

**City of Portland, Maine - Building or Use Permit Application**

389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

Permit No:	06-1072	Issue Date:	PERMIT ISSUED AUG 23 2006	CBL:	406 F054001
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Location of Construction:	Owner Name:
19 STEPPING STONE LN	HANCOCK CONSTRUCTION FIN

Owner Address:	Phone:
PO BOX 299	

Business Name:	Contractor Name:
	Paul Dancause 408-9497

Contractor Address:	Phone:
48 Union St # 202 Bldg 202 CITY OF PORTLAND	2074502370

Lessee/Buyer's Name:	Phone:

Permit Type:	Zone:
	2

Past Use:	Proposed Use:
Single Family	Single Family Interior finish work

Permit Fee:	Cost of Work:	CEO District:
\$405.00	\$30,613.00	4

Proposed Project Description:
Interior finish work

FIRE DEPT:	INSPECTION:
<input type="checkbox"/> Approved <input checked="" type="checkbox"/> Denied N/A	Use Group R-3 Type SB IPC 2003

Signature	Signature

**'EDESTRIAN ACTIVITIES DISTRICT (P.A.D.)**

Action	<input type="checkbox"/> Approved	<input type="checkbox"/> Approved w/Conditions	<input type="checkbox"/> Denied
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Signature	Date

Permit Taken By:	Date Applied For:
dmartin	07/17/2006

**Zoning Approval**

<p><b>Special Zone or Reviews</b></p> <input type="checkbox"/> Shoreland <input type="checkbox"/> Wetland <input type="checkbox"/> Flood Zone <input type="checkbox"/> Subdivision <input type="checkbox"/> Site Plan <input type="checkbox"/> Major <input type="checkbox"/> Minor <input type="checkbox"/> MM <input type="checkbox"/> Date: 7/24/06	<p><b>Zoning Appeal</b></p> <input type="checkbox"/> Variance <input type="checkbox"/> Miscellaneous <input type="checkbox"/> Conditional Use <input type="checkbox"/> Interpretation <input type="checkbox"/> Approved <input checked="" type="checkbox"/> Denied	<p><b>Historic Preservation</b></p> <input checked="" type="checkbox"/> Not in District or Landmark <input type="checkbox"/> Does Not Require Review <input type="checkbox"/> Requires Review <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/Conditions <input type="checkbox"/> Denied Date:
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**CERTIFICATION**

I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in the application is issued, I certify that the code official's authorized representative shall have the authority to enter all areas covered by such permit at any reasonable hour to enforce the provision of the code(s) applicable to such permit.

SIGNATURE OF APPLICANT	ADDRESS	DATE	PHONE
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RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE	DATE	PHONE
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DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK

# CITY OF PORTLAND

## BUILDING INSPECTION

### PERMIT

Permit Number: 061072

Please Read Application And Notes, If Any, Attached-

This is to certify that HANCOCK CONSTRUCTION FINANCING LLC /Paul Danuse

has permission to Interior finish work

AT 19 STEPPING STONE LN

406 F054001

**PERMIT ISSUED**

AUG 23 2006

CITY OF PORTLAND

provided that the person or persons who accept this permit shall comply with all of the provisions of the Statutes of the State and of the Ordinances of the City of Portland regulating the construction, maintenance and use of buildings and structures, and of the application on file in this department.

Apply to Public Works for street line and grade if nature of work requires such information.

Notification of inspection must be given and when permission procured before this building or part thereof is occupied or service closed-in. 4 HOUR NOTICE REQUIRED.

A certificate of occupancy must be procured by owner before this building or part thereof is occupied.

#### OTHER REQUIRED APPROVALS

Fire Dept. \_\_\_\_\_

Health Dept. \_\_\_\_\_

Appeal Board \_\_\_\_\_

Other \_\_\_\_\_

Department Name

*[Signature]*  
8/17/06  
Director - Building & Inspection Services

**PENALTY FOR REMOVING THIS CARD**

# BUILDING PERMIT INSPECTION PROCEDURES

Please call **874-8703** or **874-8693** to schedule your inspections as agreed upon

Permits expire in 6 months, if the project is not started or ceases for 6 months.

The Owner or their designee is required to notify the inspections office for the following inspections and provide adequate notice. Notice must be called in 48-72 hours in advance in order to schedule an inspection:

By initializing at each inspection time, you are agreeing that you understand the inspection procedure and additional fees from a "Stop Work Order" and "Stop Work Order Release" will be incurred if the procedure is not followed as stated below.

A Pre-construction Meeting will take place upon receipt of your building permit.

- ~~NA~~ **Footing/Building Location Inspection:** Prior to pouring concrete
- ~~NA~~ **Re-Bar Schedule Inspection:** Prior to pouring concrete
- ~~NA~~ **Foundation Inspection:** Prior to placing ANY backfill
- Framing/Rough Plumbing/Electrical:** Prior to any insulating or drywalling
- Final/Certificate of Occupancy:** Prior to any occupancy of the structure or use, NOTE: There is a \$75.00 fee per inspection at this point.

Certificate of Occupancy is not required for certain projects. Your inspector can advise you if your project requires a Certificate of Occupancy. **All** projects DO require a final inspection

**If any** of the inspections do not occur, the project cannot go on to the next phase, **REGARDLESS OF THE NOTICE OR CIRCUMSTANCES.**

**CERIFICATE OF OCCUPANICES MUST BE ISSUED AND PAID FOR, BEFORE THE SPACE MAY BE OCCUPIED**

Signature of Applicant/Designee

Date

Signature of Inspections Official

Date

CBL: 406-F-54

Building Permit #: for 06-1072

6L-1237

**City of Portland, Maine - Building or Use Permit**

389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

<b>Permit No:</b> 06-1072	<b>Date Applied For:</b> 07/17/2006	<b>CBL:</b> 406 F054001
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<b>Location of Construction:</b> 19 STEPPING STONE LN	<b>Owner Name:</b> HANCOCK CONSTRUCTION FIN	<b>Owner Address:</b> PO BOX 299	<b>Phone:</b>
<b>Business Name:</b>	<b>Contractor Name:</b> Paul Dancause	<b>Contractor Address:</b> 48 Union St # 202 Biddeford	<b>Phone</b> (207) 450-2370
<b>Lessee/Buyer's Name</b>	<b>Phone:</b>	<b>Permit Type:</b> Alterations - Commercial	

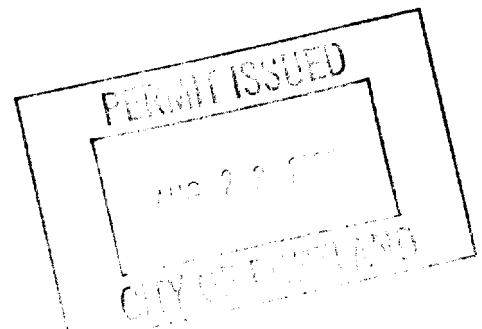
<b>Proposed Use:</b> Single Family Interior finish work	<b>Proposed Project Description:</b> Interior finish work
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**Dept:** Zoning      **Status:** Approved with Conditions      **Reviewer:** Marge Schmuckal      **Approval Date:** 0712412006  
**Note:** **Ok to Issue:**

- 1) This permit is being approved on the basis of plans submitted. Any deviations shall require a separate approval before starting that work. It is understood that this permit is for interior finish work only, no exterior additions.
- 2) This property shall remain a single family dwelling. Any change of use shall require a separate permit application for review and approval.
- 3) This is NOT an approval for an additional dwelling unit. You SHALL NOT add any additional kitchen equipment includmg, but not limited to items such as stoves, microwaves, refrigerators, or kitchen sinks, etc. Without special approvals.
- 4) Separate permits shall be required for future decks, sheds, pools, and/or garages.

**Dept:** Building      **Status:** Approved with Conditions      **Reviewer:** Tammy Munson      **Approval Date:** 08/17/2006  
**Note:** **Ok to Issue:**

- 1) All previous conditions of permit #04-1346 apply to this permit.
- 2) The structure shall be completed per the original approved plans under permit #04-1346.





# General Building Permit Application

If you or the property owner owes real estate or personal property taxes or user charges on any property within the City, payment arrangements must be made before permits of any kind are accepted.

Location/Address of Construction: <u>19 Stepping Stone Ln</u>			
Total Square Footage of Proposed Structure <u>2,326 sq ft</u>		Square Footage of Lot <u>0.170 Acres</u>	
Tax Assessor's Chart, Block & Lot Chart# <u>406</u> Block# <u>F</u> Lot# <u>54</u>	Owner: <u>Paul Dancause</u>	Telephone: <u>450-2370</u>	
Lessee/Buyer's Name (If Applicable) <u>Paul Dancause</u>	Applicant name, address & telephone: <u>Paul Dancause</u> <u>48 Union St. Apt 202</u> <u>Biddeford Me 04005</u>	Cost Of Work: \$ <u>30,613</u>	Fee: \$ <u>405.00</u>
Current Specific use: <u>Residence Unfinished NEW CONSTRUCTION</u>		C of O Fee: \$ <u>75</u>	
If vacant, what was the previous use? <u>RE - same as above</u>			
Proposed Specific use: <u>Finished Residence</u>			
Project description: <u>To fix all issues not to code and finish house for resale. interior finish work to existing NEW Single Family</u>			



## CITY OF PORTLAND, MAINE Department of Building Inspections

20 000

Received from \_\_\_\_\_

Location of Work \_\_\_\_\_

Cost of Construction \$ 30,613

Permit Fee \$ 405.00

Building (IL)  Plumbing (15) \_\_\_\_\_ Electrical (12) \_\_\_\_\_ Site Plan (U2) \_\_\_\_\_

Other \_\_\_\_\_

CBL: 11-2-24

Check #: 200 Total Collected \$ 31,018

### THIS IS NOT A PERMIT

No work is to be started until PERMIT CARD is actually posted upon the premises. Acceptance of fee is no guarantee that permit will be granted. PRESERVE THIS RECEIPT. In case permit cannot be granted the amount of the fee will be refunded upon return of the receipt less \$10.00 or 10% whichever is greater.

WHITE - Applicant's Copy  
YELLOW - Office Copy  
PINK - Permit Copy

F<sub>y</sub> = 36 ksi

BEAMS  
W Shapes

Allowable uniform loads in kips  
for beams laterally supported

For beams laterally unsupported, see page 2-146

W 12  
I

Designation	W 12		W 12		W 12				Deflection in.	
	Wt./ft.	Flange Width	L <sub>c</sub>	L <sub>u</sub>	22	19	18	14		
50	45	40	33	30	26	22	19	18	14	02
8 1/2	8	8	8 1/2	8 1/4	8 1/2	4	4	4	4	03
8.50	8.50	8.40	5.90	5.90	6.90	4.30	4.20	4.10	3.50	05
19.6	17.7	16.0	12.6	10.8	9.40	6.40	5.30	4.30	4.20	07
3	4	5	6	7	8	9	10	11	12	10
130	116	101	108	92	81	82	67	54	47	10
128	115	101	103	90	76	57	48	39	34	13
114	102	91	80	68	59	45	37	30	25	17
102	92	82	72	61	53	40	31	27	24	20
93	84	75	66	56	48	34	28	23	21	25
86	77	69	60	51	44	31	26	21	20	29
79	71	63	56	47	41	31	25	21	20	35
73	66	59	52	44	38	29	24	21	19	40
68	61	55	48	41	35	27	22	22	18	46
64	58	51	45	38	33	25	21	17	15	52
60	54	48	42	36	31	24	20	16	14	59
57	51	46	40	34	29	22	19	15	13	66
54	48	43	38	32	28	22	18	14	12	74
49	44	39	34	29	25	20	16	14	12	82
45	40	36	31	27	23	19	15	13	11	90
43	38	35	30	26	22	17	14	12	10	108
41	37	34	28	25	21	17	15	12	11	118
39	35	33	28	25	21	17	15	12	10	128
37	33	31	27	24	20	16	14	11	9	138
34	31	29	26	23	19	15	13	10	8	161
30	28	26	24	21	18	14	12	10	8	184

Load above heavy line is limited by maximum allowable web shear.

Properties and Reaction Values

S, in. <sup>2</sup>	V, kips	R <sub>v</sub> , kips	R <sub>h</sub> , kips/in.	R <sub>v</sub> , kips	R <sub>h</sub> , kips/in.	R <sub>v</sub> , kips	R <sub>h</sub> , kips/in.	R <sub>v</sub> , kips	R <sub>h</sub> , kips/in.	R <sub>v</sub> , kips	R <sub>h</sub> , kips/in.	R <sub>v</sub> , kips	R <sub>h</sub> , kips/in.	R <sub>v</sub> , kips	R <sub>h</sub> , kips/in.	R <sub>v</sub> , kips	R <sub>h</sub> , kips/in.
64.7	58.1	51.9	45.6	38.6	33.4	25.4	21.3	17.1	14.9								
51	58	51	54	46	40	48	41	36	34								
30.2	24.9	21.9	17.8	14.5	12.0	13.5	11.3	9.80	8.17								
8.79	7.96	7.01	7.13	6.18	5.46	6.18	5.58	5.23	4.75								
36.7	30.0	24.2	24.2	17.9	13.9	17.6	13.7	10.6	8.65								
3.97	3.32	2.56	2.54	1.98	1.60	2.06	1.87	2.05	1.83								
51	42	32	33	25	20	25	20	18	15								

AMERICAN INSTITUTE OF STEEL CONSTRUCTION

ATTN: PAUL.

