

B

Type

Docs

Plans

B-144449

Building Permit Number

28900

Street Number

Seaview Rd

Street Name

Community Code

APN

COUNTY OF SONOMA

PERMIT AND RESOURCE MANAGEMENT DEPARTMENT

2550 Ventura Avenue, Santa Rosa, CA

(707) 527-1900 FAX (707) 527-1103

BUILDING PERMIT RECEIPT

B-144649

Site Location Information		Time: 15:56 Date: Jan 09, 1998
Address: 28900 SEAVIEW RD TIM		APN: 109-360-036
Cross Street: BSN WAY		Activity Type: B-BLD 9701
Owner		Applicant
BOTSFORD LOUIS W 788 MULBERRY LN DAVIS CA	955163429	BOTSFORD MARYLYNN 28900 SEAVIEW RD CAZADERO CA 916 758 1926
Contractor		Architect or Engineer
Lic. #:		Lic. #:

Status: ISSUED

Permit Description: ADDITION TO EXISTING SECOND DWELLING UNIT Type: SADD

Valuation/Contract Price of Work: \$29,546.40

Plan Check Multiplier: 1.00 Penalty Multiplier (Where Applicable):

Occupancy/ Dwellings	Type	Factor	Sq. Feet	Valuation
DWEL-Type V - Wd Frms		75 %	390	29,546.40
Total Valuation:				29,546.40

Table Date: 07/12/1997

Item #	Item Account Code	Description	Fee	Prev. Paid
0011	025619-1341	INSPECTIONS - OTHER	\$.00	\$.00
0012	025619-1341	INSP. OUTSIDE NORMAL HRS	\$.00	\$.00
0013	025619-1341	REINSPECTION(S) FEE	\$.00	\$.00
0018	025650-3141	PROCESSING FEE	\$35.00	\$35.00
0050	925404-4040	S.M.I.P. RESIDENTIAL	\$2.96	\$2.96
0060	025619-1341	BLDG PERM PLAN CHECK FEE	\$206.10	\$206.10
0062	025619-1341	ADDITIONAL PLANCHECK FEE	\$75.92	\$.00
0063	025619-1341	ADDITIONAL PERMIT FEE	\$116.81	\$.00
0100	025619-1341	SITE REVIEW/ELEV. CERT.	\$.00	\$.00
0120	025619-1341	FIRE STDS INSPECT - PRMD	\$.00	\$.00
0121	025619-1341	FIRE SAFE STDS/REF FEES	\$.00	\$.00
0122	025619-1341	ELECTRICAL FEE	\$30.10	\$30.10
0123	025619-1341	MECHANICAL FEE	\$30.10	\$30.10
0124	025619-1341	PLUMBING FEE	\$33.89	\$33.89
0132	025619-1341	BUILDING PERMIT FEE	\$317.07	\$317.07
0220	025213-1600	VIO. PENALTY FEE (BLDG)	\$.00	\$.00
0221	025213-4114	VIO. INVEST. FEE (BLDG)	\$.00	\$.00
0707	025627-3140	REF.-GRADING/DRAIN. PLAN	\$.00	\$.00
0708	025627-3140	REF.-GRD/DRAIN DAM/DRVWY	\$.00	\$.00
1165	025627-3829	ZONING PERMITS W/O D.R.	\$19.00	\$19.00
2000	925032-4040	PRM-CO-WDE CE DEV FEE TR	\$.00	\$.00
2001	925040-4040	PRM-CO-WDE NO DEV FEE TR	\$.00	\$.00
2002	925057-4040	PRM-CO-WDE SO DEV FEE TR	\$.00	\$.00
2003	925065-4040	PRM-CO-WDE WE DEV FEE TR	\$.00	\$.00
2005	925073-4040	PRM-EASTMN LN DEV FEE TR	\$.00	\$.00
2006	925107-4040	PRM-MOORLAND DEV FEE TR	\$.00	\$.00
2007	925024-4040	PRM LARK/WIK SP PLN DEV	\$.00	\$.00
2008	925081-4040	PRM-SONOMA VLY DEV FEE T	\$.00	\$.00
5011	025619-1341-WAIVED	INSPECTIONS - OTHER	\$.00	\$.00
5012	025619-1341-WAIVED	INSP. OUTSIDE NORMAL HRS	\$.00	\$.00
5013	025619-1341-WAIVED	REINSPECTION(S) FEE	\$.00	\$.00
5018	025650-3141-WAIVED	PROCESSING FEE	\$.00	\$.00
5060	025619-1341-WAIVED	BLDG PERM PLAN CHECK FEE	\$.00	\$.00
5062	025619-1341-WAIVED	ADDITIONAL PLANCHECK FEE	\$.00	\$.00
5100	025619-1341-WAIVED	SITE REVIEW/ELEV. CERT.	\$.00	\$.00
5120	025619-1341-WAIVED	ADDITIONAL FEE FIRE REV.	\$.00	\$.00
5121	025619-1341-WAIVED	FIRE S.S. REFERRAL FEE	\$.00	\$.00
5122	025619-1341-WAIVED	ELECTRICAL FEE	\$.00	\$.00
5123	025619-1341-WAIVED	MECHANICAL FEE	\$.00	\$.00
5124	025619-1341-WAIVED	PLUMBING FEE	\$.00	\$.00
5132	025619-1341-WAIVED	BUILDING PERMIT FEE	\$.00	\$.00
5220	025213-1600-WAIVED	VIOLATION PENALTY FEE	\$.00	\$.00
5221	025213-4114-WAIVED	VIOLATION INVESTIG FEE	\$.00	\$.00
5707	025627-3140-WAIVED	REF.-GRADING/DRAIN. PLAN	\$.00	\$.00
5708	025627-3140-WAIVED	REF.-GRD/DRAIN DAM/DRVWY	\$.00	\$.00
6165	025627-3829-WAIVED	ZONING PERMITS W/O D.R.	\$.00	\$.00
7000	925032-4040-WAIVED	PRM-CO-WDE CE DEV FEE TR	\$.00	\$.00
7001	925040-4040-WAIVED	PRM-CO-WDE NO DEV FEE TR	\$.00	\$.00
7002	925057-4040-WAIVED	PRM-CO-WDE SO DEV FEE TR	\$.00	\$.00
7003	925065-4040-WAIVED	PRM-CO-WDE WE DEV FEE TR	\$.00	\$.00
7005	925073-4040-WAIVED	PRM-EASTMN LN DEV FEE TR	\$.00	\$.00
7006	925107-4040-WAIVED	PRM-MOORLAND DEV FEE TR	\$.00	\$.00
7007	925024-4040-WAIVED	PRM LARK/WIK SP PLN DEV	\$.00	\$.00
7008	925081-4040-WAIVED	PRM-SONOMA VLY DEV FEE T	\$.00	\$.00

Permit qualified for fee waiver (Y/N): N	\$674.22	01/09/9801 \$674.22
Total Calculated Fees	\$674.22	# 0144649
Total Additional Fees	\$192.74	CASH REGISTER \$192.74
Previously Paid	\$674.22	VALIDATION \$192.74
Balance Due	\$192.74	REQUIRED \$192.74
		BELOW \$0.00

COUNTY OF SONOMA - PERMIT AND RESOURCE MANAGEMENT DEPARTMENT
 2550 Ventura Avenue, Santa Rosa, CA 95403 (707) 527-1900 FAX (707) 527-1103

Please Print Your Name: Marylynn Botstford Date Applied: 9-19-97

INFORMATION WITHIN HEAVY LINE TO BE COMPLETED BY APPLICANT

SITE LOCATION INFORMATION - PRINT CLEARLY

Site Address: <u>28900 Seaview Road</u>	City: <u>Jelmer</u>	Zip: _____
Cross-Street: <u>Ben Way</u>	APN: <u>109-360-036</u>	Project Name: _____
Directions: <u>Highway 11 to Meyers Grade</u>	Subd. Name: _____	Project # _____
Describe Project: <u>Addition to Existing 2nd Unit</u> <u>(Repair Fire Damage)</u>	Live: <u>390</u>	Contract Price: _____
	Garage: _____	
OWNER NAME AND ADDRESS		APPLICANT NAME AND ADDRESS
Name: <u>Louis Botstford</u>		Name: <u>Marylynn Botstford</u>
Mailing Address: <u>28900 Seaview Rd</u>		Mailing Address: <u>28900 Seaview Rd</u>
City: <u> Cazadero </u>	State: <u> CA </u>	City: <u> Cazadero </u>
Day Ph: <u> 916 758-4926 </u>	Fax: ()	Day Ph: <u> 916 758-4926 </u>

CONTRACTOR INFORMATION			OTHER PERSONS (ARCHITECT, ENGINEER, ETC.)		
Company Name: _____	Name: _____				
Address: _____	Address: _____				
City: _____ State: _____ ZIP: _____	City: _____ State: _____ ZIP: _____				
Day Ph: () Fax: ()	Day Ph: () Fax: ()				

WORKER'S COMPENSATION DECLARATION

I hereby affirm under penalty of perjury one of the following declarations:

I have and will maintain a certificate of coverage for workers compensation, as provided for by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued.

I have and will maintain worker's compensation insurance, as required by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued. My worker's compensation insurance carrier and policy number are:

Carrier: _____
 Policy No: _____

(This section need not be completed if the permit is for one hundred dollars (\$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 worker's compensation laws of California, and agree that I should become subject to the worker's compensation provisions of Section 3700 of the Labor Code, I shall forthwith comply with those provisions.

Exp. Date: _____ Applicant: _____

OWNER-BUILDER DECLARATION

I hereby affirm under penalty of perjury that I am exempt from the Contractor's 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 Contractor's License Law (Chapter 9 commencing with Section 7000) of Division 3 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).

I, as 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 Contractor's 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 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 Contractor's 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 Contractor's License Law.

I am exempt under Sec. _____ & B.P.C. for the reason _____

Date: 10/15/97 Owner: Louis Botstford

LICENSED CONTRACTOR'S 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.

Lic. Class: _____ Lic. No: _____

Exp. Date: _____ Contractor: _____

ASBESTOS DECLARATION

Written asbestos notification pursuant to Part 61 of Title 40 of the Code of Federal Regulations is attached to this permit. The work authorized by this permit is from construction that () does () does not contain asbestos, or that () no demolition is authorized by this permit.

I certify that I have read this application and affirm under penalty of perjury that the above information is correct. I agree to comply with all local Ordinances and State laws relating to building construction. I hereby authorize representatives of the County of Sonoma to enter upon the above-mentioned property for inspection purposes. If, after making the Certificate of Exemption for the Worker's Compensation provision of the Labor Code I should become subject to such provisions, I will forthwith comply. In the event I do not comply with the Worker's Compensation law, this permit shall be deemed revoked.

NOTICE: THIS PERMIT WILL EXPIRE BY LIMITATION IF WORK IS NOT STARTED IN 180 DAYS OR IF WORK IS ABANDONED FOR MORE THAN 180 DAYS. A REQUEST FOR TIME EXTENSION MUST BE SUBMITTED IN WRITING TO THE BUILDING CODE ADMINISTRATOR WITHIN THE FIRST 30 DAYS OF THE PERMIT.

Marylynn Botstford
 PERMITTEE SIGNATURE
28900 Seaview, Cazadero 95421
 ADDRESS CITY ZIP
 Owner Agent for Contractor Agent for Owner

Permit # B 744699 Area 2

CONSTRUCTION LENDING DECLARATION

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. 2097, Civ. C.)

