0	1,000.0	875.0
Fv - Basic Allow	psi	95.0	95.0	95.0	95.0	85.0	95.0	95.0
Elastic Modulus	ksi	1,600.0	1,600.0	1,600.0	1,700.0	1,600.0	1,700.0	1,600.0
Load Duration Factor		1.250	1.250	1.250	1.250	1.250	1.250	1.250
Member Type		Sawn	Sawn	Sawn	Sawn	Sawn	Sawn	Sawn
Repetitive Status		Repetitive	Repetitive	Repetitive	No	No	No	No

#### Center Span Data

	ft	12.25	15.50	16.00	21.00	24.00	13.00	10.00
Span	ft							
Dead Load	#/ft	21.40	21.40	19.90	35.00		43.00	88.00
Live Load	#/ft	32.00	32.00	21.30	48.00		64.00	132.00
Dead Load	#/ft					201.00		
Live Load	#/ft					216.00		
Start	ft							
End	ft					12.500		

#### Results

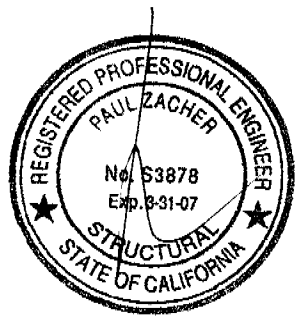
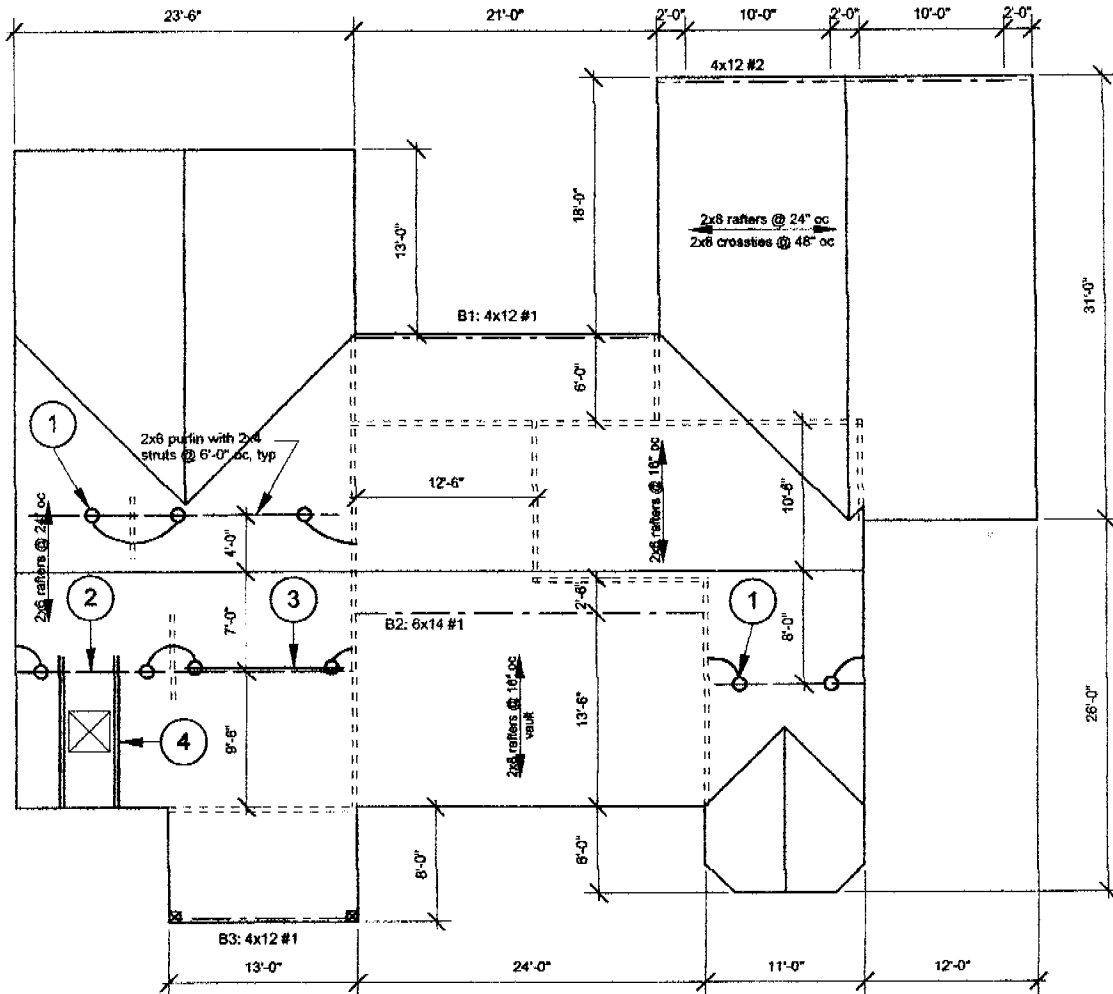
Ratio =		0.9720	0.9702	0.7977	0.5409	0.7685	0.2672	0.9536
Mmax @ Center	in-k	12.02	19.24	15.82	54.90	213.83	27.12	33.00
@ X =	ft	6.12	7.75	8.00	10.50	9.22	6.50	5.00
Fb : Actual	psi	1,589.4	1,464.5	1,204.0	743.7	1,280.0	367.4	1,043.0
Fb : Allowable	psi	1,635.2	1,509.4	1,509.4	1,375.0	1,665.6	1,375.0	1,093.8
		Bending OK	Bending OK	Bending OK	Bending OK	Bending OK	Bending OK	Bending OK
Fv : Actual	psi	55.2	53.0	42.2	30.3	69.0	22.7	79.8
Fv : Allowable	psi	118.8	118.8	118.8	118.8	106.3	118.8	118.8
		Shear OK	Shear OK	Shear OK	Shear OK	Shear OK	Shear OK	Shear OK