W12x26x21' IS CAPABLE OF CARRYING  
A 25,000 # UNIFORM LOAD

50000

GARAGE 21'x26' ASSUME 50# LOAD  
15# DL  
35# LL

$$\sqrt{\left(\frac{21}{2}\right) \times \left(\frac{26}{2}\right)} 50\# =$$

7150# LOAD  
+ INDRN # FACTOR & SAFETY

17150#

17150 < 25,000



# DEERING LUMBER INC.

14 Elm Street • Biddeford, ME • (207) 283-3621  
 3 Brown Street • Kennebunk, ME • (207) 985-4948  
 www.deeringlumber.com SINCE 1866

INEX OPTIMUM PAUL SYSTEM 7/4 STOCK AT  
 DEERING LUMBER

## DELIVERY RECEIPT

DRIVER	INVOICE
LOCATION	
SHIP DATE	CC

LOCATION	MATERIAL							
CUSTOMER NO. 849401	JOB NO.	PURCHASE ORDER NO.	REFERENCE	TERMS	CLERK	CL	DATE	TIME
				5% 10/11 NET 1/11			07/24/06	11:35

FROM Y. DANIELLE  
 TORCE R. DANIELLE  
 21 CANOLDIE DRUSSING  
 HULLS ME 04042-3354  
 (207) 727-6310

PAUL DEERING  
 S H I P T O

EXP. DATE 07/25/06  
 TEL 3 01 1  
 DE PRIN SIDE (207) 283-3621

P.O. #  
 1000 206872  
 \*\*\*\*\*  
 \* ESTIMATE \*  
 \*\*\*\*\*  
 EST. 206872

SHIPPED	ORDERED	UM	SKU	DESCRIPTION	UNITS	PRICE/PER	EXTENSION
	123	00	YNG015	1307 L/00	123	5.79 /PC	711.62
	6	00	000	0P GRAY UNGL STRUCK 24	6	21.97 /PC	131.92
	5	00	24003	GRAY OUTSIDE LARKER 10'	5	63.39 /RM	316.95
	100	00	00000	PALM WHITE OIL STOCK	100	6.39 /CB	639.00
	40	00	000	12'S GRAY S/2 J CHANNEL	40	14.79 /EA	591.60
	1	00	00	10'WHR PALM CRT-11 12'	1	450.09 /TON	450.09
				100% BILUMINANCE			

Purchaser agrees to maintain a suitable roadway for Deering Lumber trucks to the point of delivery. Purchaser is responsible for any damages by or to seller's trucks after leaving the street, pavement or driveway.

RECEIVED BY \_\_\_\_\_

SEE REVERSE SIDE FOR RETURNED GOODS AND TERMS POLICIES.

YES [NO] YES [NO] YES [NO] YES [NO] YES [NO] YES [NO]

TAX AMOUNT 746.51  
 TOTAL DEDUCTIBLE 15697.62



# DEERING LUMBER INC.

14 Elm Street • Biddeford, ME • (207) 283-3621  
 3 Brown Street • Kennebunk, ME • (207) 985-4948  
 www.deeringlumber.com SINCE 1866

## DELIVERY RECEIPT

TRUCK FRONT-END ROLL SYSTEM IN STOCK AT  
 DEERING LUMBER

DRIVER	INVOICE
LOCATION	
SHIP DATE	CC

MATERIAL LOCATION

CUSTOMER NO. 449401 JOB NO. PURCHASE ORDER NO.

REFERENCE

TERMS 5% 10% NET 11TH

CLERK CL 19

DATE 5/24/06 TIME 4:55

JEAN Y. DANONISE  
 JUDITH M. DANONISE  
 24 GARDEN LINE CROSSING  
 HILLS  
 (207) 727-6310 ME 04042-3368

PHIL DANONISE  
 S H I P T O

EXP. DATE: 5/25/06  
 SLSMAN: 011  
 TAX: 1% MEANER STATE TAX

P.O. #

DNOR 326072  
 \*\*\*\*\*  
 \* ESTIMATE \*  
 \*\*\*\*\*  
 EST. 100000

SHIPPED	ORDERED	UM	SKU	DESCRIPTION	UNITS	PRICE/PER	EXTENSION
	13	50	00	ONE TIER	13	42.00 / EA	546.00
	57	1F	1E2P	1/2" PINE ONE	50	1.75 / LF	87.50
	32	1F	1E2P	1/2" PINE ONE	32	5.29 / LF	169.28
	43	00	1E2P	1/2" PINE ONE	43	3.95 / EA	170.15
	6	00	1E2P	1/2" PINE ONE	6	32.99 / EA	197.94
	36	1F	1E2P	1/2" PINE ONE	36	2.20 / LF	79.20
	69	1F	1E2P	1/2" PINE ONE	69	2.75 / LF	189.75
	13	00	1E2P	1/2" PINE ONE	13	42.00 / EA	546.00
	7	00	1E2P	1/2" PINE ONE	7	255.00 / EA	1785.00
	1	00	1E2P	1/2" PINE ONE	1	125.00 / EA	125.00
	1	00	1E2P	1/2" PINE ONE	1	312.20 / EA	312.20
	1	00	1E2P	1/2" PINE ONE	1	455.00 / EA	455.00
	1	00	1E2P	1/2" PINE ONE	1	455.00 / EA	455.00
	47	00	1E2P	1/2" PINE ONE	47	19.99 / EA	939.63
	31	00	1E2P	1/2" PINE ONE	31	19.99 / EA	619.69
	429	1F	1E2P	1/2" PINE ONE	429	2.15 / LF	922.35

Purchaser agrees to maintain a suitable roadway for Deering Lumber trucks to the point of delivery. Purchaser is responsible for any damages by or to seller's trucks after leaving the street pavement.

RECEIVED BY \_\_\_\_\_  
 SEE REVERSE SIDE FOR RETURNED GOODS AND TERMS POLICIES  
 YES (NO) YES (NO) YES (NO)



2x10 RAFTERS  
 3 1/2 x 11 7/8 LVL  
 (SUPPORT WALL BEYOND)  
 2x10 CEILING JOISTS

2  
 4

*Will add ridge  
 vent.*

**A** FRAMING SECTION THRU FAMILY ROOM



**B** BUILDING SECTION

**Windemere  
 Homes**

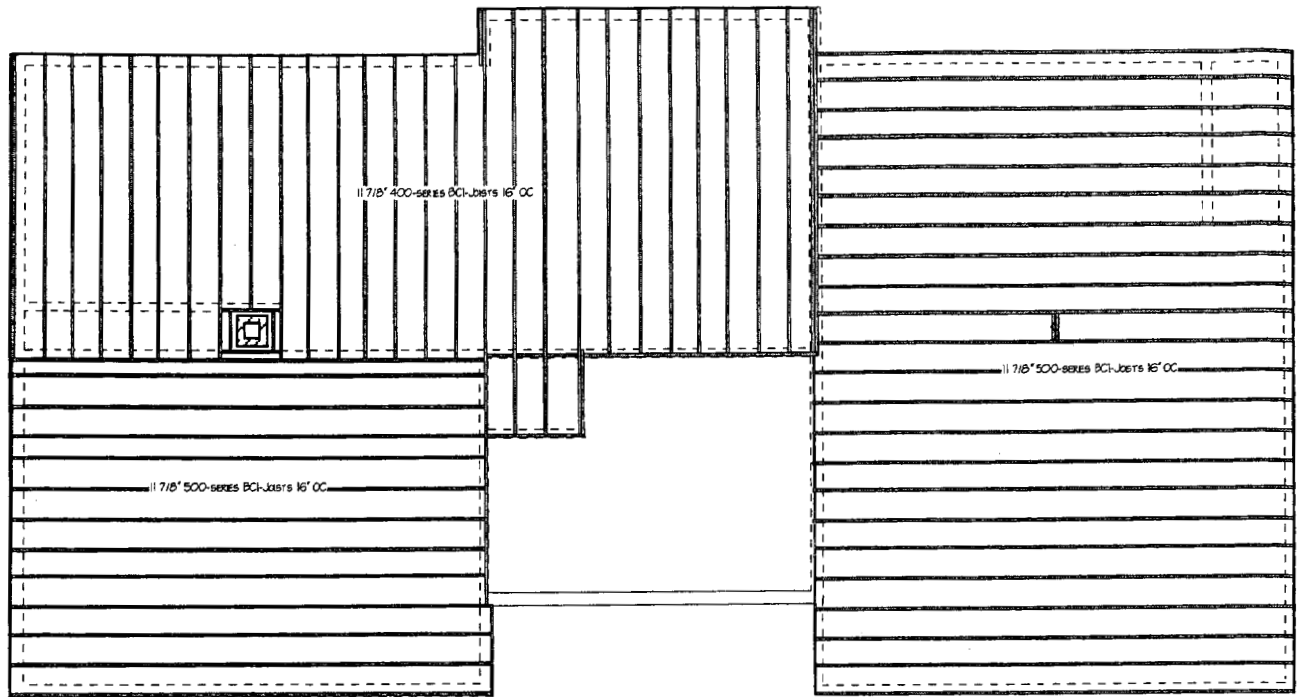
**WILTSHIRE MANOR**  
 LOT 4 STEPPING STONE LANE  
 AUTUMN GLEN SUBDIVISION  
 PORTLAND, ME

**BUILDING  
 SECTIONS**

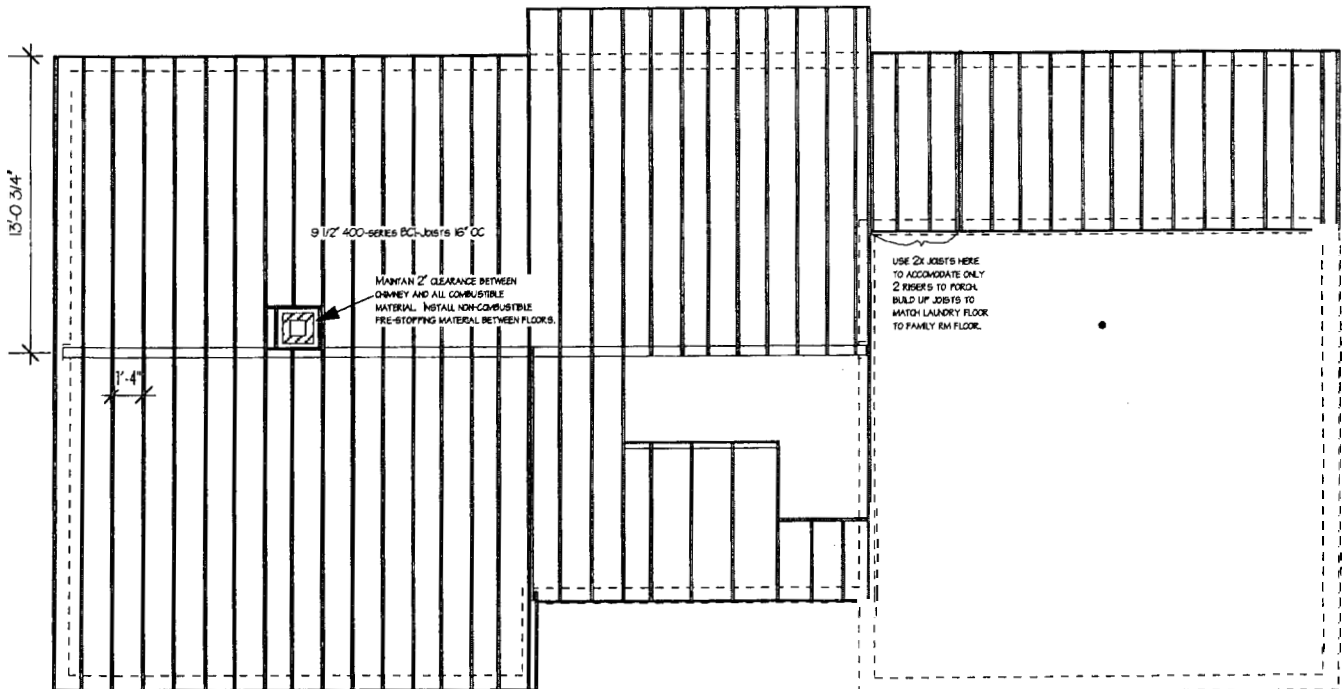
DATE  
 8/13/04

SCALE  
 1/8" = 1'-0"