Lenders Name: _____
 Lenders Address: _____

FOR DEPARTMENT USE 89-186

Zoning: RRD B/L 1606 Under UPLSU Across 10.56 ac

Existing Use/Structures: SEU/second unit 750 sf

Proposed Use/Structures: enlarge second unit to 340 sf

Zoning Min. Yard Requirements: Front 30 Left 10 Right 10 Back 20

NOTE: Fire Safe Standards require all parcels greater than 1 Acre to have a min. 10' setback unless mitigated. Mitigation Required Address subject to change

Approved for Permit Issuance: _____ Date: _____

By: J. Tesconi Date: 9/19/97

Conditions: Covered parking NOT req'd for second unit. UPLSU 89-186 expansion of 2nd second unit 750 sf Addition to 1st floor 1 bedroom + living space kitchen existing

Sewer Connection: Available Fees Paid

Approved by: _____ Date: _____

Road Encroachment: Fees Paid

Approved by: _____ Date: _____

Septic System: SEP 97-1444

Permit Clearance: S. LABA Date: 11-22-97

Flood Zone: Yes No 100 Year Flood Elevation: _____

Site Review: See - SEU 97-0188

By: _____ Date: _____

Condition of Soil at Job Site: Original Engineered Fill L

Required Reports: Geology Soils Compaction

Code Enforcement Violation Yes No

Work Authorized: add

EXPIRED

New Addition Alteration Moving Occ/Chg

Date: 3-28-07

Plans Approved By: SB Machine Space for Permit Fee

No Plans Subject to Field Inspection

Checked/Stamped By: 10-10-97 Date: _____

Permit Clearance: 015770 10-15-97 01

Type: <u>RR</u>	Occupancy: <u>1</u>	No. of Stories: <u>1</u>	No. of Bedrooms: <u>1</u>	TERRA	\$468.12
				TTL	\$468.12
Auto. Fire Sprinklers Req'd	No. of Units	Certificate of Occupancy	CHECK		\$468.12
			CHNG		\$0.00

Final Date: _____ Inspector: _____

JOB ADDRESS: 28900 Seaview Rd

MAP REFERENCE: See Map

PERMIT NUMBER: B 744699

INSPECTION AREA: 2

SPECIAL INSPECTION REQUIRED		<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	IF YES, SEE ADDITIONAL SHEET
INSPECTION RECORD	DATE	NAME		REMARKS
FOUNDATION				
FORMS/SETBACK	12-5-97	B. Bauer		
FOOTING	1-23-98	B. Bauer		
WALLS				
UPPER GROUND #				
CAISSONS/PIERS				
SLAB				
MASONRY				
RETAINING WALLS				
FIREPLACE				
FOOTING				
HEARTH/PROTECTION				
THROAT				
CHIMNEY				
UNDERFLOOR/UNDERSLAB				
U/F ELECTRICAL				8-28-98 under floor existing ok
U/F MECHANICAL				Pier to support Post - Plumb
U/F PLUMBING				B. Bauer
U/F FRAMING	12-24-97	B. Bauer		8-12-98 Progress @ site
U/F INSULATION	"	"		B. Bauer
SHEAR WALLS				8-21-98 Shearwalling @ chimney
<input type="checkbox"/> INTERIOR	3-14-00	B. Bauer		B. Bauer
<input type="checkbox"/> EXTERIOR				
DIAPHRAGMS				2-8-99 Progress @ site
<input type="checkbox"/> ROOF	8-11-00	B. Bauer		B. Bauer
<input type="checkbox"/> FLOOR				
SIDING/SHEATHING				3-29-99 Progress @ site
HOLD DOWNS				
CLOSE-IN				7-7-99 ok to insulate and
ROUGH ELECTRICAL				apply shear inside bath
ROUGH MECHANICAL				wall
ROUGH PLUMBING	7-7-99	B. Bauer		B. Bauer
ROUGH FRAME	"	"		
SMOKE DETECTORS				3-14-00 under ground elect ok
INSULATION	3-20-00	B. Bauer		B. Bauer
WALLBOARD				12-12-01 Progress B. Bauer
STUCCO/PLASTER				
<input type="checkbox"/> LATH				
<input type="checkbox"/> SCRATCH				
TUB/SHOWER PAN				
SUSPENDED CEILING				
ROUGH ELECTRICAL				
ROUGH MECHANICAL				
EXITING				
STAIRS/HANDRAILS				
RAMPS				
CORRIDORS/DOORS				
HANDICAP REQUIREMENTS				
ENERGY REQUIREMENTS				
TEMPORARY OCCUPANCY				
TEMPORARY ELECTRICAL				
TEMPORARY GAS				
ELECTRIC METER AUTHORIZATION				
PANEL BOARDS/SERVICE				
GAS METER AUTHORIZATION				
GAS PRESSURE TEST				
HOUSE				
YARD				
MANUF. HOME FOUNDATION				
MANUF. HOME INSTALLATION				FIRE INSPECTION REQUIRED <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
CONTINUITY				Inspected by:
STAIRS/SKIRTS				
RIDGE BOLTING				
SWIMMING POOLS				
PRE-GUNITE				
PRE-DECK				CLEARANCES:
PRE-PLASTER/FENCE				FIRE <input type="checkbox"/> Local <input type="checkbox"/> County
GRADING FINAL				HEALTH DEPARTMENT
ELECTRICAL FINAL				ZONING
MECHANICAL FINAL				SANITATION
PLUMBING FINAL				N.C.A.P.C.D.
FINAL				
OCCUPANCY (OK TO OCCUPY)				PLAN RETENTION REQUIRED? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

PERMIT # B-144649

SCHOOL DISTRICT CERTIFICATION OF COMPLIANCE

RETURN TO: Permit and Resource Management, County of Sonoma, 2550 Ventura Ave., Santa Rosa, California 95403 (as of July, 1995)

FROM: High School District W.S.C.H.S.D. Elementary District Fort Ross

THIS CERTIFICATION IS VOID IF NOT RETURNED TO THE BUILDING INSPECTION DEPARTMENT WITHIN 30 DAYS AFTER THIS FORM IS SIGNED AND DATED BY THE SCHOOL DISTRICTS

[To be completed by applicant for building permit(s) and verified by Permit and Resource Management]

EFFECTIVE DATE 9-19-97 (Date Plan Check Fee Was Paid) CITY RECEIPT NO. _____

PROJECT ADDRESS 28900 Seaview Rd - Cazadero

PROPERTY OWNER'S NAME Botsford, Louis & Mary Lynn

If applicable: Mobilehome Park Name _____ Lot/Space Number _____

ASSESSOR'S PARCEL NO. 109-360-036

PROJECT DESCRIPTION - Include number of dwelling units. If agricultural, state specific use. Also include information regarding whether or not replacement dwelling, building used for religious purposes, private school or owned and occupied by governmental entity.
addition

Building Type: Residential Commercial/Industrial Mobilehome/Manufactured Home

Square footage breakdown per residential unit: residential area* 390#

Total No. of residential units 1 Total Square Feet of Eligible Building Area*: 390#

I declare under penalty of perjury under the laws of the State of California on behalf of _____ that the information furnished above is accurate and correct to the best of my knowledge.
Mary Lynn Botsford (Developer/Owner)
Mary Lynn Botsford Applicant's Signature

The County of Sonoma Permit and Resource Management on _____, 19 97, has verified the square footage and use information furnished by the above developer.
County of Sonoma Signature C. Niederman

- * **Residential Buildings** are building occupancies for single and multiple family dwellings, apartments, condominiums, and residential hotels where the primary purpose is to provide a residence and not a services, such as health care.
- * **Commercial/Industrial Buildings** are building occupancies other than residential. Includes those buildings where the primary purpose is to provide a service, such as health care. Also includes senior citizen housing (Civil Code 51.3), residential care facility for elderly (H&S Code 15432(d)(9)), and adult only mobilehomes [Gov. Code 65995.2(a)]
- * **Eligible Commercial/Industrial Area** is all chargeable covered and enclosed space calculated by the building department. **Chargeable Covered and Enclosed Space** include all the covered and enclosed space within the perimeter of a commercial or industrial structure but does not include any storage areas incidental to the principal use of the development, garage, parking structure, unenclosed walkway, or utility or disposal area.
- * **Eligible Residential Area** means the **Assessable Space** calculated by the building department which includes all the square footage within the perimeter of a residential structure, but does not include any carport, walkway, overhang, patio detached accessory structure, or similar area.

[To be completed by school districts] **SCHOOL DISTRICT CERTIFICATION**

School District requirements for the above project have been satisfied pursuant to (circle one):

Gov. Code 53080 Mitigation Agreement Not subject to fee requirement

This Certification covers only the amount of square footage identified above. Any additional square footage for the project is subject to another certification of compliance.

ELEM. SCHOOL DISTRICT	HIGH SCHOOL DISTRICT
recpt. no. _____	recpt. no. _____
Square footage: _____ at \$ <u>0</u> / sq. ft.	Square footage: _____ at \$ <u>0</u> / sq. ft.
Total Fee Amount collected: \$ <u>0</u>	Total Fee Amount collected: \$ <u>0</u>
Authorized School District Official <u>Sally Sheldon</u> signature	Authorized School District Official <u>Sally Sheldon</u> signature
Date: <u>10/9/97</u> <u>Acct. Clerk</u> title	Date: <u>10/9/97</u> <u>Acct. Clerk</u> title

With regards to mobilehomes / manufactured homes, it is understood that the validity of any certificate of occupancy or Statement of Installation Acceptance issued by the City is conditioned on the concurrent payment of fees set forth above.

SOL • DATA



1-800-95-ENERGY

401-C College Avenue

Santa Rosa, CA 95401

707 • 545-4440 • fax 545-4447

email: info@soldata.com

bill mattinson • kevin gilleran • sarah pernula

project:

Botsford Residence: Remodel & Addition, Update

location:

Cazadero, CA

designer:

Marilyn Botsford

job number:

970576

date:

1/8/98

Title 24 Energy Compliance Documentation

Method of Compliance: Performance Method (Climate Zone 1)

Scope of Analysis: This Remodel and Addition project is in compliance with the 1995 edition of the California Residential Energy Standards when built as documented in this submittal.

Existing Conditions and/or Requirements

EXISTING HOUSE

INSULATION: Add R-25.2 roof (3.5" rigid)

GLAZING: New fixed windows must have a .72 U-value or lower.

HEATING: New gas wall furnace with a minimum 70% AFUE will supply the existing plus the addition.

WATER HEATING: See below

Specific Requirements: (must also conform to all applicable Mandatory Measures on Form MF-1)

ADDITION

INSULATION: R-13 walls, R-25.2 roof (3.5" rigid), R19 floor

HEATING: See existing.

DUCTS: NA

WATER HEATING: No change

GLAZING: New operable windows must have a .75 U-value or lower. New fixed windows must have a .72 U-value or lower. New wood french doors must have a .55 U-value or lower.

☆ **APPROVED** ☆

Note: The U-values for the above windows and doors must be **NFRC** certified and the above products must be properly labeled.

PERMIT AND RESOURCE
MANAGEMENT DEPARTMENT

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Project Title..... Botsford Res: Exist + Add          Date..... 01/08/98
Project Address..... 28900 Sea View Rd.          *****
                  Cazadero, CA                  *v4.51*
Documentation Author... Kevin P. Gilleran, CEM      *****
                  SOL*DATA
                  401-C College Avenue
                  Santa Rosa, CA 95401
                  707-545-4440
Climate Zone..... 01
Compliance Method..... MICROPAS4 v4.51 for 1995 Standards by Enercomp, Inc.
=====
| MICROPAS4 v4.51 File-BOTSFRE1 Wth-CTZ01S92 Program-TOC |
| User#-MP0817 User-SOL*DATA Run-EXIST/ADD |
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Project Title..... Botsford Res: Exist + Add Date..... 01/08/8
 Project Address..... 28900 Sea View Rd. *****
 Cazadero, CA *v4.51*
 Documentation Author... Kevin P. Gilleran, CEM ***** | Building Permit # |
 SOL*DATA | Plan Check / Date |
 401-C College Avenue | Field Check/ Date |
 Santa Rosa, CA 95401
 707-545-4440
 Climate Zone..... 01
 Compliance Method..... MICROPAS4 v4.51 for 1995 Standards by Enercomp, Inc.