#### Reactions

@ Left End	DL	lbs	131.07	165.85	159.20	367.50	1,858.20	279.50	440.00
	LL	lbs	196.00	248.00	170.40	504.00	1,996.87	416.00	660.00
	Max. DL+LL	lbs	327.07	413.85	329.60	871.50	3,855.08	695.50	1,100.00
@ Right End	DL	lbs	131.07	165.85	159.20	367.50	654.30	279.50	440.00
	LL	lbs	196.00	248.00	170.40	504.00	703.12	416.00	660.00
	Max. DL+LL	lbs	327.07	413.85	329.60	871.50	1,357.42	695.50	1,100.00

#### Deflections

		Ratio OK	Deflection OK	Deflection OK	Deflection OK	Deflection OK	Deflection OK	Deflection OK
Center DL Defl	in	-0.326	-0.365	-0.385	-0.217	-0.447	-0.039	-0.070
L/Defl Ratio		451.1	510.1	498.7	1,161.7	644.9	3,985.7	1,725.9
Center LL Defl	in	-0.487	-0.545	-0.412	-0.298	-0.480	-0.058	-0.104
L/Defl Ratio		301.7	341.1	465.9	847.0	600.1	2,677.9	1,150.6
Center Total Defl	in	-0.813	-0.910	-0.797	-0.514	-0.927	-0.097	-0.174
Location	ft	6.125	7.750	8.000	10.500	11.136	6.500	5.000
L/Defl Ratio		180.8	204.4	240.9	489.9	310.8	1,601.7	690.4



**FRAMING NOTES:**

1. Add 2x4 struts to bearing below (total 5).
2. Add a 2x8 DF#2 x 8'-0" long purlin with 2x4 struts to bearing below.
3. Scab a 2x12 DF#2 x 14'-0" to the existing 2x6 purlin. See detail 2.
4. Double the 2x6 rafters on each side of the existing skylight (total 2 rafters).

**Notes:**

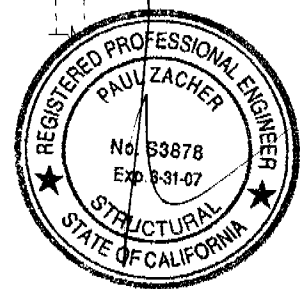
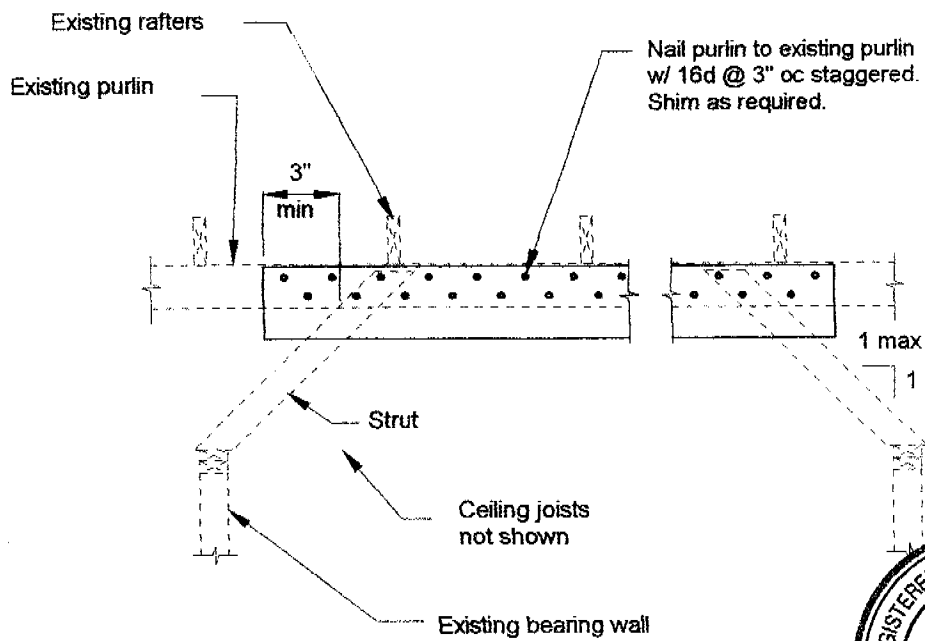
- A. This is a reroof project. The new roofing material shall be a Light Weight Concrete Tile. The tile shall weigh less than or equal to 7.3 psf.
- B. All rafters are 2x6 DF#2 and hips and valleys are 2x8 DF#2 unless otherwise noted.
- C. All existing rafter, hips, valleys, rafter ties, and purlins 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.



**ROOF PLAN - LATHROP**

Not to Scale





2

**PURLIN DETAIL**

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