**A-10**

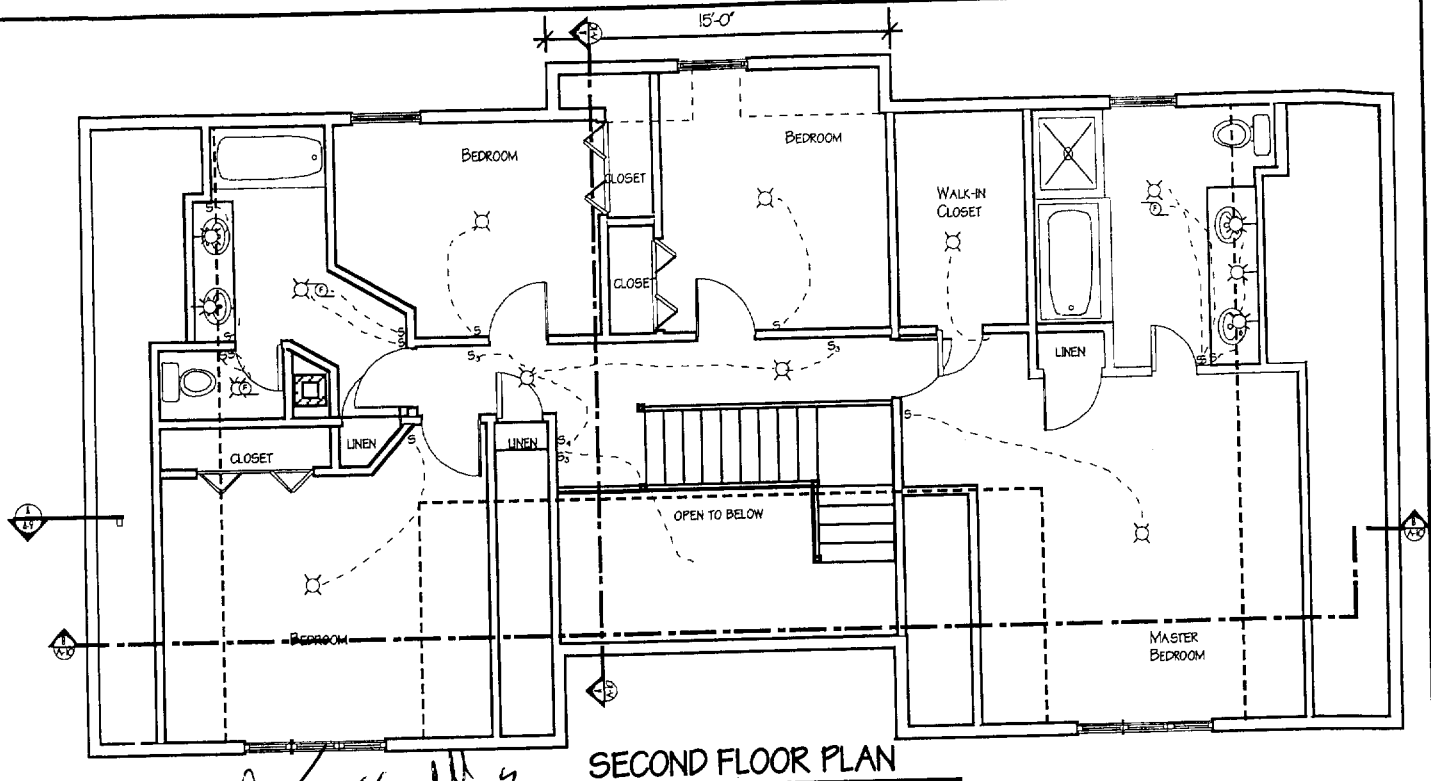


**SECOND FLOOR FRAMING PLAN**

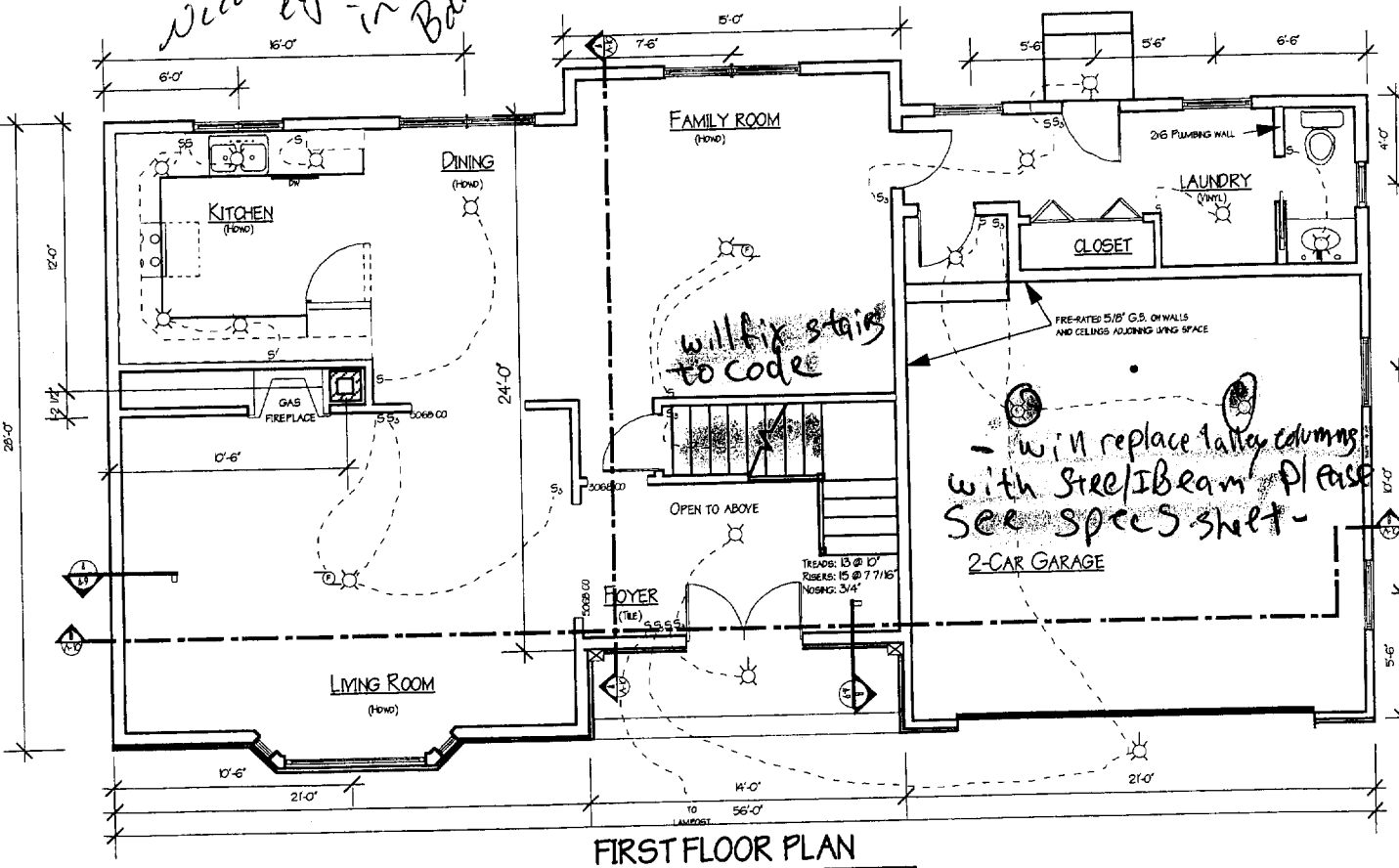


**FIRST FLOOR FRAMING PLAN**

	LOT 4 STEPPING STONE LANE AUTUMN GLEN SUBDIVISION PORTLAND, ME	<b>FLOOR FRAMING PLAN 5</b>	DATE 8/13/04	<b>A-8</b>
			SCALE 1/8" = 1'-0"	



*Need egress in all Bedrooms*



**Windemere Homes**

**WILTSHIRE MANOR**  
 LOT 4 STEPPING STONE LANE  
 AUTUMN GLEN SUBDIVISION  
 PORTLAND, ME

**FLOOR PLANS**

DATE  
8/13/04  
SCALE  
1/8" = 1'-0"

**A-3**

# WINDOW & DOOR SCHEDULE

NUMBER	MANUFACTURER	MODEL	ROUGH OPENING	HEADER SIZE
W-1	Andersen	45-6050-20	9'2 3/8" x 5' 1 7/8"	2-2x10
w-2	Andersen	CW23	4'9" x 3'0 1/2"	2-2X6
W-3	Andersen	244-DH-3050-2	6' x 5'	2-2X8
w-4	Andersen	244-DH-3050**	3' x 5'	2-2X4
w-5	Andersen	CW15-3**	6' x 5'0 3/8"	2-2x10
W-6	Andersen	244-DH-2432	2'6" x 3'5 1/4"	2-2X4
W-7			approx 6' x 3'	2-2x10
** Meets or exceeds Egress requirements				
D-1	Custom		approx 6' x 6'8"	2-2x10
D-2	Therma-Tru or App'd Equal		2'8" x 6'8"	2-2X4

# ROOM FINISH SCHEDULE

ROOM	FLOOR	WALLS	CEILING	COMMENTS
Foyer	Tile	DW/Paint	DW/Paint	Stairs - Hdwd
Living Room	Hardwood	DW/Paint	DW/Paint	
Laundry Room	Tile	DW/Paint	DW/Paint	
Family Room	Hdwd	DW/Paint	DW/Paint	
Dining Room	Hdwd	DW/Paint	DW/Paint	
Kitchen	Hdwd	DW/Paint	DW/Paint	
MBR	Carpet	DW/Paint	DW/Paint	
Bedroom 1	Carpet	DW/Paint	DW/Paint	
Bath 1	Tile	DW/Paint	DW/Paint	
Master Bath	Tile	DW/Paint	DW/Paint	
2nd Flr Hall	Hdwd	DW/Paint	DW/Paint	
NOTES:				
Hardwood is 2 1/4" Red oak				
Tile is 12 inch square terracotta				