MICROPAS4 v4.51 File-BOTSFRE1 Wth-CTZ01S92 Program-FORM CF-1R
 User#-MP0817 User-SOL*DATA Run-EXIST/ADD

GENERAL INFORMATION

Conditioned Floor Area..... 825 sf
 Building Type..... Single Family Detached
 Construction Type Existing Plus Addition
 Building Front Orientation: Front Facing 0 deg (N)
 Number of Dwelling Units... 1
 Number of Stories..... 1
 Floor Construction Type... Raised Floor
 Glazing Percentage..... 28.7 % of floor area
 Average Glazing U-value.... 0.75 Btu/hr-sf-F

BUILDING SHELL INSULATION

Component Type	Frame Type	Cavity R-value	Sheathing R-value	Insul R-value	Assembly U-value	Location/Comments
Wall	Wood	R-11	R-n/a	R-11	0.098	% area removed
Roof	Wood	R-25.2	R-0	R-25.2	0.047	3.5in rigid existing
Floor	Wood	R-19	R-n/a	R-19	0.037	To Crawlspace
Wall	Wood	R-13	R-n/a	R-13	0.088	
Roof	Wood	R-25.2	R-0	R-25.2	0.045	3.5in rigid new

FENESTRATION

Orientation	Area (sf)	U-Value	# of Panes	Interior Shading/Description	Exterior Shading	Overhang/Fins	Framing Type
Window Front (N)	20.0	0.940	2	Drapes.Std	None	None	Metal
Window Left (E)	6.0	0.940	2	Drapes.Std	None	None	Metal
Window Left (E)	15.0	0.940	2	Drapes.Std	None	None	Metal
Window Back (S)	6.3	0.940	2	Drapes.Std	None	None	Metal
Window Back (S)	33.4	0.940	2	Drapes.Std	None	None	Metal
Window Right (W)	4.0	0.940	2	Drapes.Std	None	None	Metal
Window Right (W)	10.0	0.720	2	SiteBlt/Fixed	None	None	Metal
Skylight Front (N)	18.0	0.800	2	None/Skylight	None	None	Metal
Door Front (N)	40.0	0.550	2	Drapes/Frnch.Dr	None	None	Wood
Door Front (N)	40.0	0.550	2	Drapes/Frnch.Dr	None	None	Wood
Window Back (S)	8.0	0.750	2	Drapes/Slider	None	None	Metal
Window Back (S)	8.0	0.750	2	Drapes/Slider	None	None	Metal
Window Back (S)	12.0	0.750	2	Drapes/Slider	None	None	Metal
Window Right (W)	10.0	0.720	2	SiteBlt/Fixed	None	None	Metal
Skylight Front (N)	5.7	0.800	2	None/Skylight	None	None	Metal

Project Title..... Botsford Res: Exist + Add

Date..... 01/08/98

MICROPAS4 v4.51 File=BOTSFRE1 Wth-CTZ01S92 Program=FORM CF-1R
User#-MP0817 User-SOL*DATA Run-EXIST/ADD

HVAC SYSTEMS

Table with 5 columns: Equipment Type, Minimum Efficiency, Duct Location, Duct R-value, Thermostat Type. Rows include Furnace, NoCooling, Furnace, NoCooling with values like 0.700 AFUE, 10.00 SEER, None, Attic, R-4.2, Setback.

SPECIAL FEATURES/REMARKS

COMPLIANCE STATEMENT

This certificate of compliance lists the building features and performance specifications needed to comply with Title-24, Parts 1 and 6 of the California Code of Regulations, and the administrative regulations to implement them.

DESIGNER or OWNER

Name.... Marilyn Botsford
Company.
Address. 28900 Sea View Rd.
Cazadero, CA
Phone... (916) 752-6169
License.

DOCUMENTATION AUTHOR

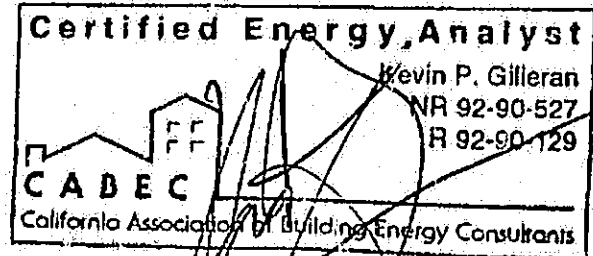
Name.... Kevin P. Gilleran, CEM
Company. SOL*DATA
Address. 401-C College Avenue
Santa Rosa, CA 95401
Phone... 707-545-4440

Signed.. [Signature] (date)

ENFORCEMENT AGENCY

Name....
Title...
Agency..
Phone...

Signed.. (date)



Project Title..... Date.....
 Project Address..... *****
 Documentation Author... Kevin P. Gilleran, CEM *v4.51*
 SOL*DATA * *****
 401-C College Avenue | Building Permit # |
 Santa Rosa, CA 95401 | Plan Check / Date |
 707-545-1440 | Field Check/ Date |
 Climate Zone.....
 Compliance Method..... MICROPAS4 v4.51 for 1995 Standards by Enercomp, Inc.
 | MICROPAS4 v4.51 File- Wth-CTZ02S92 Program-FORM MF-1R |
 | User#-MP0817 User-SOL*DATA Run- |

Lowrise residential buildings subject to the Standards must contain these measures regardless of the compliance approach used. Items marked with an asterisk (*) may be superseded by more stringent compliance requirements listed on the Certificate of Compliance. When this checklist is incorporated into the permit documents, the features noted shall be considered by all parties as binding minimum component performance specifications for the mandatory measures whether they are shown elsewhere in the documents or on this checklist only.

BUILDING ENVELOPE MEASURES

	Design- er	Enforce- ment
+150(a): Minimum R-19 ceiling insulation.	√	_____
150(b): Loose fill insulation manufacturers labeled R-Value.	√	_____
*150(c): Minimum R-13 wall insulation in framed walls (does not apply to exterior mass walls).	√	_____
+150(d): Minimum R-13 raised floor insulation in framed floors; minimum R-8 in concrete raise. floors.	√	_____
150(i): Slab edge insulation - water absorption rate no greater than 0.3%, water vapor transmission rate no greater than 2.0 perm/inch.	_____	_____
118: Insulation specified or installed meets CEC quality standards. Indicate type and form.	√	_____
116-17: Fenestration Products, Exterior Doors and Infiltration/exfiltration controls		
a. Doors and windows between conditioned and unconditioned spaces designed to limit air leakage.		
b. Manufactured fenestration products have label with certified U-value, and infiltration certification.		
c. Exterior doors and windows weatherstripped; all joints and penetrations caulked and sealed.	√	_____
150(g): Vapor barriers mandatory in Climate Zones 14 and 16 only.	_____	_____
150(f): Special infiltration barrier installed to comply with Sec. 151 meets CEC quality standards.	_____	_____
150(e): Installation of Fireplaces, Decorative Gas Appliances and gas logs		
1. Masonry and factory-built fireplaces have:		
a. Closeable metal or glass door		
b. Outside air intake with damper and control		
c. Blue damper and control		
2. No continuous burning gas pilots allowed.	√	_____

Project Title.....

Date.....

MICROPAS4 v4.51 File-WLLMSN8 Wth-CTZ02S92 Program-FORM MF-1R
 User#-MPO817 User-SOL*DATA Run-

SPACE CONDITIONING, WATER HEATING AND PLUMBING SYSTEM MEASURES

	Design- er	Enforce- ment
110-13: HVAC equipment, water heaters, showerheads and faucets certified by the CEC,	√	_____
150(h): Heating and/o. cooling loads calculated in accordance with ASHRAE, SMACNA or ACCA.	√	_____
150(i): Setback thermostat on all applicable heating systems.	√	_____
150(j): Pipe and Tank insulation		
1. Indirect hot water tanks (e.g., unfired storage tanks or backup solar hot water tanks) have insulation blanket (R-12 or greater) or combined interior/exterior insulation (R-16 or greater).		
2. First 5 feet of pipes closest to water heater tank, non-recirculating systems, insulated (R-4 or greater).		
3. All buried or exposed piping insulated in recirculating sections of hot water system.		
4. Cooling system piping below 55 degrees insulated.		
5. Piping insulated between heating source and indirect hot water tank.	√	_____
*150(m): Ducts and Fans		
1. Ducts constructed, installed and sealed to comply with UMC sections 601 and 603; ducts insulated to a minimum installed value of R-4.2 or ducts enclosed entirely within conditioned space.		
2. Exhaust fan systems have backdraft or automatic dampers.		
3. Gravity ventilating systems serving conditioned space have either automatic or readily accessible, manually operated dampers.	√	_____
114: Pool and Spa Heating Systems and Equipment		
1. System is certified with 78% thermal efficiency, on-off switch, weatherproof operating instructions, no electric resistance heating and no pilot light.		
2. System installed with:		
a. At least 36 inches pipe between filter and heater for future solar heating.		
b. Cover for outdoor pools or outdoor spa.		
3. Pool system has directional inlets and a circulation pump time switch.		
115: Gas-fired central furnace, pool heater, spa heater or household cooking appliance have no continuously burning pilot light (Exception: Non-electrical cooking appliance with pilot < 150 Btu/hr.).	√	_____

LIGHTING MEASURES

	Design- er	Enforce- ment
150(k): 40 lumens/watt or greater for general lighting in kitchens and rooms with water closets; and recessed ceiling fixtures IC (insulation cover) approved.	√	_____

Project Title..... Botsford Res: Exist + Add Date..... 01/08/98
 Project Address..... 26900 Sea View Rd. *****
 Documentation Author... Kevin P. Gilleran, CEM *****
 SOL*DATA
 401-C College Avenue
 Santa Rosa, CA 95401
 707-545-4440
 Climate Zone..... 01
 Compliance Method..... MICROPAS4 v4.51 for 1995 Standards by Enercomp, Inc.

Building Permit #
Plan Check / Date
Field Check/ Date

MICROPAS4 v4.51 File-BOTSFREX Program-ADDITIONS
 User#-MP0817 User-SOL*DATA Run-EXIST/ADD

ADDITION WORKSHEET - COMPUTER PERFORMANCE

EXISTING

File Name..... BOTSFRFX
 Run Title..... EXIST
 Conditioned Floor Area..... 323 sf
 Standard Design Energy Use. 1.15 kBtu/sf-yr
 Proposed Design Energy Use. 30.42 kBtu/sf-yr

NEW (EXISTING PLUS ADDITION)

File Name..... BOTSFR1
 Run Title..... EXIST/ADD
 Conditioned Floor Area..... 825 sf
 Standard Design Energy Use. 16.02 kBtu/sf-yr
 Proposed Design Energy Use. 27.34 kBtu/sf-yr

FLOOR AREA RATIO

Existing	New	Floor Area Ratio
Floor Area	Floor Area	
-----	-----	-----
323 /	825	= 0.392

ADDITION DESIGN ENERGY USE FOR NEW (EXISTING PLUS ADDITION)

New Standard	Floor Area Ratio	Existing Proposed	Existing Standard	Addition Design
-----	-----	-----	-----	-----
16.02	+ 0.392	x (30.42 -	1.15)	= 27.46

Note: If (Existing Proposed - Existing Standard) is negative, this difference is set to zero.

ADDITION ENERGY USE SUMMARY

Energy Use (kBtu/sf-yr)	Addition Design	Proposed Design	Compliance Margin
New.....	27.48	27.34	0.14

*** Addition complies with Computer Performance ***

```

=====
Project Title..... Botsford Res: Exist + Add      Date..... 01/08/98
Project Address..... 28900 Sea View Rd.          *****
                                           Cazadero, CA          *v4.51*
Documentation Author... Kevin P. Gilleran, CEM    *****
                                           SOL*DATA
                                           401-C College Avenue
                                           Santa Rosa, CA 95401
                                           707-545-4440
Climate Zone..... 01
Compliance Method..... MICROPAS4 v4.51 for 1995 Standards by Enercomp, Inc.
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| MICROPAS4 v4.51 File=BOTSFRE1 Vth=CTZ01S97 Program=FORM C-2R |
| User#=MP0817 User=SOL*DATA Run=EXIST/ADD |
=====
    
```

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=====
MICROPAS4 ENERGY USE SUMMARY
=====
Energy Use          Standard   Proposed   Compliance
(kBtu/sf-yr)       Design     Design     Margin
-----
Space Heating..... 15.87      26.61      -10.74
Space Cooling..... 0.15       0.73       -0.58
-----
Total              16.02      27.34      -11.32
=====
*** Water Heating not calculated ***
=====
    
```

GENERAL INFORMATION

```

Conditioned Floor Area..... 825 sf
Building Type..... Single Family Detached
Construction Type ..... Existing Plus Addition
Building Front Orientation: Front Facing 0 deg (N)
Number of Dwelling Units... 1
Number of Building Stories: 1
Weather Data Type..... ReducedYear

Floor Construction Type... Raised Floor
Number of Building Zones... 2
Conditioned Volume..... 7425 cf
Footprint Area..... 825 sf
Ground Floor Area..... 825 sf
Slab-On-Grade Area..... 0 sf
Glazing Percentage..... 28.7 % of floor area
Average Glazing U-value.... 0.75 Btu/hr-sf-F
Average Ceiling Height..... 9 ft
    
```

BUILDING ZONE INFORMATION

Zone Type	Floor Area (sf)	Volume (cf)	# of Dwelling Units	Cond-itioned	Thermostat Type	Vent Height (ft)	Special Vent Area (sf)
ADDITION							
Residence	502	4518	0.61	Yes	Setback	2.0	n/a
EXISTING							
Residence	323	2907	0.39	Yes	Setback	2.0	n/a

Project Title..... Botsford Res: Exist + Add Date..... 01/08/98

MICROPAS4 v4.51 File-BOTSFRE1 Wth-CT201S92 Program-FORM C-2R
 User#-MP0817 User-SOL*DATA Run-EXIST/ADD

OPAQUE SURFACES

Surface	Area (sf)	U-value	Insul R-val	Act Azm	Solar Tilt	Gains	Form 3 Reference	Location/ Comments
ADDITION - New								
8 Wall	200	0.088	13	0	90	Yes	None	
9 Wall	13	0.088	13	90	90	Yes	None	
10 Wall	297	0.088	13	180	90	Yes	None	
11 Wall	133	0.088	13	270	90	Yes	None	
12 Roof	208	0.045	25.2	n/a	0	Yes	RR.25.2.PLY	3.5in rigid
13 Roof	182	0.045	25.2	n/a	0	Yes	RR.25.2.PLY	
14 Roof	106	0.045	25.2	0	37	Yes	RR.25.2.PLY	
15 Floor	390	0.037	19	n/a	0	No	None	To Crawlspace
16 Floor	112	0.037	19	n/a	0	No	None	To Crawlspace
EXISTING - Existing								
1 Wall	147	0.098	11	0	90	Yes	None	
2 Wall	141	0.098	11	90	90	Yes	None	
3 Wall	127	0.098	11	180	90	Yes	None	
4 Wall	31	0.098	11	270	90	Yes	None	% area removed
5 Roof	104	0.047	25.2	0	37	Yes	RR.25.5.1XWD	3.5in rigid
6 Roof	201	0.047	25.2	0	37	Yes	RR.25.5.1XWD	
7 Floor	323	0.037	19	n/a	0	No	None	To Crawlspace

FENESTRATION SURFACES

Surface	Area (sf)	# of Pan- es	Frame Type	Vent Open Type	U-value	Act Azm	SC Glass Tlt	SC Int Shade	Interior Shading/ Description
ADDITION - New									
9 Door	40.0	2	Wood	Slider	0.550	0	90 0.88	0.78	Drapes/Frnch.Dr
10 Door	40.0	2	Wood	Slider	0.550	0	90 0.88	0.78	Drapes/Frnch.Dr
11 Window	8.0	2	Metal	Slider	0.750	180	90 0.88	0.78	Drapes/Slider
12 Window	8.0	2	Metal	Slider	0.750	180	90 0.88	0.78	Drapes/Slider
13 Window	12.0	2	Metal	Slider	0.750	180	90 0.88	0.78	Drapes/Slider
14 Window	10.0	2	Metal	Slider	0.720	270	90 0.88	0.78	SiteBlt/Fixed
15 Skylight	5.7	2	Metal	Fixed	0.800	0	37 1.00	0.88	None/Skylight
EXISTING - Existing									
1 Window	20.0	2	Metal	Slider	0.940	0	90 0.88	0.78	Drapes.Std
2 Window	6.0	2	Metal	Slider	0.940	90	90 0.88	0.78	Drapes.Std
3 Window	15.0	2	Metal	Slider	0.940	90	90 0.88	0.78	Drapes.Std
4 Window	6.3	2	Metal	Slider	0.940	180	90 0.88	0.78	Drapes.Std
5 Window	33.4	2	Metal	Slider	0.940	180	90 0.88	0.78	Drapes.Std
6 Window	4.0	2	Metal	Slider	0.940	270	90 0.88	0.78	Drapes.Std
8 Skylight	18.0	2	Metal	Fixed	0.800	0	37 1.00	0.88	None/Skylight
EXISTING - New									
7 Window	10.0	2	Metal	Slider	0.720	270	90 0.88	0.78	SiteBlt/Fixed

Project Tit. Botsford Res: Exist + Add

Date..... 01/08/98

MICROPAS4 v4.51 File-BOTSFRE1 Wth-CTZ01S92 Program-FORM C-2R
User#-MP0817 User-SOL*DATA Run-EXIST/ADD

HVAC SYSTEMS

System Type	Minimum Efficiency	Duct Location	Duct R-value	Duct Efficiency
ADDITION				
Furnace	0.700 AFUE	None	R-4.2	1.000
NoCooling	10.00 SEER	Attic	R-4.2	0.810
EXISTING				
Furnace	0.700 AFUE	None	R-4.2	1.000
NoCooling	10.00 SEER	Attic	R-4.2	0.810

SPECIAL FEATURES/REMARKS


```

Project Title..... Botsford Res: Existing          Date..... 01/07/98
Project Address..... 28900 Sea View Rd.          *****
                  Cazadero, CA                  *v4.51*
Documentation Author... Kevin P. Gilleran, CEM      *****
                  SOL*DATA
                  401-C College Avenue
                  Santa Rosa, CA 95401
                  707-545-4440
Climate Zone..... 01
Compliance Method..... MICROPAS4 v4.51 for 1995 Standards by Enercomp, Inc.
    
```

Building Permit #
Plan Check / Date
Field Check/ Date

```

MICROPAS4 v4.51 File-BOTSFREX Wth-CTZ01S92 Program-FORM C-2R
User#-MP0817 User-SOL*DATA Run-EXIST
    
```

=====

MICROPAS4 ENERGY USE SUMMARY

=====

Energy Use (kBtu/sf-yr)	Standard Design	Proposed Design	Compliance Margin
Space Heating.....	0.56	27.03	-26.47
Space Cooling.....	0.59	3.39	-2.80
Total	1.15	30.42	-29.27

*** Water Heating not calculated ***

=====

GENERAL INFORMATION

```

Conditioned Floor Area..... 323 sf
Building Type..... Single Family Detached
Construction Type ..... Existing
Building Front Orientation. Front Facing 0 deg (N)
Number of Dwelling Units... 1
Number of Building Stories. 1
Weather Data Type..... ReducedYear

Floor Construction Type.... Raised Floor
Number of Building Zones... 1
Conditioned Volume..... 2907 cf
Footprint Area..... 0 sf
Ground Floor Area..... 0 sf
Slab-On-Grade Area..... 0 sf
Glazing Percentage..... 0 % of floor area
Average Glazing U-value.... 0 Btu/hr-sf-F
Average Ceiling Height..... 9 ft
    
```

BUILDING ZONE INFORMATION

Zone Type	Floor Area (sf)	Volume (cf)	# of Dwell Units	Cond- itioned	Thermostat Type	Vent Height (ft)	Special Vent Area (sf)
EXISTING Residence	323	2907	1.00	Yes	Setback	2.0	n/a

Project Title..... Botsford Res; Existing

Date..... 01/07/98

MICROPAS4 v4.51 File-BOTSFREX Wth-CTZ01S92 Program-FORM C-2R

User#-MP0317 User-SOL+DATA Run-EXIST

OPAQUE SURFACES

Surface	Area (sf)	U-value	Insul R-val	Act Azm	Solar Tilt	Gains	Form 3 Reference	Location/ Comments
EXISTING - Existing								
1 Wall	147	0.098	11	0	90	Yes	None	
2 Wall	141	0.098	11	90	90	Yes	None	
3 Wall	127	0.098	11	180	90	Yes	None	
4 Wall	152	0.098	11	270	90	Yes	None	
5 Roof	312	0.051	19	0	37	Yes	None	
6 Floor	323	0.037	19	n/a	0	No	None	To Crawlspace

FENESTRATION SURFACES

Surface	Area (sf)	# of Panes	Frame Type	Vent Open Type	U-value	Act Azm	SC Glass Tilt	SC Int Shade	Interior Shading/ Description
EXISTING - Existing									
1 Window	20.0	2	Metal	Slider	0.940	0	90 0.88	0.78	Drapes.Std
2 Window	6.0	2	Metal	Slider	0.940	90	90 0.88	0.78	Drapes.Std
3 Window	15.0	2	Metal	Slider	0.940	90	90 0.88	0.78	Drapes.Std
4 Window	6.3	2	Metal	Slider	0.940	180	90 0.88	0.78	Drapes.Std
5 Window	33.4	2	Metal	Slider	0.940	180	90 0.88	0.78	Drapes.Std
6 Window	6.0	2	Metal	Slider	0.940	270	90 0.88	0.78	Drapes.Std
7 Window	4.0	2	Metal	Slider	0.940	270	90 0.88	0.78	Drapes.Std
8 skylight	18.0	2	Metal	Fixed	0.800	0	37 1.00	0.88	None/Skylight

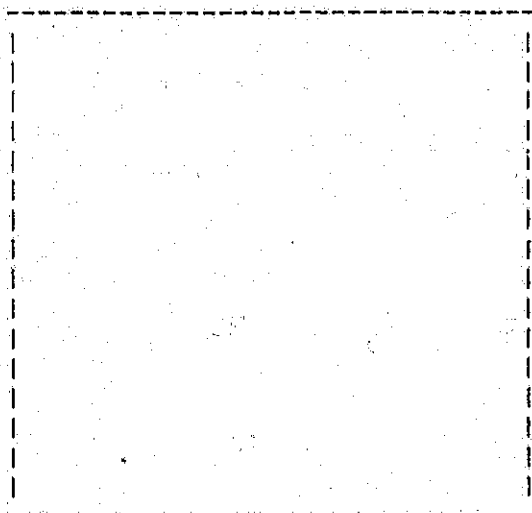
HVAC SYSTEMS

System Type	Minimum Efficiency	Duct Location	Duct R-value	Duct Efficiency
EXISTING				
Furnace	0.730 AFUE	None	R-4.2	1.000
ACSplit	10.00 SEER	Attic	R-4.2	0.810

SPECIAL FEATURES/REMARKS

Project Title..... Botsford Res: Exist + Add Date..... 01/08/98

MICROPAS4 v4.51 File-BOTSFRE1 Wch-CT#01S92 Program-FORM 3R
 User#-MP0817 User-SOL*DATA Run-EXIST/ADD



Parallel Path Method

Reference Name . RR.25.5.1XWD

Description Roof R-25.5 16oc

Type Roof

R-Value 25.2 Hr-sf-F/Btu

Framing

Material FIR.2X4

Type Wood

Description .. 2x4 fir

Spacing 16 inches on center

Framing Frac.. 0.10

Sketch of Construction Assembly

LIST OF CONSTRUCTION COMPONENTS

Material Name	Description	Cavity R-Value	Frame R-Value
0. FILM.EX	Exterior air film: winter value	0.17	0.17
1. SHNGL.ASPHLT	Asphalt shingle roofing	0.44	0.44
2. PLY.0.25	0.25 in plywood	0.31	0.31
3. 1INDECKING	1in decking	1.11	1.11
4c. ISOCYAN.3.50	3.50 in polyisocyanurate	25.20	--
4f. FIR.2X4	2x4 fir	--	3.46
5. PLY.0.50	0.50 in plywood	0.62	0.62
I. FILM.IN.RF	Inside air film: heat flow straight up	0.61	0.61
Total Unadjusted R-Values		28.46	6.72

FRAMING ADJUSTMENT CALCULATION

Cavity	Framing	Total
$U\text{-Value: } (1 / 28.46 \times 0.90) + (1 / 6.72 \times 0.10) = 0.047 \text{ Btu/hr-sf-F}$		
$\text{Total R-Value: } 1 / 0.047 = 21.50 \text{ hr-sf-F/Btu}$		

Project Title..... Botsford Res: Exist + Add

Date..... 01/08/98

MICROPAS4 v4.51 File-BOTSFRE1 Wth-CTZ01S92 Program-FORM 3R
 User#-MP0817 User-SOL*DATA Run-EXIST/ADD

Parallel Path Method

Reference Name // RR.25.2.PLY

Description Roof R-25.2 24oc

Type Roof

R-Value 25.2 Hr-sf-F/Btu

Framing

Material FIR.2X4

Type Wood

Description .. 2x4 fir

Spacing 24 inches on center

Framing Frac.. 0.07

Sketch of Construction Assembly

LIST OF CONSTRUCTION COMPONENTS

Material Name	Description	Cavity R-Value	Frame R-Value
0. FILM.EX	Exterior air film: winter value	0.17	0.17
1. SHINGL.ASPHLT	Asphalt shingle roofing	0.44	0.44
2. PLY.0.50	0.50 in plywood	0.62	0.62
3c. ISOCYAN.3.50	3.50 in polyisocyanurate	25.20	--
3f. FIR.2X4	2x4 fir	--	3.46
4. PLY.0.50	0.50 in plywood	0.62	0.62
1. FILM.IN.RF	Inside air film: heat flow straight up	0.61	0.61
Total Unadjusted R-Values		27.66	5.92

FRAMING ADJUSTMENT CALCULATION

Cavity	Framing	Total
$U\text{-Value: } (1 / 27.66 \times 0.93) + (1 / 5.92 \times 0.07) = 0.045 \text{ Btu/hr-sf-F}$		
$\text{Total R-Value: } 1 / 0.045 = 22.01 \text{ hr-sf-F/Btu}$		