**Windermere  
Homes**

**WILTSHIRE MANOR**

LOT 4 STEPPING STONE LANE  
AUTUMN GLEN SUBDIVISION  
PORTLAND, ME

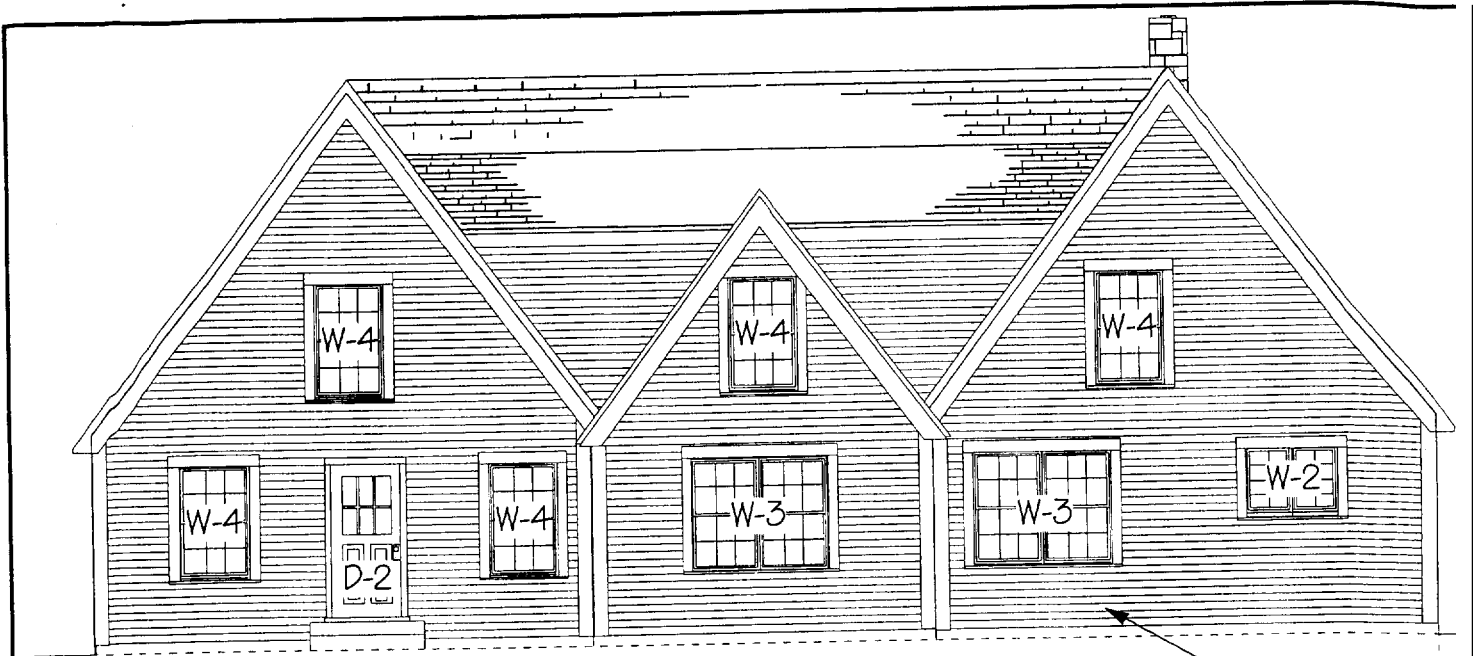
**SCHEDULES**

DATE

8/13/04

SCALE  
NONE

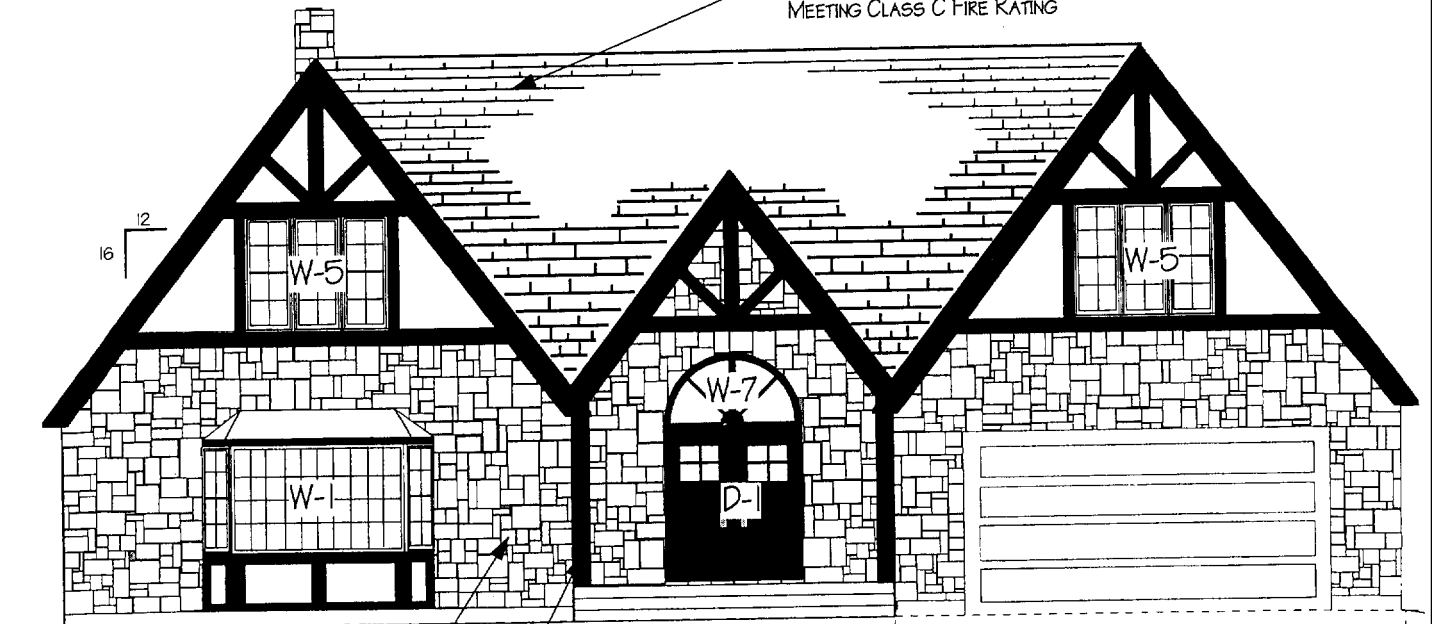
**A-4**



**REAR ELEVATION**

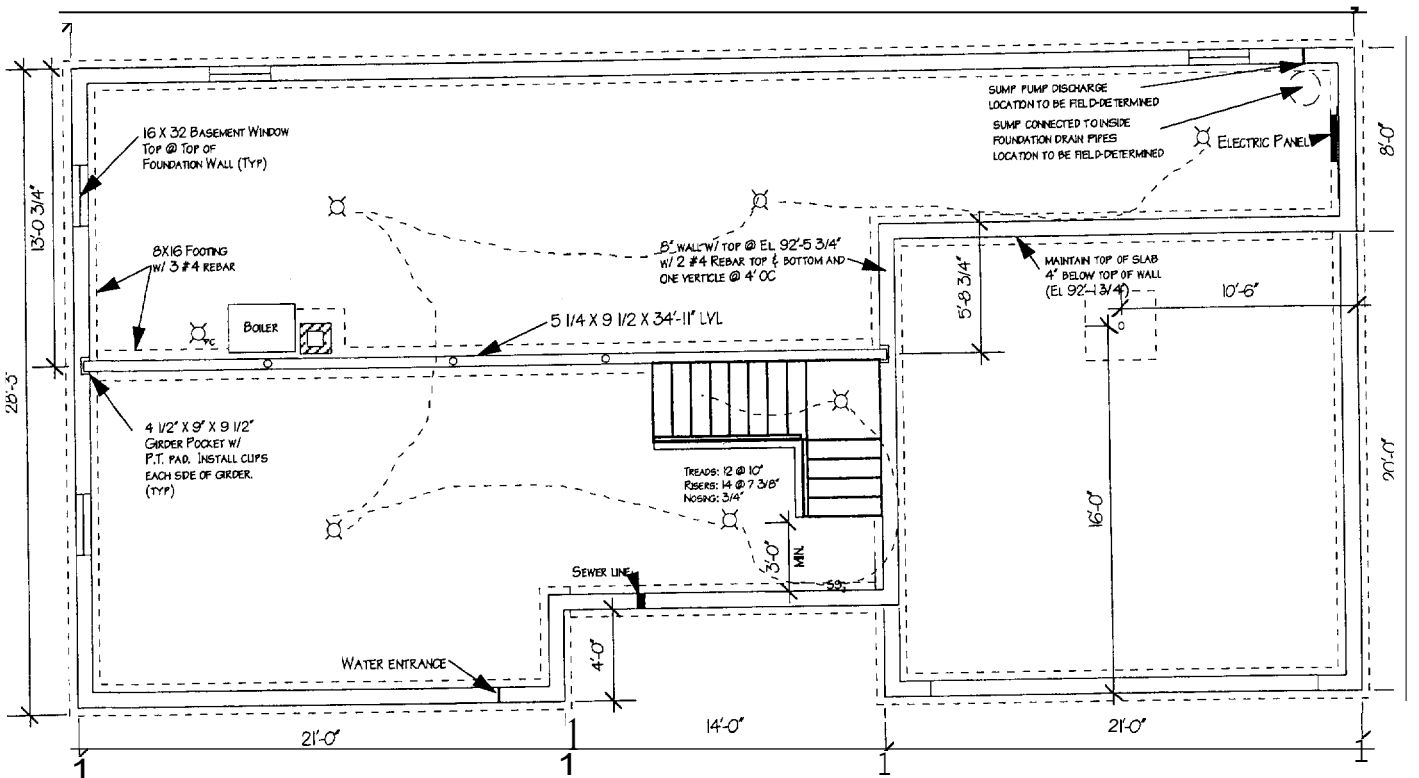
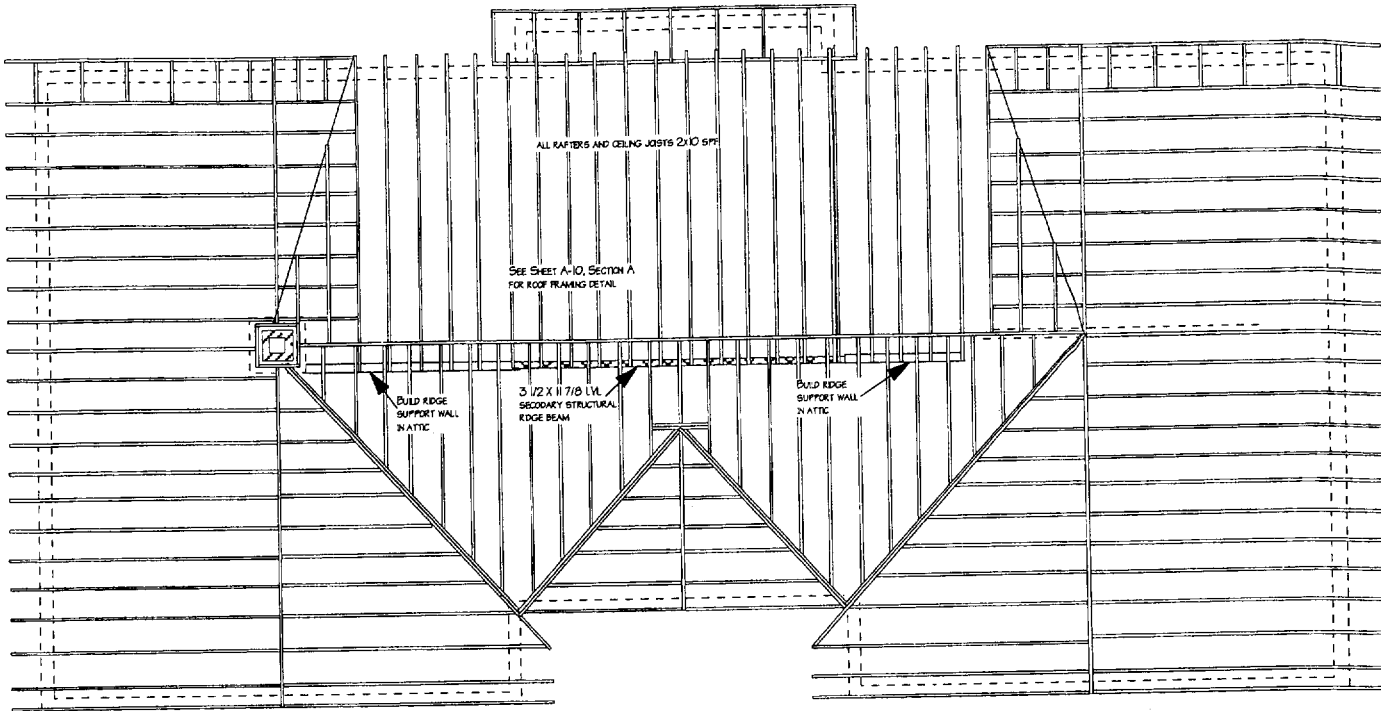
RUSTIC CEDAR SIDING

"AUTHENTIC" RUBBER SLATE RANDOM BLEND OF 25% DARK GRAY, 25% LIGHT GRAY, 25% GREEN, AND 25% PLUM. INSTALLED OVER ASPHALT-SATURATED TYPE 30 FELT MEETING CLASS C FIRE RATING



CULTURED STONE VENEER  
TIMBERFRAME TRIM

	<b>WILTSHIRE MANOR</b>	<b>FRONT &amp; REAR ELEVATIONS</b>	DATE 8/13/04	<b>A-5</b>
	LOT 4 STEPPING STONE LANE AUTUMNGLEN SUBDIVISION PORTLAND, ME		SCALE 1/8" = 1'-0"	



FOUNDATION PLAN

Windemere Homes

LOT 4 STEPPING STONE LANE  
AUTUMN GLEN SUBDIVISION  
PORTLAND, ME

ROOF FRAMING &  
FOUNDATION PLANS

DATE  
8/13/04

SCALE  
1/8" = 1'-0"

A-7

AUTHENTIC® RUBBER SLATE RANDOM  
 BLEND a 25% DARK GRAY, 25%  
 LIGHT GRAY, 25% GREEN, AND 25%  
 TAN  
 INSTALLED OVER  
 ASPHALT-SATURATED TYPE 30 FELT  
 MEETING CLASS C FIRE RATING

RUSTIC CEDAR SIDING

**LEFT ELEVATION**

TOP OF ROOF  
 117' - 1"

TOP OF 2ND FLR. SUBFLOOR  
 102' - 7 3/4"

TOP OF 1ST FLR. SUBFLOOR  
 93' - 5 1/4"

BOTTOM OF FOOTING  
 83' - 11 1/2"

**RIGHT ELEVATION**

**Windemere  
 Homes**

**WILTSHIRE MANOR**  
 LOT 4 STEPPING STONE LANE  
 AUTUMN GLEN SUBDIVISION  
 PORTLAND, ME

**SIDE  
 ELEVATIONS**

DATE  
 8/13/04

SCALE  
 1/8" = 1'-0"

**A-6**



A Masco Company

AND BUILDING PRODUCTS

65 DOWNEAST DRIVE

YARMOUTH, ME 04096

PHONE (207) 846-7745 FAX (207) 846-7761

002307#6

PAGE 01

TO : PAUL DANCAUSE  
48 UNION ST APT 202  
  
BIDDEFORD, ME  
04005

LOT #  
ADDRESS : STEPPING STONE LANE  
CITY : PORTLAND  
OUR JOB # 131553A  
207-450-2370

QUALITY INSULATION & BLDG HEREBY SUBMITS TO PURCHASER ESTIMATES FOR :

MAIN CEILING	R-38 KRAFT BATT 160C	
1ST FL COLD CLG	R-30 KRAFT BATTS 16X48	
PERIMETER CEIL	R-30 KRAFT BATTS 16X48	
9-14' SLOPES	EX.CUT / EXTRA CUT	
9-14' SLOPES	R-30 KRAFT BATTS 16X48	
15-18' SLOPES	R-30 KRAFT BATTS 16X48	
GARAGE CEILING	R-30 KRAFT BATTS 16X48	
STUFF WINDOWS	WALL MATERIAL	
EXTERIOR WALLS	R-19 UNFACED BATTS 150C	4mPOLY
GARGE/HSE WALL	R-19 UNFACED BATTS 150C	4mPOLY
GARGE/HSE WALL	R-19 UNFACED BATTS 23oc	4mPOLY
9-14' CATH WALL	R-19 UNFACED BATTS 23oc	4mPOLY
GARAGE WALLS	R-19 UNFACED BATTS 23oc	4mPOLY
9-14' GAR WALLS	R-19 UNFACED BATTS 23oc	4mPOLY
BATH WALLS	R-11 KRAFT BATTS 15oc	FACEST
BLKRS & RUNNERS	R-19 UNFACED BATTS 160C	
BSMT BLKR/RNR	R-19 UNFACED BATTS 160C	
GAR.CLG.BLOCKER	R-19 UNFACED BATTS 160C	
OVERHANG	R-38 KRAFT BATT 160C	
4' VENT @ EAVES	PROPA VENTS 16oc	
4' VNT @ EVE 9'+	PROPA VENTS 16oc	
4' VNT @ EVE 15'+	PROPA VENTS 16oc	