```

=====
Project Title..... Botsford Res: Exist + Add      Date..... 01/08/98
Project Address..... 28900 Sea View Rd.          *****
                                           Cazadero, CA          *v4.51*
Documentation Author... Kevin P. Gilleran, CEM    *****
                                           SOL*DATA
                                           401-C College Avenue
                                           Santa Rosa, CA 95401
                                           707-545-4440
Climate Zone..... 01
Compliance Method..... MICROPAS4 v4.51 for 1995 Standards by Enercomp, Inc.
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| MICROPAS4 v4.51 File-BOTSFRE1 Wth-CTZ01S92 Program-HVAC SIZING |
| User#-MP0817 User-SOL*DATA Run-EXIST/ADD |
=====

```

GENERAL INFORMATION

```

-----
Floor Area..... 825 sf
Volume..... 7425 cf
Front Orientation..... Front Facing 0 deg (N)
Sizing Location..... FORT ROSS
Latitude..... 38.5 degrees
Winter Outside Design..... 35 F
Winter Inside Design..... 70 F
Summer Outside Design..... 74 F
Summer Inside Design..... 78 F
Summer Range..... 19 F
Interior Shading Used..... No
Exterior Shading Used..... No
Overhang Shading Used..... No
Latent Load Fraction..... 0.20

```

HEATING AND COOLING LOAD SUMMARY

Description	Heating (Btuh)	Cooling (Btuh)
Opaque Conduction and Solar.....	5850	1241
Glazing Conduction.....	6229	0
Glazing Solar.....	n/a	8426
Infiltration.....	3485	0
Internal Gain.....	n/a	1826
Ducts.....	0	1149
Sensible Load.....	15564	12642
Latent Load.....	n/a	2528
Minimum Total Load	15564	15170

Note: The loads shown are only one of the criteria affecting the selection of HVAC equipment. Other relevant design factors such as air flow requirements, outdoor design temperatures, coil sizing, availability of equipment, oversizing safety margin, etc., must also be considered. It is the HVAC designer's responsibility to consider all factors when selecting the HVAC equipment.

Project Title..... Botsford Res: Exist + Add

Date..... 01/08/98

MICROPAS4 v4.51 File-BOTSFRE1 Wlh-CTZ0: 02 Program-HVAC SIZING
 User#-MP0817 User-SOL*DATA Run-EXIST/ADD

HEATING AND COOLING LOAD SUMMARY BY ZONE

ZONE 'ADDITION'

Floor Area..... 502 sf
 Volume..... 4518 cf

Description	Heating (Btuh)	Cooling (Btuh)
Opaque Conduction and Solar.....	3404	743
Glazing Conduction.....	2687	0
Glazing Solar.....	n/a	2802
Infiltration.....	2121	0
Internal Gain.....	n/a	1007
Ducts.....	0	455
Sensible Load.....	8212	5007
Latent Load.....	n/a	1001
Minimum Zone Load	8212	6009

ZONE 'EXISTING'

Floor Area..... 323 sf
 Volume..... 2907 cf

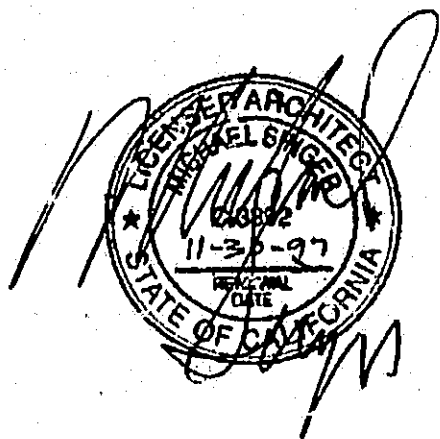
Description	Heating (Btuh)	Cooling (Btuh)
Opaque Conduction and Solar.....	2446	498
Glazing Conduction.....	3543	0
Glazing Solar.....	n/a	5624
Infiltration.....	1364	0
Internal Gain.....	n/a	819
Ducts.....	0	694
Sensible Load.....	7353	7634
Latent Load.....	n/a	1527
Minimum Zone Load	7353	9161

MICHAEL SINGER ARCHITECT

SISSORS TRUSS DESIGN
FOR