WE PROPOSE TO FURNISH THE LABOR AND MATERIAL FOR THE ABOVE SPECIFICATIONS  
FOR THE SUM OF :

\$3,655.00

( PLEASE SEE NEXT PAGE )



# R & R DRYWALLERS TNC

te

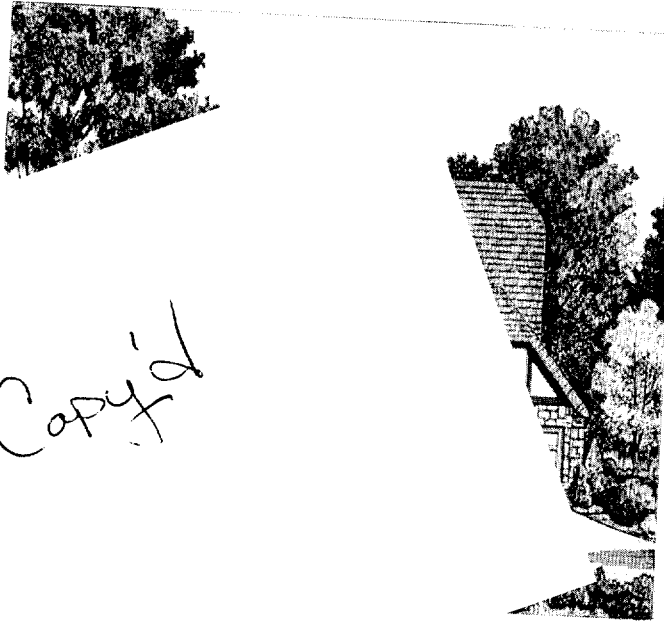
P.O.Box 798  
 Biddeford, ME 04005  
 Ralph: 286-0813 - Rick: 229-1044  
 Office / Fax: 286-9255  
 rrdrywallers@yahoo.com

DATE
5/25/2006
5/25/2006

NAME / ADDRESS
Paul Duncaise

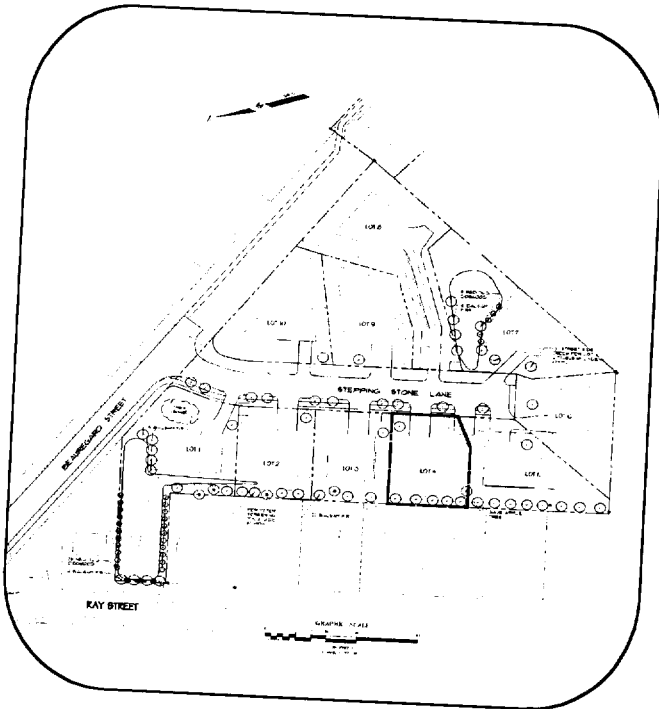
Home: Lot 4 - Autumn Glen  
 Address:  
 Portland, ME

ITEM	DESCRIPTION	TOTAL
Drywall	<p>For the completion of the house with 1/2 inch sheet rock and MR in the bathrooms,            The garage is to have 5/8 inch sheet rock on the ceiling and parting wall with the rest with 1/2 inch.            All work will be three coated, sanded, and ready for paint on completion.            We scrape and sweep the floors.            All ceilings are at 8'.            This price does not include heat.</p>	11,275.00
<p>A 50% payment is required when Sheet rock is delivered. This estimate is good for 30 days.</p>		<p><b>TOTAL</b> \$11,275.00</p>



Copy'd

Autumn Glen  
Stepping Stone Lane



- SHEET SCHEDULE
- A-1 COVER SHEET
  - A-2 SITE PLAN
  - A-3 FLOOR PLANS
  - A-4 SCHEDULES
  - A-5 FRONT & REAR ELEVATIONS
  - A-6 SIDE ELEVATIONS
  - A-7 FOUNDATION & ROOF FRAMING PLANS
  - A-8 FRAMING PLANS
  - A-9 WALL SECTIONS
  - A-10 BUILDING SECTIONS
  - A-11 SPECIFICATIONS
  - A-12 SPECIFICATIONS
  - A-13 NAIL SCHEDULE

Windemere  
Homes

WILTSHIRE MANOR

LOT 4 STEPPING STONE LANE  
AUTUMN GLEN SUBDIVISION  
PORTLAND, ME

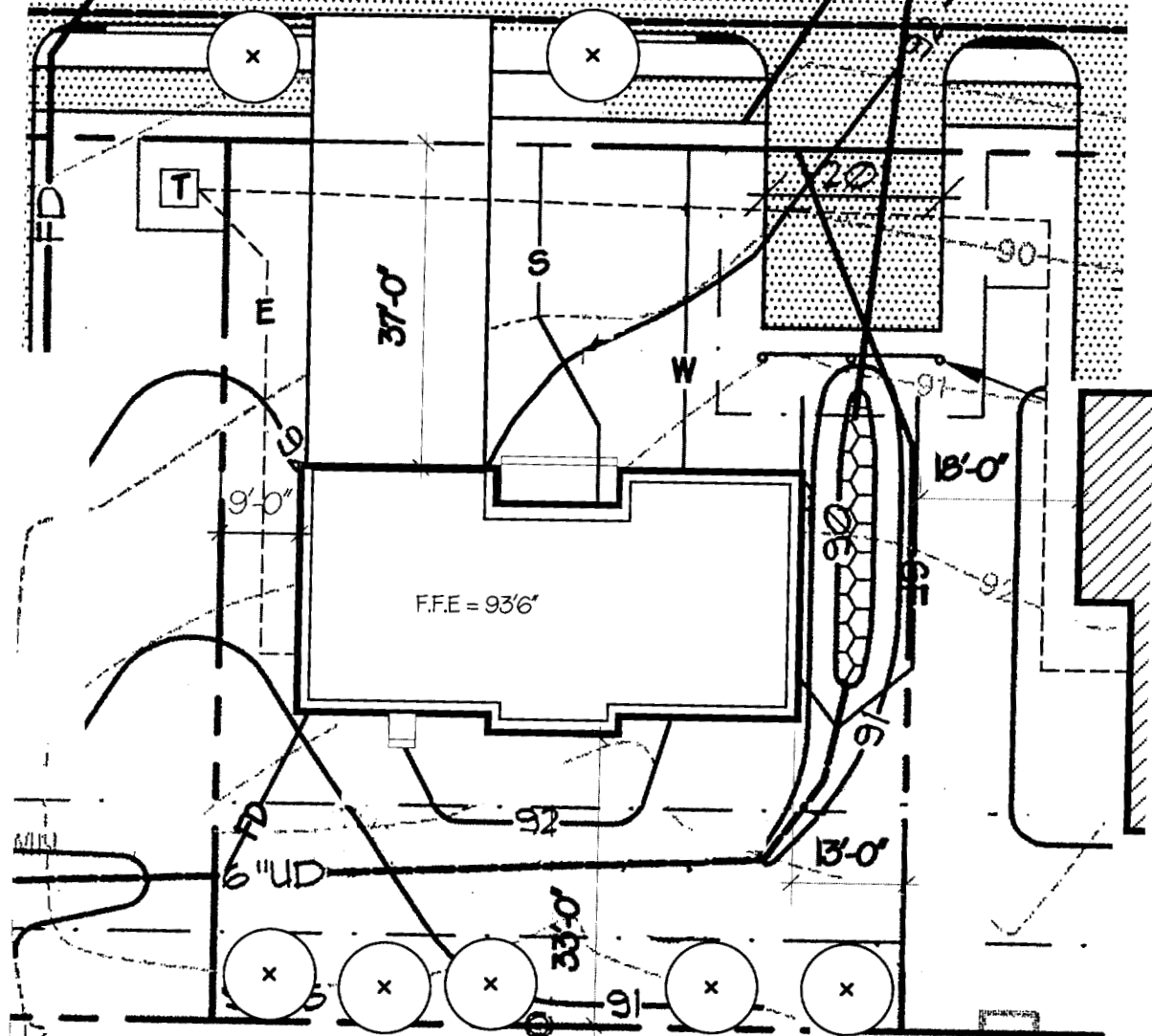
COVER SHEET

DATE  
8/13/04

SCALE  
NONE

A-1

STONE LANE 3'-0"



N/F THOMPSON  
8522/238

N/F DAYLE & VICKI SMITH  
4494/---



**WINDSHIRE MANOR**

LOT 4 STEPPING STONE LANE  
AUTUMN GLEN SUBDIVISION  
PORTLAND, ME

SITE PLAN

DATE  
8/13/04

SCALE  
1" = 20'

A-2



---

## TFXX.R21159 Prepared Roof Covering Materials, Formed or Molded Metal, Fiber-Cement or Plastic

[Page Bottom](#)

[Questions?](#)

[Previous Page](#)

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## Prepared Roof Covering Materials, Formed or Molded Metal, Fiber-Cement or Plastic

### Guide Information

**CROWE BUILDING PRODUCTS LTD**  
116 BURRIS ST  
HAMILTON  
ON L8N 2S5, CANADA

R21159

**Formed roofing shingles**, for installation over minimum 15/32 in. thick plywood decks as a Class A prepared roof coverings when laid over one layer of 1/4 in. thick G-P Gypsum Dens-Deck® or 1/2 in. thick gypsum board followed by one or more layers of Type 30 underlayment either as an interply or as a base sheet alone.

**Formed Roofing shingles** , for installation as Class B prepared roof covering. Limited to 15/32 in. plywood decks and one ply of Type G1 plysheet.

**Formed roofing shingles**, for installation over minimum 15/32 in. plywood decks as a Class C prepared roof coverings when applied with one layer of Type 30 underlayment either as an interply or as a base sheet alone.

**Formed roofing shingles**, for installation as wind resistant roof coverings when installed in accordance with manufacturer's installation instructions. These shingles may also bear the statement "Also evaluated at wind velocities up to 110mph".

---

# Authentic Roof™

By Crowe Building Products Ltd.

From the people who invented it

Made with Baljen TPO

## Technical Specifications:

**colors:** Bavarian Black, Virginia Dark Grey / Galveston Light Grey, Colorado Green, Paris Plum

**Styles:** Full Slate / Mitered Edge / Beaver Tail

**Slate Size:** #12-2000- Series Slates Length - 18" Width - 12" Weight - 1.2 to 1.54 Lbs. per Slate.

Thickness - 1/4" at the exposed end, tapering to 1/8" at the top.

### #12-2000 - Hip & Ridge Cap Slates

Same Full slate with channel in back to allow it to bend to suit desired angle.

To figure hip & ridge cap:

Number of Feet of Hip & Ridge X 12" ~ exposure ( 6" to 7" ) = # of tile, round up to the nearest bundle of 25.

One bundle of R/C = 12.5 Feet @ 6" / 13.5 Feet @ 6 1/2" / 14.6 Feet @ 7" exposure.

**Exposure:** For Sloped Roof Installations, recommended roof pitch; 3/12 or 1/4 and up.

#12-2000 Series - 6" to 7":

3/12 to 6/12 - 6" exposure

Above 6/12 - expanding to maximum 7" exposure.

E.G.: 7/12 - 6 1/4", 8/12 - 6 1/2", 9/12 - 6 3/4", 10/12 - 7", 12/12 to 18/12 - 7"

Note: Vertical installations ( Mansard ) revert to 5" to maximum 6" exposure.

On a 3/12 installation, the roof deck should be covered with "Ice & Water Shield.

Number of slates per square	Maximum Weights per square	Per square foot
6" = 200	240 to 308 Lbs.	2.4 to 3.1 Lbs
6.5" = 185	222 to 285 Lbs.	2.22 to 2.85 Lbs.
7" = 172	206 to 265 Lbs.	2.06 to 2.65 Lbs.

## Packaging:

### Coverage per bundle

Bundles of 25      6" = 12.5 Square Feet / 6.5" = 13.5 Sq. Ft. / 7" = 14.6 Sq. Ft.

### Per Skid

1,200 Slates max.      48 Bundles

### Weight per skid

2,000 Lbs.

### Weight Per bundle

30 to 38.5 Lbs.

**Testing:** Now Underwriters Laboratories Listed; UL790; Class A fire rated with DensDeck® underlayment, Class B fire rated with G1 fiberglass base sheet ( fiberglass felt ), Class C fire rated with 30 pound tarpaper.