LOU & MARYLYNN BOTSFORD

28900 SEAVIEW ROAD
CAZADERO CA, 95421



9-19-97

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99-702 200 SHEETS 1/8" 5 SQUARE
100-702 200 SHEETS 1/8" 5 SQUARE



ROOF LOADS

DL	COMP SHINGLES	2.0 LB/Φ
	1/2" PLYWOOD	1.5
	2X6 RAFTERS /20/C	1.0
	R-11 INSULATION	.5
	1X WOOD CG	2.5
LL	9/12 PITCH	16.0
		<hr/>
		23.5 LB/Φ

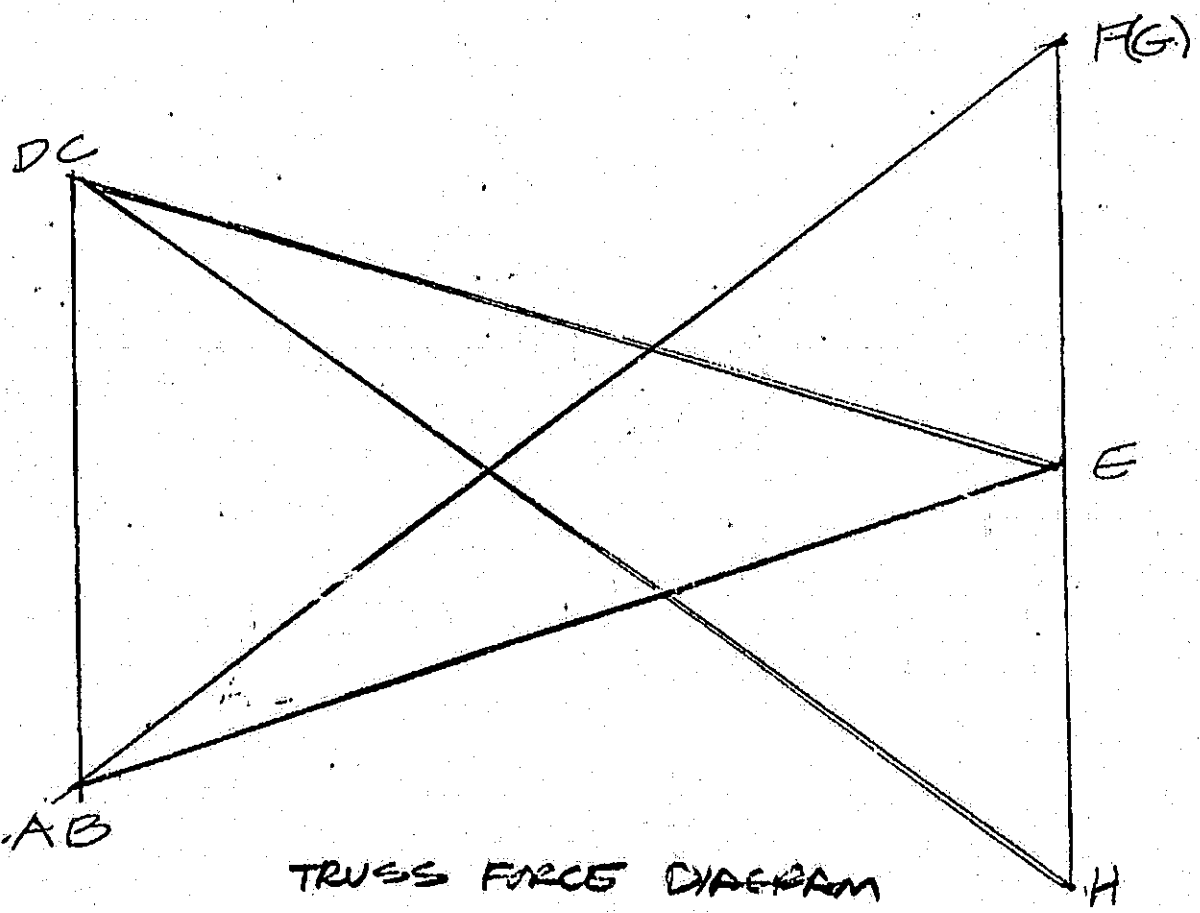
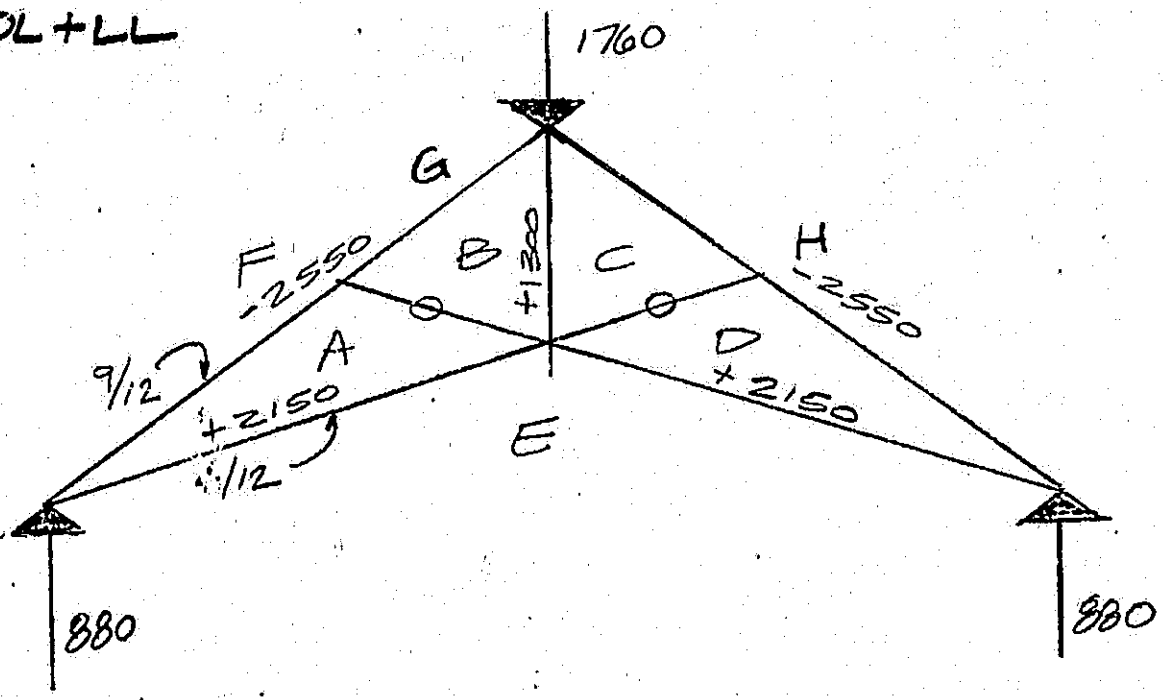
WIND LOAD

EXPOSURE B

$$P = C_e C_g q_s I_w$$

$$= (.62)(1.4)(16.4)(1.0) = 14.2 \text{ LB/Φ} \rightarrow$$

DL+LL



TRUSS FORCE DIAGRAM

DL+LL

1" = 400 LB

40 SHEETS PAPER 15 SQUARE
 50 SHEETS PAPER 15 SQUARE
 60 SHEETS PAPER 15 SQUARE
 70 SHEETS PAPER 15 SQUARE
 80 SHEETS PAPER 15 SQUARE
 90 SHEETS PAPER 15 SQUARE
 100 SHEETS PAPER 15 SQUARE
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 130 SHEETS PAPER 15 SQUARE
 140 SHEETS PAPER 15 SQUARE
 150 SHEETS PAPER 15 SQUARE
 160 SHEETS PAPER 15 SQUARE
 170 SHEETS PAPER 15 SQUARE
 180 SHEETS PAPER 15 SQUARE
 190 SHEETS PAPER 15 SQUARE
 200 SHEETS PAPER 15 SQUARE
 MADE IN U.S.A.



TRUSS FORCES

MEMBER	DL+LL	WIND		MAX <u>USE</u>
		WL	$\frac{3}{4}$ DL+LL + WL	
FA	-2550	-750	-2475	-2550
GB	-	-470	-352	-470
HC	-	-600	-450	-600
HD	-2550	-600	-2363	-2550
DE	+2150	+320	+1853	-2150
AE	+2150	+800	+2213	+2213
BC	+1300	+480	+1335	+1335
CD	0	0	0	0

400 SHEETS FILED 5 SQUARE
 42 431 60 SHEETS FILED 5 SQUARE
 42 432 100 SHEETS FILED 5 SQUARE
 42 433 100 SHEETS FILED 5 SQUARE
 42 434 100 SHEETS FILED 5 SQUARE
 42 435 200 RECYCLED WHITE 5 SQUARE
 42 436 200 RECYCLED WHITE 5 SQUARE
 Made in U.S.A.



TOP CHORD

COMPRESSION MEMBER FA

$$A_{REQ} = \frac{P}{F_c} = \frac{2250}{1450} = 1.5$$

$$M = \frac{WL}{8} \times 12 = \frac{(1758)(8)}{8} \times 12 = 21,096$$

$$S = \frac{M}{F} = \frac{21,096}{1000 \times 1.3} = 16$$

TRY 2-3x6

$$A = 2 \times 13.8 = 27.6$$

$$S = 2 \times 12.6 = 25.2$$

SOLVE AS SPACED COLUMN

$$\frac{L}{d} = \frac{5.0 \times 12}{2.5} = 24$$

TABLE 4-3 TCM

$$F_{ic} = 1900$$

$$A_{REQ} = \frac{P}{F_{ic}} = \frac{2250}{1900} = 1.1 < 27.6 \text{ OK}$$

COMBINED STRESSES:

$$\frac{P}{A F_{ic}} + \frac{M}{S F_b} \leq 1$$

$$\frac{2250}{(27.6)(1900)} + \frac{21,096}{(25.2)(1300)} = .04 + .64 = .68 < 1$$

OK

USE 2-3x6's

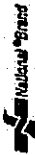
(MAY INCREASE DEPTH
FOR BOLTING)

BOTTOM CHORD
TENSION MEMBER

$$A_{REQ} = \frac{P}{F_t} = \frac{223}{675} = 3.3$$

USE 3X6 A = 12.6 > 3.3

12 1/2" 500 SHEETS PLUS 15 SQUARE
43 3/32" 100 SHEETS PLUS 15 SQUARE
43 3/32" 100 SHEETS PLUS 15 SQUARE
43 3/32" 100 SHEETS PLUS 15 SQUARE
43 3/32" 100 SHEETS PLUS 15 SQUARE
43 3/32" 100 RECYCLED WHITE 15 SQUARE
43 3/32" 100 RECYCLED WHITE 15 SQUARE
MADE IN U.S.A.

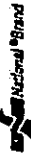


TRUSS CHORD CONNECTIONS

ROOF ADJ. FACTORS TABLE 22-III-A

LOAD DURATION $C_D = 1.90$ WET SERVICE $C_M = 1.00$ TEMP. FACTOR $C_E = 1.00$ GROUP ACTION $C_g = .99$ GEOM FACTOR $C_{\Delta} = 1.00$

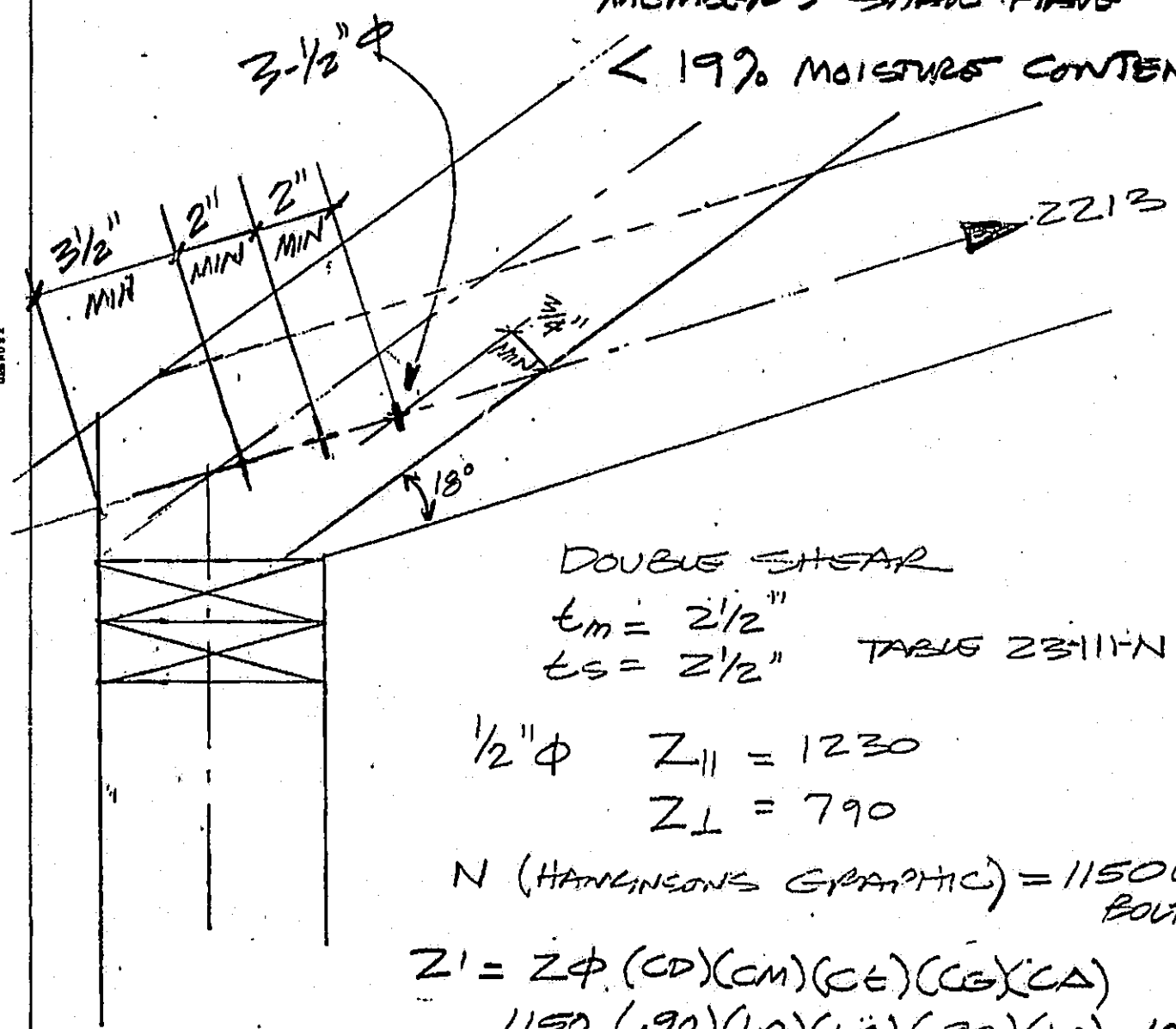
15782 400 SHEETS FULLER 5 SQUARE