UL997; Wind Tunnel tested to velocities up to 110MPH and carries a UL22 18 Class 4 Hail Impact.

Authentic Roof™ roofing slate products have been tested by independent testing agencies as well as by ourselves to extreme limits so as to far surpass the highest standards in the industry. Research and development on this product is ongoing to find ways of improving the product and the materials that comprise it so as to stay number one. Authentic Roof is the original synthetic, polymer & rubber roofing slate and is the only one made with TPO ( Thermal Poly Olifins ). There is also an Ultra Violet protection package in the material to protect it from the sun's harmful UV rays so as to preserve the material and protect it from fade. For a more complete summary of the independent testing, please consult our brochure or [www.authentic-roof.com](http://www.authentic-roof.com)

***If it's not from Crowe, it's not Authentic!***

All designs, testing results and promotional materials are the copyright property of Crowe Building Products Ltd. 1988// 2003

## PRESS RELEASE - Underwriters Laboratories Listing #R21159

We are pleased to announce that Underwriters Laboratories Inc. has completed their tests and factory inspections. We are now listed for the following classifications:

## UL790

Class A - prepared roof covering when laid over one layer of 1/4 in. thick G-P Gypsum Dens-Deck or 1/2 in thick gypsum board followed by one or more layers of type 30 underlayment either as an interply or as a base sheet alone.

Class B - prepared roof-covering limited to minimum 15/32 in. plywood or similar decks and one ply Type G1 Fiberglass felt base sheet.

Class C - for installation over minimum 15/32 in. plywood or similar decks when applied with type 30 underlayment either as an interply or as a base sheet alone.

## UL997

For installation as wind resistant roof coverings when installed in accordance with manufacturer's installation instructions. These shingles may also bear the statement " Also evaluated at wind velocities up to 110 mph" .

## UL2218

Class 4 Hail Impact Resistance.

"This investigation was initiated with a purpose to establish a program of Listing and Follow-up Service for the products involved in the construction of the test assemblies. Product Listing involves more than merely testing in accordance with a designated Standard. It also involves the implementation of an ongoing program of unannounced visits at the factory whereby Underwriters field representatives audit the quality control programs for factory output, which bears the UL Mark" .

To search out Authentic Roof Listing on the Underwriters Laboratories web site:

Please go to: <http://www.ul.com>

ONLINE CERTIFICATIONS DIRECTORY - UL File Number

Enter: R21159

This will take **you** to Two Listings for Crowe Building Products Ltd. The first is for Fire and Wind, the second is for Hail Impact.

For more information please call us at 905-529-6818

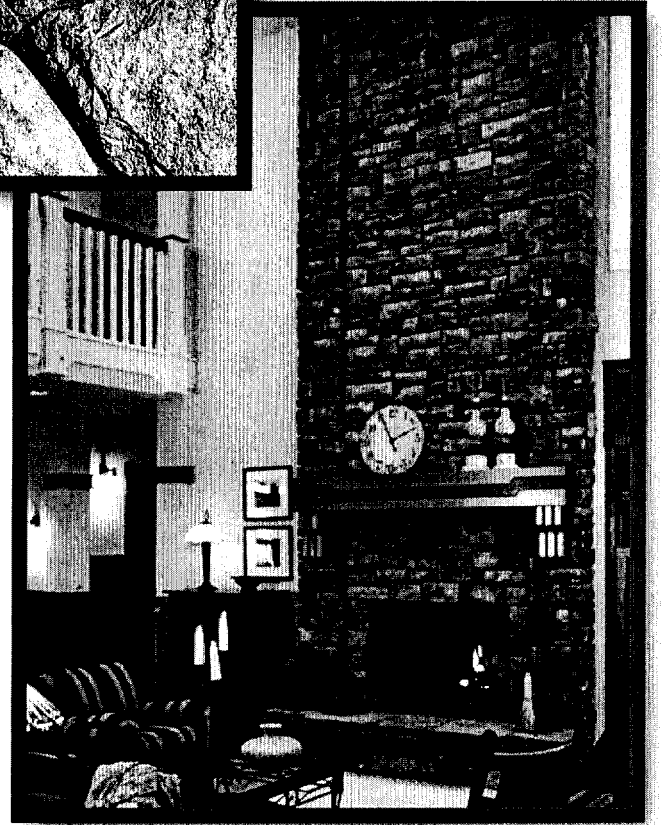
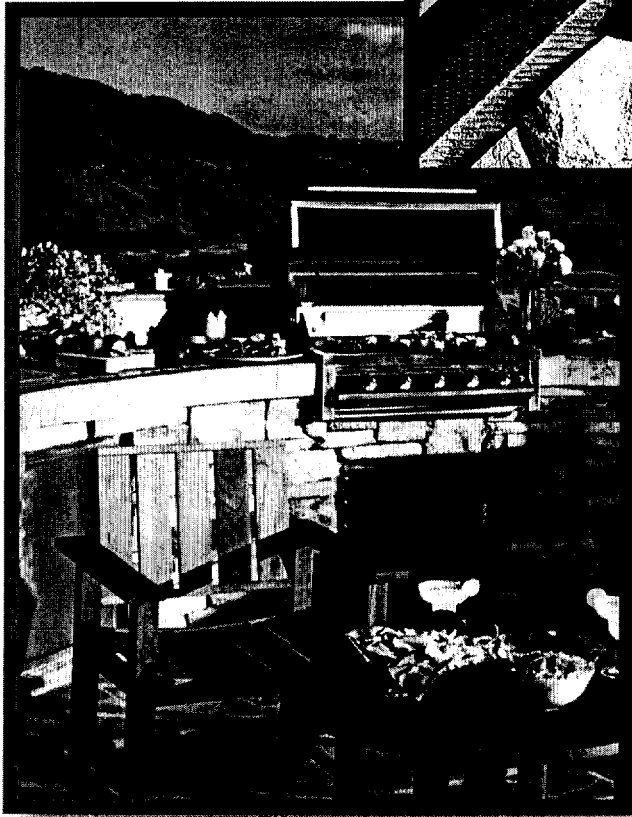
Thank you!

Authentic Sales Department



# CULTURED STONE<sup>®</sup>

*Manufacturer's Installation Instructions*





# CULTURED STONE®

## Manufacturer's Installation Instructions

Cultured Brick® Products Installation Instructions are available separately from your Dealer.

Building Code requirements vary from area to area. Check with local authorities for Building Code requirements in your area. Carefully read all Installation Instructions before proceeding with your Cultured Stone® products application. Observe safety precautions. Cultured Stone® products are covered by a 50-Year Limited Warranty when installed in accordance with the Manufacturer's Installation Instructions. See warranty on page 8.

### Estimating Stone Required

Determine the amount of Cultured Stone® products needed by measuring the area to be covered. Measure the length times the height to arrive at the square footage of flat stone needed. Subtract square footage for window and door openings. Measure the linear feet of outside corners to determine the amount of corner pieces needed. One linear foot of corner pieces covers approximately 3/4 of a square foot of flat area. Subtract the flat area covered by the linear feet of corner pieces from the square footage of flat stone required. You may wish to obtain some extra stone to allow for cutting and trimming.

### Tools Required

(Choose the tools required for your installation - see page 7 for illustrations and appropriate use.)

Hammer or Staple Gun • Wheelbarrow & Hoe • Hock & Trowel • Mason's Trowel • Margin Trowel • Masonry, Circular, Table Saw or Grinder with Carborundum or Diamond Blade • Wide Mouth Nippers or Hatchet • Safety Glasses/Dust Mask • Level • Metal Jointing Tool or Wood Stick • Grout Bag • Whisk Broom

### Sundry Material Requirements

#### A. MORTAR COMPONENTS

1. Premixed: Type N premixed mortar, or mortar mixed as per Table #2 on page 3.
2. Mortar color: iron oxide color (if desired).

#### B. WEATHER-RESISTANT BARRIER

Depending on local building code requirements, barrier shall be equal to U.B.C. Standard No. 14-1 for Kraft waterproof building paper or asphalt saturated rag felt or ASTM D 226, Type 1, No. 15 felt. **Note: Weather-resistant barrier must be used on all exterior and interior mortar applications except for those over masonry, concrete or stucco.**

#### C. METALLATH

1. Minimum 2.5 lb. expanded metal lath (diamond mesh) galvanized. Black metal lath (rust inhibitive) may be used on interior applications.
2. or 18 gauge galvanized woven wire mesh.
3. For metal buildings & open stud construction - minimum 3.4 lb. 3/8" rib expanded galvanized metal lath.
4. or other code accepted mesh or lath.

#### D. FASTENERS

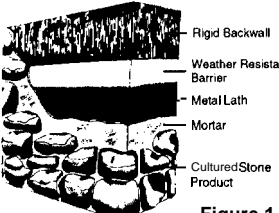
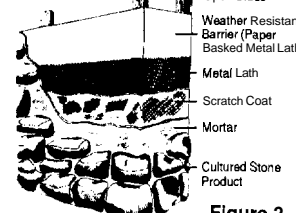
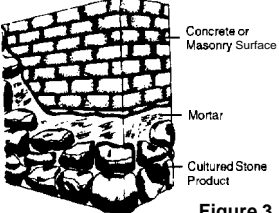
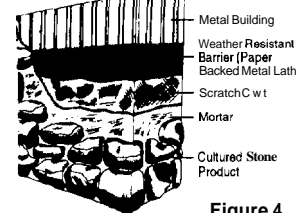
1. Galvanized nails, staples, concrete nails.
2. United States Gypsum Company's 1-1/4" type S-12 Pancake Head Super Tite screws. (Used for installation to metal surfaces.)

#### E. MASONRY SEALER

1. Silane based breather type sealer (if required).

### Surface Preparation for Mortar Installations

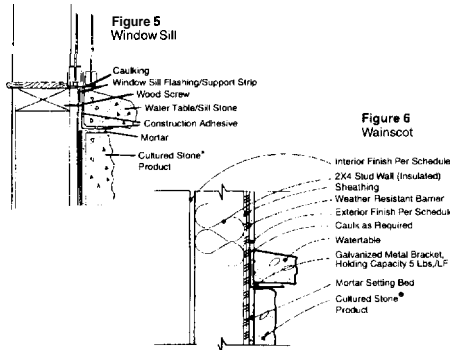
Using the chart below, determine the correct surface preparation for your installation.

TABLE 1	
WALL SURFACE	INTERIOR & EXTERIOR PREPARATION REQUIRED
<b>Rigid Backwall</b> Wallboard Plywood Paneling Wall Sheathing Concrete Board Polystyrene Insulation Board installed over a rigid backwall	Cover sheathing with a breather type weather resistant barrier, lap joints 4" shingle fashion. Then in accordance with local building code, lap and install lath or mesh using galvanized nails or staples 6" on center vertically, penetrating studs a minimum of 1". Continuously wrap weather-resistant barrier and metal lath a minimum of 16" around all outside and inside corners. (Fig. 1).
Clean & Untreated Concrete Masonry stucco	No preparation needed. Examine newly poured concrete closely to ensure that its finished surface contains no release agents (form oil). If it does contain form oil, etch surface with muriatic acid, rinse thoroughly and/or Score with a wire brush (Fig. 3).
<b>Dirty, Painted or Sealed</b> Concrete, Masonry or stucco	Sandblast or waterblast to original surface (remove sandblasting dust by washing) or securely attach lath.
<b>Metal Buildings</b>	Lap and install paperbacked 3/8" rib expanded metal lath to metal cladding supports of 20 ga. to 12 ga. using United States Gypsum Company's 1-1/4" type S-12 Pancake Head Super Tite screws. Screws must penetrate 3/8" beyond the inside face of metal surface. Screws are to be installed on centers equal to 1 screw/sq. ft. and shall not exceed 6" on center in one direction. Apply 1/2 to 3/4" scratch coat and allow to dry 48 hours (Fig. 4).
<b>Open Studs</b> Polystyrene Insulation Board installed Over Open Studs	Lap and install paperbacked metal lath to studs using nails which penetrate a minimum of 1" at 4" on center. Apply 1/2 to 3/4" scratch coat and allow to dry 48 hours (Fig. 2).
 Figure 1	 Figure 2
 Figure 3	 Figure 4

## Watertable/Sill Installations

Watertable/Sills provide a transition piece between a stone wainscot and other exterior finishes and for water runoff. They can also be used as a window sill.

Install using galvanized metal support brackets or support strip fastened with galvanized nails or screws penetrating studs 1" at a minimum of 16" O.C. Caulk and flash top of Watertable/Sill as required.

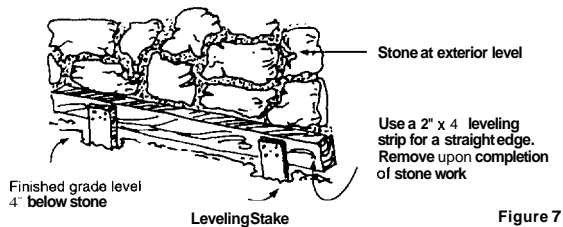


## Installing Stone At Ground Level

Keep the finished edge of the Cultured Stone® product a minimum of 4" above grade. Use a 2" X 4" leveling strip (straight-edge) (Figure 7).