43381 50 SHEETS FIVE PLY 5 SQUARE
43382 100 SHEETS FIVE PLY 5 SQUARE
43383 200 SHEETS FIVE PLY 5 SQUARE
43384 100 SHEETS FIVE PLY 5 SQUARE
43385 100 RECYCLED WHITE 5 SQUARE
43386 200 RECYCLED WHITE 5 SQUARE
MADE IN U.S.A.



JOINT A&F

NOTE WOOD TRUSS
MEMBERS SHALL HAVE

< 19% MOISTURE CONTENT



DOUBLE SHEAR

$$t_m = 2\frac{1}{2}''$$

$$t_s = 2\frac{1}{2}'' \quad \text{TABLE 2311-N}$$

$$\frac{1}{2}'' \phi \quad Z_{||} = 1230$$

$$Z_{\perp} = 790$$

$$N \text{ (HANKINSON'S GRAPHIC)} = 1150 \text{ LB/BOLT}$$

$$Z' = Z_{\phi} (C_D)(C_M)(C_t)(C_G)(C_A)$$

$$1150 (.90)(1.0)(1.10)(.99)(1.10) = 1024$$

$$3 \times 1024 = 3072 > 2213$$

SPACING

$$4d \times \frac{1}{2}'' = 2''$$

EDGE DIST

$$1.5d \times \frac{1}{2}'' = \frac{3}{4}''$$

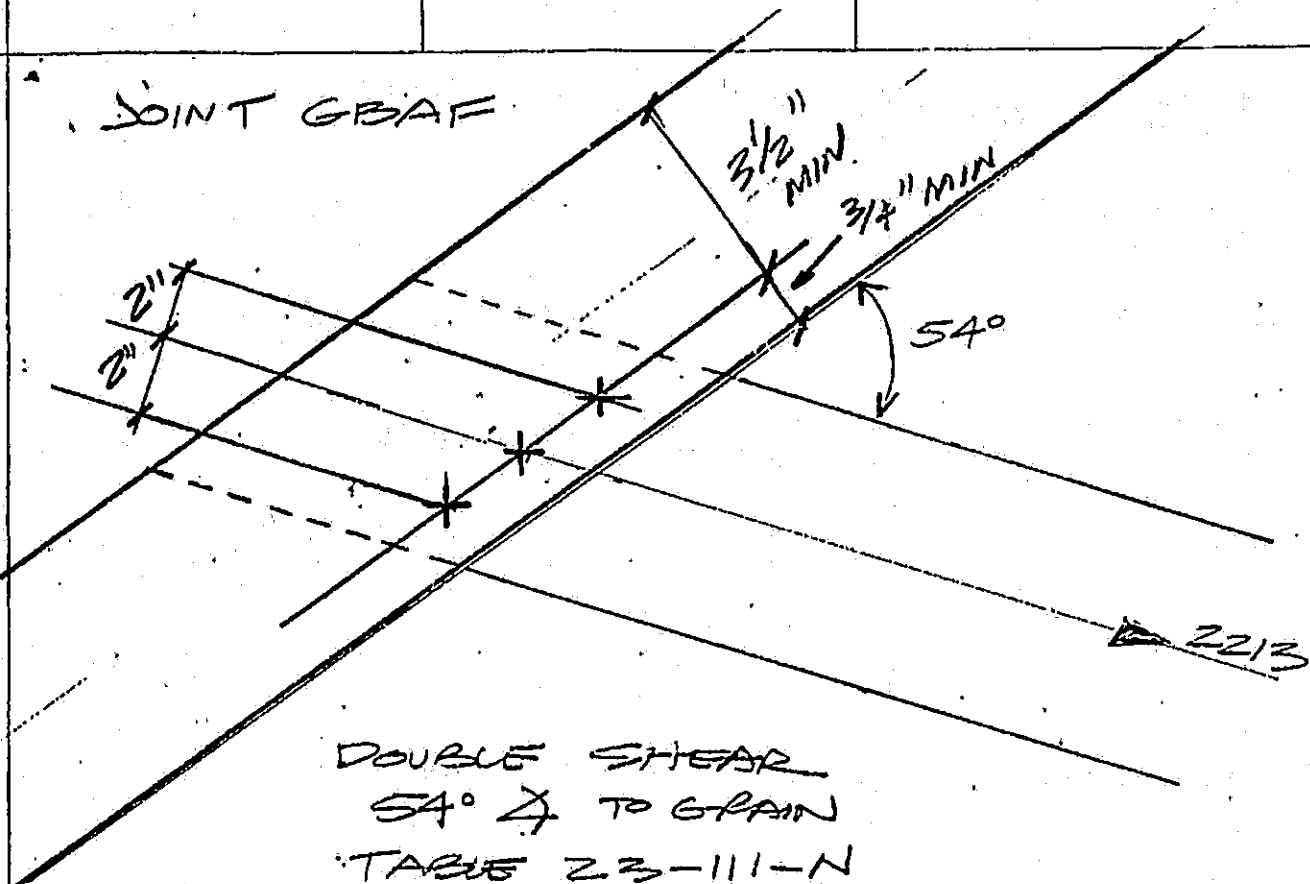
END DIST

$$7d \times \frac{1}{2}'' = 3\frac{1}{2}''$$

500 SHEETS FULLER SQUARE
50 SHEETS EYE-PASS SQUARE
100 SHEETS EYE-PASS SQUARE
200 SHEETS EYE-PASS SQUARE
200 RECYCLED WHITE SQUARE
42,399 MADE IN U.S.A.



JOINT GRAF



DOUBLE SHEAR
 54° Δ TO GRAIN

TABUL 23-111-N

$t_m = 2\frac{1}{2}$ $t_s = 2\frac{1}{2}$ "

$\frac{1}{2}$ " ϕ $Z_{II} = 1230$
 $Z_L = 790$

N - HANKINSONS GRAPHIC = 375

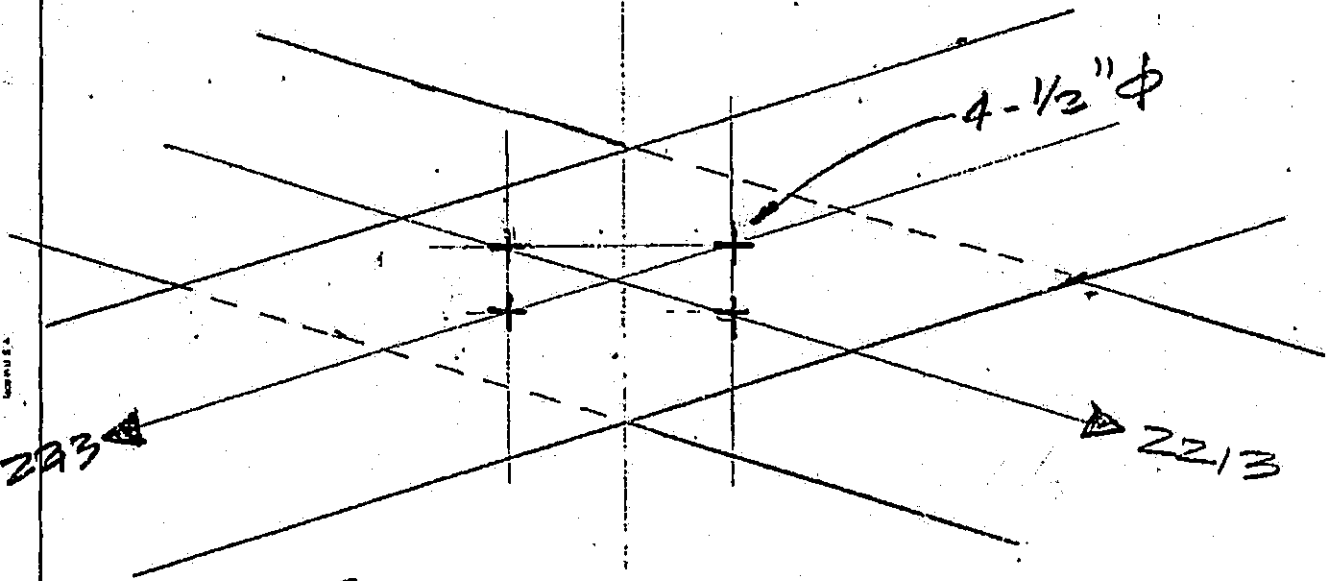
$Z' = 375 (.90)(.99) = 780 \text{ LB/BOLT}$

$\frac{2213}{780} = 2.8$ USE $3\frac{1}{2}$ " ϕ BOLTS

500 SHEETS MILLER 5 SQUARE
 40 SHEETS EYEGLASS 5 SQUARE
 100 SHEETS EYEGLASS 5 SQUARE
 200 SHEETS EYEGLASS 5 SQUARE
 100 RECYCLED WHITE 5 SQUARE
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BOTTOM CHORD SPACE
 JOINT ABCDE - 1/2 LAP SPACE



15 SHEETS PAPER 1 SQUARE
 20 SHEETS PAPER 1 SQUARE
 30 SHEETS PAPER 1 SQUARE
 40 SHEETS PAPER 1 SQUARE
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 990 SHEETS PAPER 1 SQUARE
 1000 SHEETS PAPER 1 SQUARE

P = 2213 TENSION

|| TO GRAIN SINGLE SHEAR

$t_m = 2\frac{1}{2}$ $t_s = 2\frac{1}{2}$

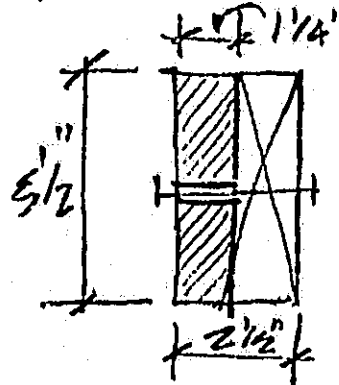
TABLE 23-111-D

$\frac{1}{2}'' \phi$ $Z_{||} = 610 \text{ LB/INCH}$

$Z_{\phi} = Z_{||} (.90)(.99) = 544 \text{ LB/INCH}$

$\frac{2213}{544} = 4 \text{ BOLTS}$

CHECK NET SECTION



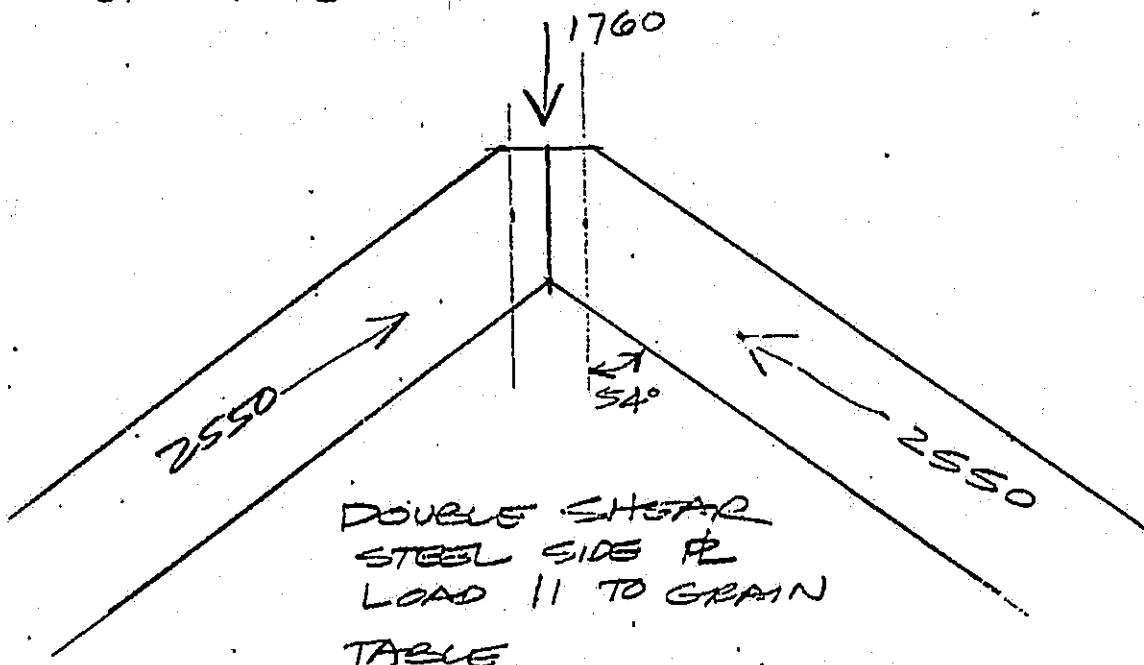
$\frac{1}{2}'' \phi + \frac{1}{16} \times 2 = 1.125''$

$5.5 - 1.125 = 4.375''$

$4.375'' \times 1.25'' = 5.5 \text{ IN}^2$

$A_{REQ} = \frac{P}{F_t} = \frac{2213}{1675} = 3.3 \text{ IN}^2$
 5.5
 OK

TOPCHORD AT RIDGE JOINT G H C B



$t_m = 2\frac{1}{2}'' \quad t_s = \frac{1}{4}''$

$\frac{1}{2}'' \phi Z_{||} = 1510$

$Z' = 1510 \times .90 \times .99 = 1345$

$1345 \text{ LB} \times 2 = 2690 \text{ LB} > 2550$

CHECK SMALLER LOAD @ \perp TO GRAIN

$Z_{||} = 1510$

$Z_{\perp} = 790$

HANKINONE GRAPHIC $N = 900$

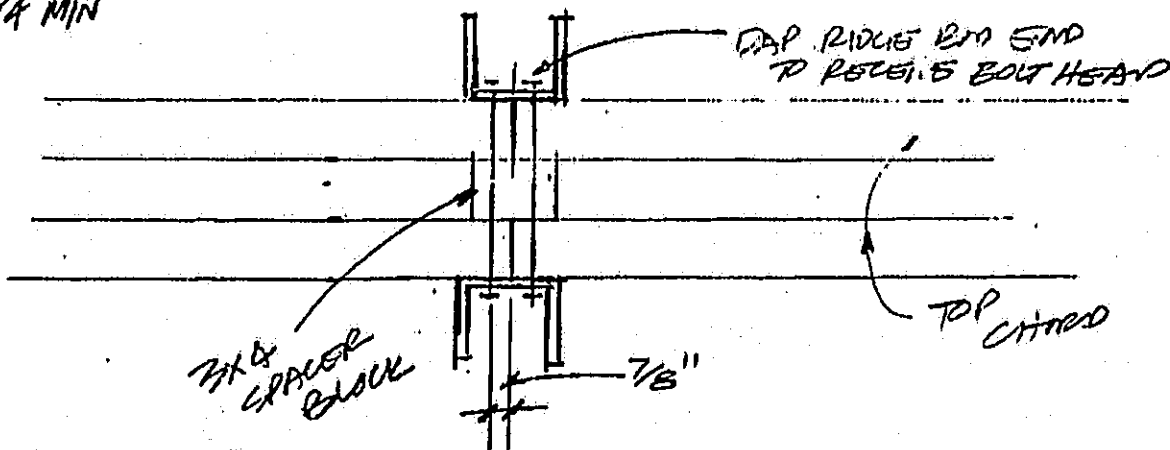
$Z' = 900 \times .90 \times .99 = 802$

$802 \text{ LB} \times 4 = 3208 > 1760$

EDGE
DIST

1.5D =

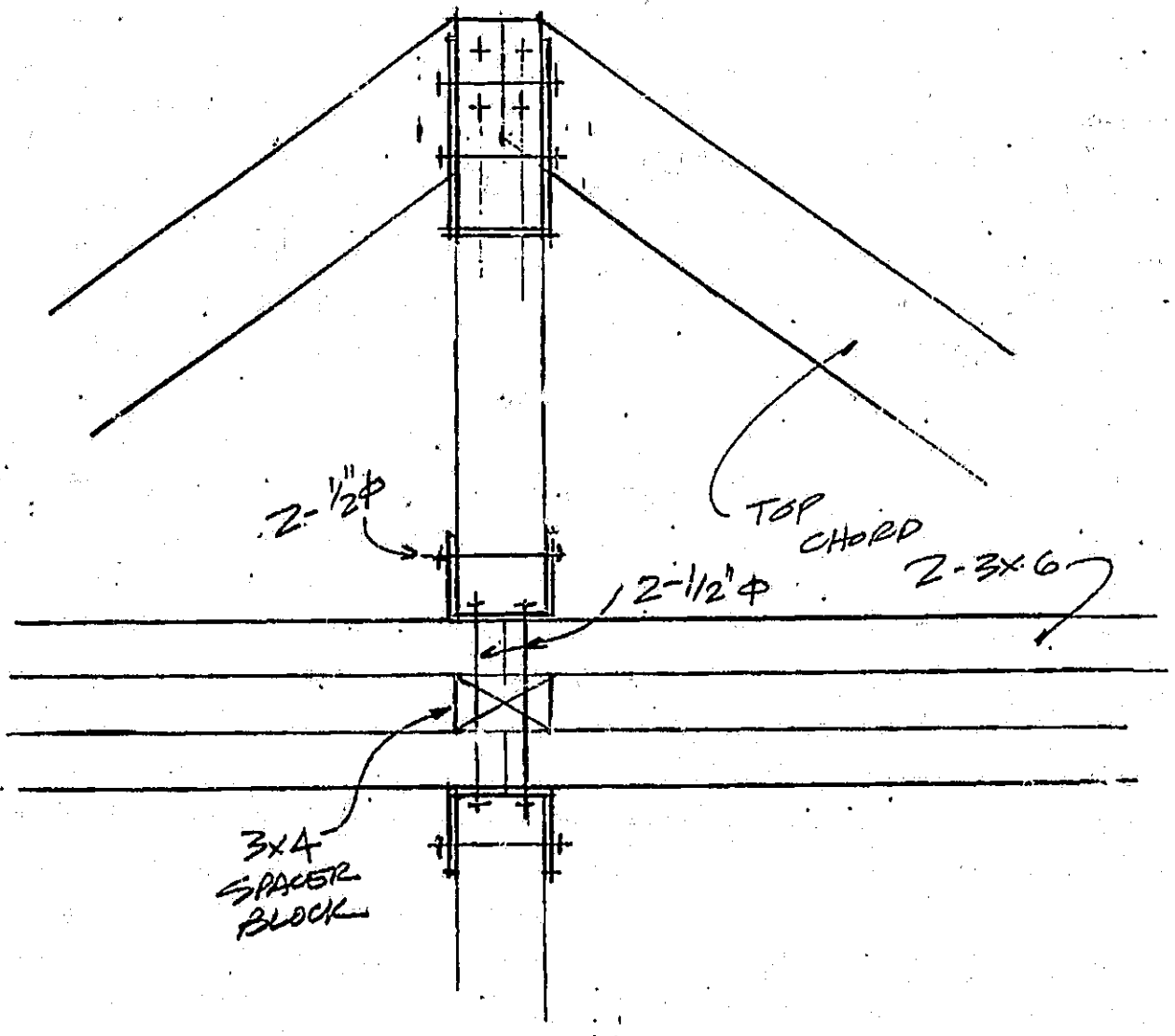
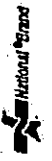
$\frac{3}{8}'' \text{ MIN}$



RIDGE / TRUSS CONN.

HUC410

13782 500 SHEETS FILLER 5 SQUARE
 43381 100 SHEETS FILLER 5 SQUARE