This will:

- Provide a means of drainage
- Avoid possible staining of the stone by soils containing alkali or other minerals
- Achieve the look of natural stone that has been installed on a footing or foundation



## Prepare Your Work Area

Spread Cultured Stone® wall veneer out at the job site so you have a good variety of sizes, shapes, and colors to choose from. Plan for some variety and contrast in the overall design. Use small stones next to large ones, heavy-textured pieces next to smooth, thick stones next to thinner ones. Mixing Cultured Stone® wall veneer from different boxes during application will allow you to achieve a desirable balance of stones on your finished project.

## Mortar

### NOTE: WEATHER CONDITIONS

If stone is being applied in hot or dry weather, the back of each piece should be moistened with a fine spray of water or a wet brush to adequately prevent excessive absorption of moisture from the mortar. If being installed over concrete, masonry or scratch coat substrate, the substrate surface area should also be dampened before applying mortar.

Applications should be protected from temperatures below freezing as mortar will not set up properly under such conditions. Do not use antifreeze compounds to lower the freezing point of mortar.

## A. MIXING MORTAR/GROUT

Using Premixed Type N mortar or components from Table 2, mix to a firm, moist consistency. Mortar that is too dry and crumbly will not provide proper bond. Mortar that is too wet will be weak and messy.

TABLE 2 - Proportions for Mortar

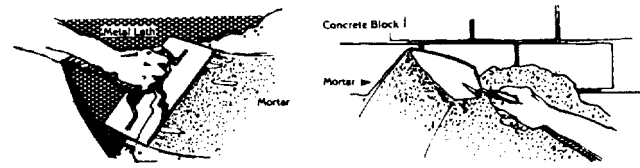
Parts By Volume

## B. MORTAR COLOR

Tinting mortar complements the color of the stone being installed. Example: use tan mortar with earthtone stones. This will greatly enhance the appearance of the finished installation. Regular mortars can be tinted to complement your Cultured Stone® product using iron oxide pigments available from your dealer.

## C. APPLYING MORTAR TO PREPARED SURFACE AREA

Using a plasterer's or mason's trowel (Figures 8 and 9), apply mortar 1/2" to 3/4" thick to prepared surface area. Do not spread more than a workable area (5 to 10 sq. ft.) so that mortar will not "set up" before stone is applied.



## Applying Cultured Stone® Products

See page 5 for additional instructions concerning Pro-Fit LedgeStone®, Carolina LedgeStone & European Castle Stone.

### A. STARTING POINT

Apply mortar and stone working from the bottom up or most stones can also be applied from the top down. Working from the top down may help avoid splashing previously applied stone with dripping mortar. LedgeStone types should be installed from the bottom up.

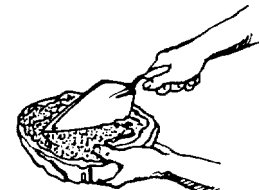
### B. JOINT WIDTH

In order to obtain the most natural look, joints should be as narrow as possible, average should not exceed 1/2" in width. An attractive look can also be achieved by fitting stones tightly together if desired.

### C. SETTING THE STONES

Press each stone into the mortar setting bed firmly enough to squeeze some mortar out around the stone's edges. Apply pressure to the stone to ensure a good bond. Ensure complete coverage between the mortar bed and back surface of the stone. Mortar may also be applied to the entire back of the stone (Figure 10).

Figure 10  
Mortar applied to the entire back of the stone



Care must be taken to avoid smearing mortar on surface of stone. Accidental smears should be removed using a whisk broom only after mortar has become crumbly.

#### D. INSTALL CORNER PIECES FIRST

If your application requires corner pieces, apply these first. Notice that the corner pieces have a long and a short leg. Alternate these in opposite directions (Figure 11).



Figure 11

Applying corners - alternating long and short legs in the opposite directions

#### E. INSTALL FLAT PIECES

After the corner pieces are in place, flat pieces are applied working toward the wall center (Figure 12).

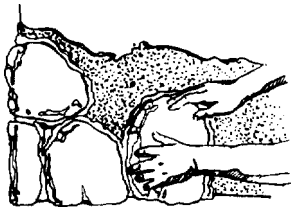


Figure 12

Applying flat pieces

#### F. KEEP YOUR MORTAR JOINTS CONSISTENT

Place the individual stones close together creating uniform joints between them. Cut and trim as required to achieve consistent width in the mortar joints. Then trim and fit small pieces into any remaining voids (Figure 13).

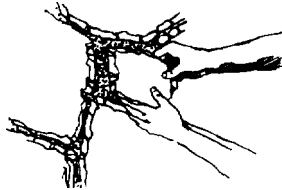


Figure 13

Position large pieces first, then trim and fit in smaller pieces

#### G. CUTTING AND TRIMMING

Stones can be cut and shaped for fit. Use wide mouth nippers or a hatchet (Figures 14 and 15). (Refer to page 2 - Tools Required). Some broken stones may be found in the box. These also may be used in filling gaps between large stones. For best finished appearance, coat cut or broken edges with mortar. If possible, position cut edges up when they are above eye level, down when below eye level. **Always use safety glasses when cutting and trimming.**



Figure 14

Trimming with wide mouth nippers



Figure 15

Trimming with a hatchet

#### NOTES:

##### LEVELAND PLUMB JOINT LINES

When applying Cobblefield®, Castle Stone, Limestone or Ledgestone, endeavor to maintain level and plumb joint lines. Also, long rectangular pieces will look most natural if applied horizontally.

##### RIVER ROCK & STREAM STONE

When applying River Rock or Stream Stone, plan the placement of stones to minimize trimming and cutting to maintain the natural looking rounded shapes.

##### LEDGESTONE TYPES

When applying Ledgestone types keep joints as small as possible to maintain a natural look and install from the bottom up. Strike joints deeply being careful not to expose the back edge of stones.

See page 5 for additional instructions regarding Pro-Fit Ledgestone®, Carolina Ledgestone, and European Castle Stone.

#### Grouting and Finishing Joints

##### A. GROUTING JOINTS

If additional mortar is required, use a grout bag to fill in joints (Figure 16). Care must be taken to avoid smearing mortar on surface of stone. Accidental smears should be removed only after mortar has become crumbly using a whisk broom or dry bristle brush. Never use a wet brush or wire brush.

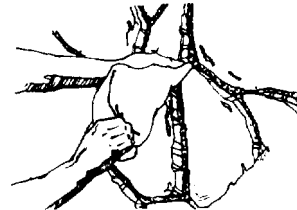


Figure 16

Grouting joints

##### B. FINISHING JOINTS

When the mortar joints have become firm or thumb-print dry (setting time will vary depending on wall surface and climatic conditions), they should be pointed up with a wood stick or metal jointing tool. Rake out excess mortar, compact and seal edges around stones (Figure 17). Careful attention to proper and even jointing will result in a professional looking finish.

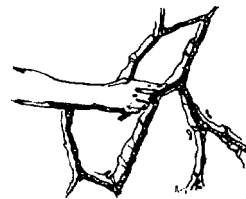


Figure 17

Finishing the job

##### C. CLEANING FINISHED JOB

At the end of the work day, or when mortar is sufficiently set up, the finished job should be broomed or brushed to remove loose mortar and to clean the face of the stone. **A wet brush should never be used to treat the mortar joints** as this will cause staining that will be difficult, or impossible, to remove. **Do not use acid or acid base products.**

## Additional Instructions For Pro-Fit LedgeStone®, Carolina LedgeStone, and European Castle Stone

### FIT THE JOINTS TIGHTLY

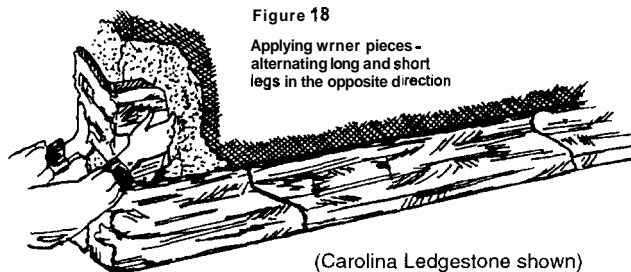
Install all these products with tight-fitted (mortarless) joints. Generally components should be placed butting each other and aligned for level and plumb. When installing with mortar, the backs of all these components must be wet. They should be noticeably damp, but free from surface water. Mortar must be tinted to match the color of the stone you are installing to help conceal the joint lines.

### A. STARTING POINT

Products are applied starting from the bottom (first course) and working up. Start each course with the appropriate LedgeStone component or European Castle Stone. Continue horizontally and complete each course before starting the next. If required, cut the appropriate size component to fit at the end or top of the finish area (Figure 20). Frequently check the installation for level and alignment.

### B. INSTALL CORNER PIECES FIRST

If your application requires corner pieces, start by installing a corner piece first followed by the adjoining flat pieces. Notice that the corner pieces have a long and short leg. Alternate these in opposite directions (Figure 18).

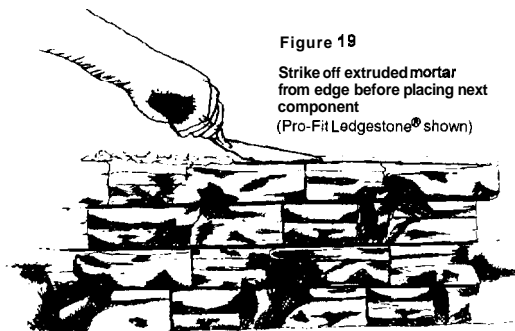


### C. SETTING THE STONES

Press each stone into the mortar setting bed firmly enough to squeeze some mortar out around the mortar groove at the back edge of component. Apply pressure to the component to ensure a good bond. Check for level and plumb. Mortar may also be applied to the entire back of the stone.

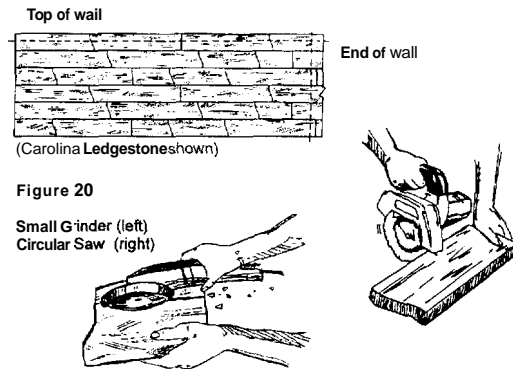
### D. INSTALL FLAT PIECES

After the first corner piece is in place, the adjoining flat pieces of each course or pattern are applied. Using a trowel, strike off the excess mortar around the edges of the component prior to placing the next component. This will allow the next adjacent component to fit tightly (see Figure 19). **Choose the correct length component to ensure that vertical joints do not line up.**



### G. CUTTING AND TRIMMING

Vertical or horizontal cuts can be made using a table saw, circular saw or small grinder equipped with a dry cutting diamond or carborundum blade (See Figure 20).



Cutting should be done outside as some dust will occur.

**SAFETY GLASSES AND A DUST MASK SHOULD ALWAYS BE WORN WHEN CUTTING ANY CULTURED STONE PRODUCTS.** Stones can also be cut and shaped using wide-mouth nippers or a hatchet.

### ADDITIONAL INFORMATION ON CUTTING AND FITTING

Finished Edges - Place finished edges at exposed areas

Cut Edges - Place cut edges within courses.

### FINISHING JOINTS

The design simplicity of Pro-Fit LedgeStone®, Carolina LedgeStone, and European Castle Stone allows for easy installation of components and provides a finished mortar-less joint between the stones. This reduces the time required for cutting, grouting and jointing.

### SURFACE CLEANING

Care must be taken to avoid smearing mortar on the surface of components. Accidental smears should be removed with a whisk broom or dry bristle brush only after mortar has become crumbly. **Do not use a wet brush or a wire brush.** Careful attention to proper jointing will result in a professional looking finish. **Do not use acid or acid base products.**

## Installing Hearthstones

Hearthstones are not recommended or warranted for exterior use or as a surface area subject to foot traffic. Terra Craft® Pavers are available from your dealer for patios, walkways, and driveways.

### A. PLACE MORTAR

Place mortar 3/4" deep in 3-inch wide strips 1 inch apart on prepared surface (Figure 21).



Figure 21  
Placing Mortar for  
Hearthstone Installation

### B. INSTALL HEARTHSTONES

Place the first Hearthstone on to the mortar bed and level (Figure 22). Place adjacent Hearthstones, aligning and leveling with the first piece.

If joints need additional mortar, fill joints using a grout bag. Tool and finish joints following previous instructions under "Grouting and Finishing Joints". Ensure Hearthstones are set in a complete bed of mortar.

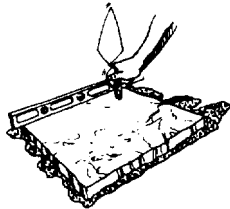


Figure 22  
Placing Hearthstone

### C. CUTTING AND TRIMMING HEARTHSTONES

Hearthstones can be cut as required using a circular saw fitted with a carborundum or diamond blade or using a mason's brick or tile saw. Place finished edges at exposed areas.