 43382 100 SHEETS FILLER 5 SQUARE
 43383 100 SHEETS FILLER 5 SQUARE
 43384 100 SHEETS FILLER 5 SQUARE
 43385 100 SHEETS FILLER 5 SQUARE
 43386 100 SHEETS FILLER 5 SQUARE
 43387 100 SHEETS FILLER 5 SQUARE
 43388 100 SHEETS FILLER 5 SQUARE
 43389 100 SHEETS FILLER 5 SQUARE
 MADE IN U.S.A.



13/4

RIDGE
BEAM
HANGER

4X10 RIDGE
2-1/2" ϕ

12 1/2" 100 SHEETS, FULLER \$ SQUARE
 13 1/2" 100 SHEETS, FULLER \$ SQUARE
 14 1/2" 100 SHEETS, FULLER \$ SQUARE
 15 1/2" 100 SHEETS, FULLER \$ SQUARE
 16 1/2" 100 SHEETS, FULLER \$ SQUARE
 17 1/2" 100 SHEETS, FULLER \$ SQUARE
 18 1/2" 100 SHEETS, FULLER \$ SQUARE
 19 1/2" 100 SHEETS, FULLER \$ SQUARE
 20 1/2" 100 SHEETS, FULLER \$ SQUARE
 21 1/2" 100 SHEETS, FULLER \$ SQUARE
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 89 1/2" 100 SHEETS, FULLER \$ SQUARE
 90 1/2" 100 SHEETS, FULLER \$ SQUARE
 91 1/2" 100 SHEETS, FULLER \$ SQUARE
 92 1/2" 100 SHEETS, FULLER \$ SQUARE
 93 1/2" 100 SHEETS, FULLER \$ SQUARE
 94 1/2" 100 SHEETS, FULLER \$ SQUARE
 95 1/2" 100 SHEETS, FULLER \$ SQUARE
 96 1/2" 100 SHEETS, FULLER \$ SQUARE
 97 1/2" 100 SHEETS, FULLER \$ SQUARE
 98 1/2" 100 SHEETS, FULLER \$ SQUARE
 99 1/2" 100 SHEETS, FULLER \$ SQUARE
 100 1/2" 100 SHEETS, FULLER \$ SQUARE
 MADE IN U.S.A.



9"

1/4" ϕ

2"

3"

5/8"

2-1/2" ϕ

3X4 SPACER
BLOCK

3/4" ϕ
ROD

2-3X6
TOP CHORD

2-1/2" ϕ

1/4" ϕ TYP
A36 STEEL TYP

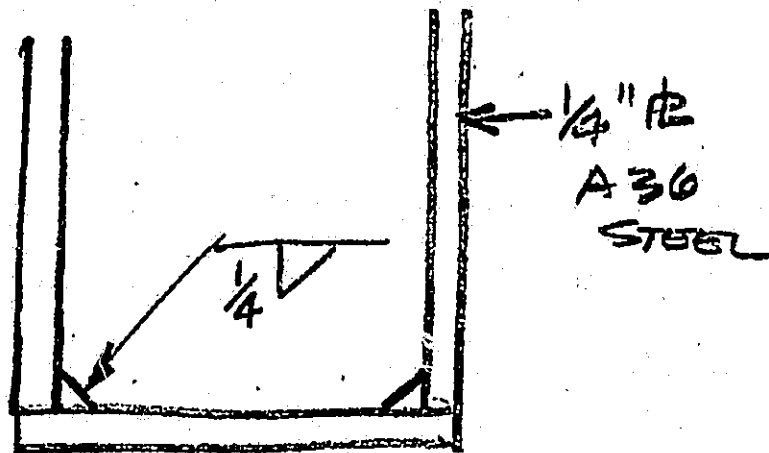
4X10
RIDGE BM

1/4" V
TYP

E60XX ELECTRODES TYP

BEAM HANGER

WELDS

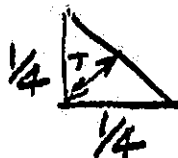


E60XX ELECTRODES

$$F = 18 \text{ KSI}$$

uw

ALLOW
SHEAR
STRESS



$$\text{THROAT } T = .25" \times .707 = .176 \text{ IN}$$

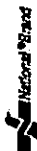
$$.176 \text{ IN} \times 18 \text{ KSI} = 3.18 \text{ K/INCH}$$

$$3.18 \text{ K/IN} \times 6 \text{ IN} = 19.08 \text{ K} > 1760 \text{ LB}$$

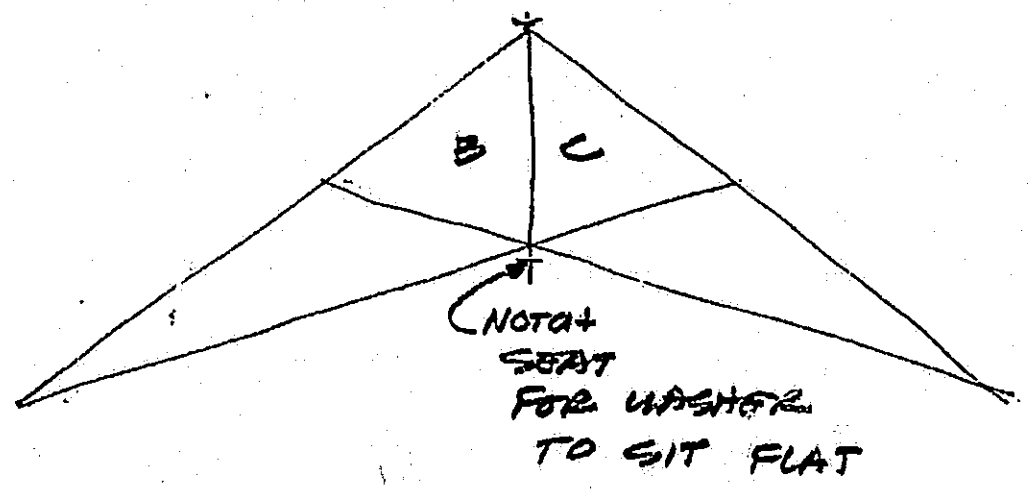
SINGLE PASS FILLET WELDS

NO SPECIAL INSPECTION REQ.

500 SQUARE FEET
50 SHEETS OF 10' X 50' SQUARE
100 SHEETS OF 5' X 10' SQUARE
200 SHEETS OF 2' X 10' SQUARE
400 SHEETS OF 1' X 10' SQUARE
100 RECYCLED WHITE SQUARE
42,399 200 RECYCLED WHITE SQUARE
MADE IN U.S.A.



TENSION STRUT BC



$P = 1335 \text{ LB}$

$A_{rod} = \frac{P}{f} = \frac{1335}{20000} = 0.067 \text{ IN}^2$

USE $3/8" \phi$ ROD $A = .44 \text{ IN}^2 > .067$

13782 50 SHEETS FILLER 5 SQUARE
 4338 50 SHEETS FILLER 5 SQUARE
 42383 50 SHEETS FILLER 5 SQUARE
 42384 50 SHEETS FILLER 5 SQUARE
 42385 50 SHEETS FILLER 5 SQUARE
 42386 50 SHEETS FILLER 5 SQUARE
 42387 50 SHEETS FILLER 5 SQUARE
 42388 50 SHEETS FILLER 5 SQUARE
 42389 50 SHEETS FILLER 5 SQUARE
 42390 50 SHEETS FILLER 5 SQUARE
 42391 50 SHEETS FILLER 5 SQUARE
 42392 50 SHEETS FILLER 5 SQUARE
 42393 50 SHEETS FILLER 5 SQUARE
 42394 50 SHEETS FILLER 5 SQUARE
 42395 50 SHEETS FILLER 5 SQUARE
 42396 50 SHEETS FILLER 5 SQUARE
 42397 50 SHEETS FILLER 5 SQUARE
 42398 50 SHEETS FILLER 5 SQUARE
 42399 50 SHEETS FILLER 5 SQUARE
 42400 50 SHEETS FILLER 5 SQUARE
 MADE IN U.S.A.