## NOTES: HEARTHSTONE INSTALLATION

### U.L. LISTED

Cultured Stone® and hearth products are made from noncombustible materials (U.L. Listing #209T). They are listed by Underwriters Laboratories, Inc. for use as floor protectors and wall shields with stoves and on fireplace hearths. If complying to U.L. Listing, mortar joints must not exceed 1/2" in width and the mortar must be even with the top of the hearth surface.

### RAISED HEARTH

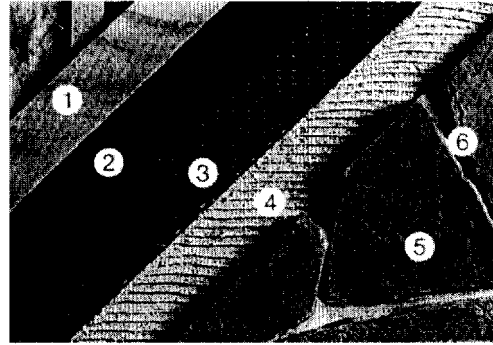
Do not cantilever or extend Hearthstones more than 1-1/2" beyond direct support. When grouting the extended portion of a cantilevered Hearthstone, bring the grout to the front edge. Push a long galvanized nail horizontally into the grout to add support, then cover the nail with mortar.

### SEALING FIREPLACES/HEARTH

If desired, sealing the Cultured Stone® facing or hearth of a fireplace installation will assist in the removal of smoke and soot stains should they occur.

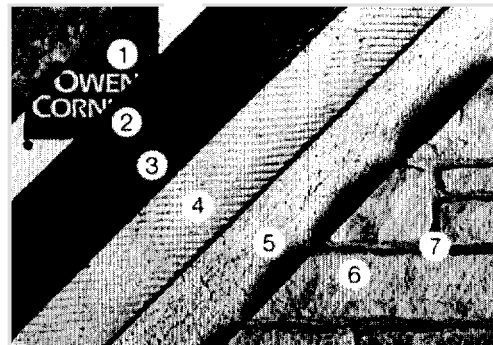
## Typical Installations:

### WOOD FRAME:



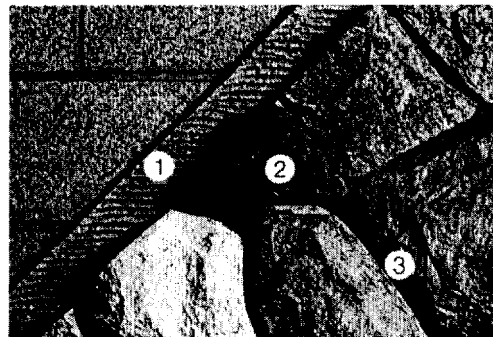
In sequence: (1) sheathing, (2) weather-resistant barrier, (3) galvanized metal lath, (4) mortar, (5) Cultured Stone, (6) mortar joint.

### RIGID FOAM INSULATION:



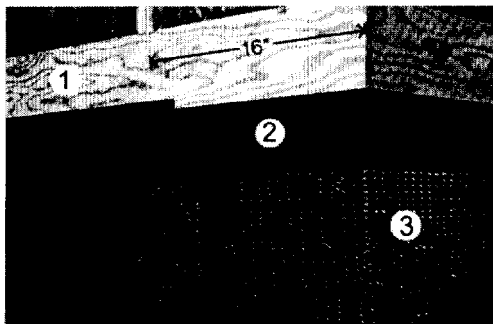
In sequence: (1) rigid foam insulation, (2) weather-resistant barrier, (3) metal lath, (4) scratch coat, (5) mortar setting bed, (6) Cultured Stone, (7) mortar joint.

### MASONRY OR CONCRETE:



In sequence: (1) mortar applied directly to untreated, unpainted masonry, concrete or stucco, (2) Cultured Stone, (3) mortar joint.

### CORNER PREPARATION:



Weather-resistant barrier and galvanized metal lath must continuously lap a minimum of 16" beyond outside and inside corners. Lap materials 4 on horizontal and vertical joints. (1) wall substrate, (2) weather-resistant barrier, (3) metal lath.

## General Information

### CLEANING

Dirt etc. may be removed by using a strong solution of granulated soap or detergent and water with a bristle brush. **Do not use a wire brush** as it will cause damage to the surface. Rinse immediately with fresh water. For help with serious cleaning problems, contact your local dealer. **Do not attempt to clean using acid or acid containing products. Do not clean with high pressure power washer.**

### SALT AND DE-ICING CHEMICALS

Because all concrete and masonry is vulnerable to damage by salt, Cultured Stone® products are not warranted against damage incurred from salt or other chemicals used to remove snow or ice. Do not use de-icing chemicals on areas immediately adjacent to a Cultured Stone® application.

### SCUFFING

Scuffing occurs on all natural stone. Occasionally some scuffing will occur on the surface of Cultured Stone® products. This can enhance the natural appearance of your Cultured Stone® installation. Some scuff marks can be removed by cleaning as described above.



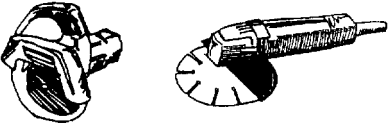


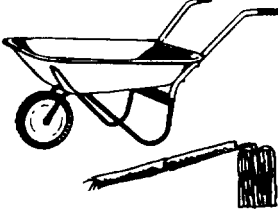





### EFFLORESCENCE

Efflorescence is a water-soluble salt that is deposited on the surface of stucco, concrete, brick and other masonry products by the evaporation of water that has penetrated the wall. On rare occasions efflorescence will occur on Cultured Stone® products. To remove efflorescence, allow the stone to dry thoroughly, then scrub vigorously with a stiff bristle brush and clean water. Rinse thoroughly - do not use a wire brush. For more difficult efflorescence problems, scrub thoroughly with a solution of 1 part white household vinegar to 5 parts water. Rinse thoroughly. For unusually difficult cleaning problems contact your local Cultured Stone® dealer.

### SWIMMING POOLS

Cultured Stone® products should not be used below water level as in swimming pool liners. Chlorine and other chemicals may discolor the Cultured Stone® products and other masonry materials.

## TOOLS REQUIRED

 <p><b>Hammer/Staple Gun</b> (Applying weather resistant barrier and/or metal lath)</p>	 <p><b>Metal Jointing Tool/Wood Stick</b> (Finishing joints)</p>	 <p><b>Masonry, Circular, Table Saw or Grinder</b> with Carborundum or Diamond Blade</p>	
 <p><b>Mason's Trowel</b> (Applying mortar)</p>	 <p><b>Margin Trowel</b> (Applying masonry adhesive)</p>		
 <p><b>Wheel Barrow and Hoe</b> (Mixing mortar)</p>	 <p><b>Hock and Trowel</b></p>	 <p><b>Grout Bag</b></p>	
	 <p><b>Level</b></p>	 <p><b>Whisk Broom</b> (Cleaning finished work)</p>	 <p><b>Dust Mask</b></p>

## Incorporate Good Building Practices

### BUILDING CODE REQUIREMENTS

Building Code requirements vary from area to area. Check with local authorities for Building Code requirements in your area. Carefully read all Installation Instructions before proceeding with your Cultured Stone® application.

### EXTERIOR APPLICATIONS

Make sure that the application of Cultured Stone® products and the structure they are being applied to incorporate good building practices.

Rigid, corrosion-resistant flashing shall be installed at all wall penetrations. Flashing type and locations shall be in accordance with the requirements of the applicable building code. On exterior applications, the incorrect installation or absence of flashing, cant strips, gutters and downspouts may result in diversion of water run-off onto finished surface areas. Masonry and other building products subjected to these conditions may develop staining, and when combined with severe freeze-thaw conditions, may eventually cause surface damage. The application of Cultured Stone® products under these conditions is not recommended.

### CAPPING OFF THE EXPOSED TOP OF EXTERIOR WALLS

To achieve a finished architectural look on horizontal or sloping top areas of exterior walls, piers, retaining walls, or other surfaces, the use of Cultured Stone® Capstones or a poured-in-place concrete cap must be used to provide adequate run-off protection to the wall areas. Caps should extend approximately 1" to 2" beyond the finished stone surface. **Cultured Stone® corner pieces or flat pieces must not be used to cap walls.**

### RETAINING WALLS

All retaining walls must be water-proofed at the fill side. Wall construction should incorporate proper use of granular back fill and provisions for good drainage. A continuous longitudinal drain along the back of the wall set in drain rock is recommended.

### CHIMNEY CAP

All chimney chases must be capped with a one-piece cap that extends 1" - 2" beyond the finished stone surface to prevent water from entering the wall system. Chimney or chase construction should incorporate proper flashing.

## Code Acceptances, Reports And Listings

Tested or listed by Underwriters Laboratories, Inc., City of Los Angeles RR23744, HUD Materials Release No. 691c, Texas Dept. of Insurance Product Evaluation EC-21, ICBO Report ER-5749, National Evaluation Service NER-358 (showing acceptability to 2000 International Building Code, 2000 International Residential Code, BOCA National Building Code/1999, 1999 Standard Building Code and 1997 Uniform Building Code) and Ontario BMEC Authorization #01-04-256.

## Trademarks and Patents

"Cultured Stone@", "Cultured Stone Veneer®", "Cultured Brick®", "Pro-Fit®", "Pro-Fit LedgeStone", "Cobblefield®", "Desert Blend®", "Glacier@", "California Drift®", "C.S.V®", "StoneCAD®", and Design Solutions" are registered trademarks of Cultured Stone - A Division of Owens Corning.

### Cultured Stone® 50-Year Limited Warranty

Cultured Stone@products are covered for a period of 50 years from the date of purchase when used on a structure which conforms to local building codes and when installed in accordance with the manufacturer's instructions. Cultured Stone - A Division of Owens Corning will repair or provide, free-of-charge, new materials to replace any determined to be defective. This warranty is limited to the original purchaser and may not be transferred to any subsequent owner

This warranty does not cover damage resulting from:

- Settlement of the building or other wall movement.
- Contact with chemicals or paint.
- Discoloration due to airborne contaminants.
- Staining or oxidation.

This warranty covers only manufacturing defects in Cultured Stone® manufactured stone products. Cultured Stone - A Division of Owens Corning is not responsible for labor costs incurred in removal and replacement of defective products. Hearstones are not warranted for use on the ground or as a surface area subject to foot traffic.

### AUTHORIZED DEALER:

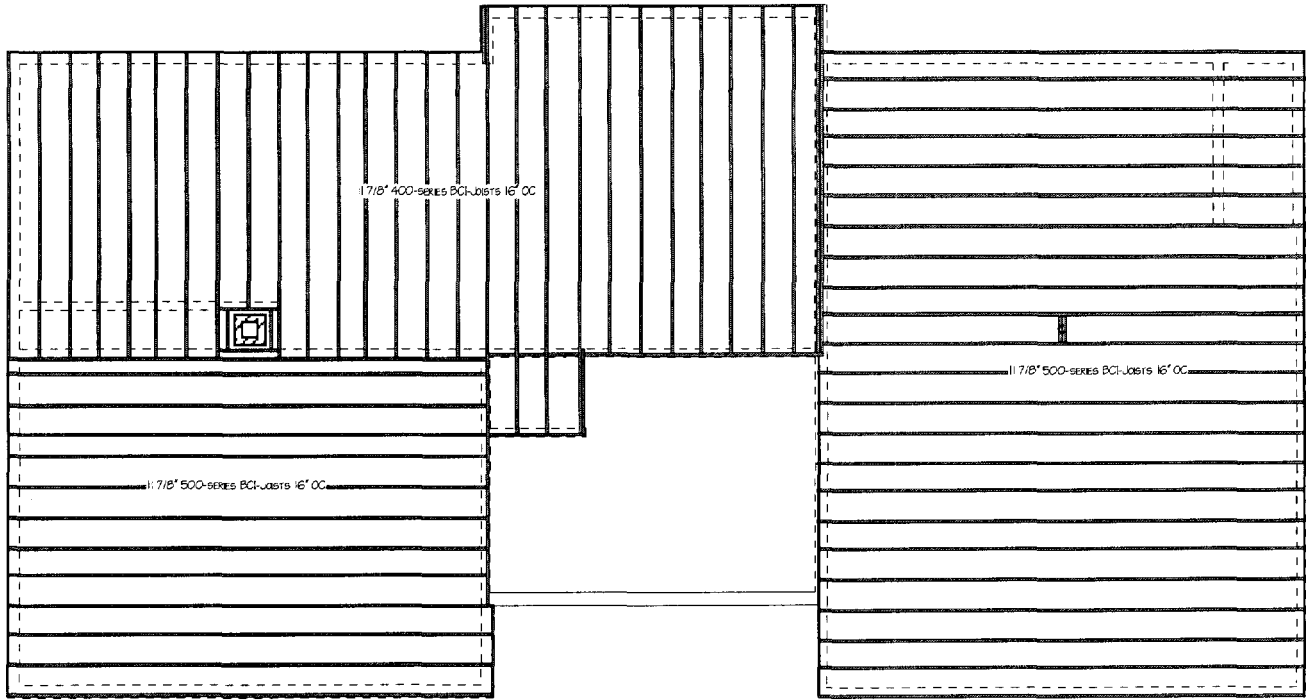
### CULTURED STONE®

One Owens Corning Parkway, Toledo, OH 43659  
Tel: 800-255-1727 Fax: 707-255-5572

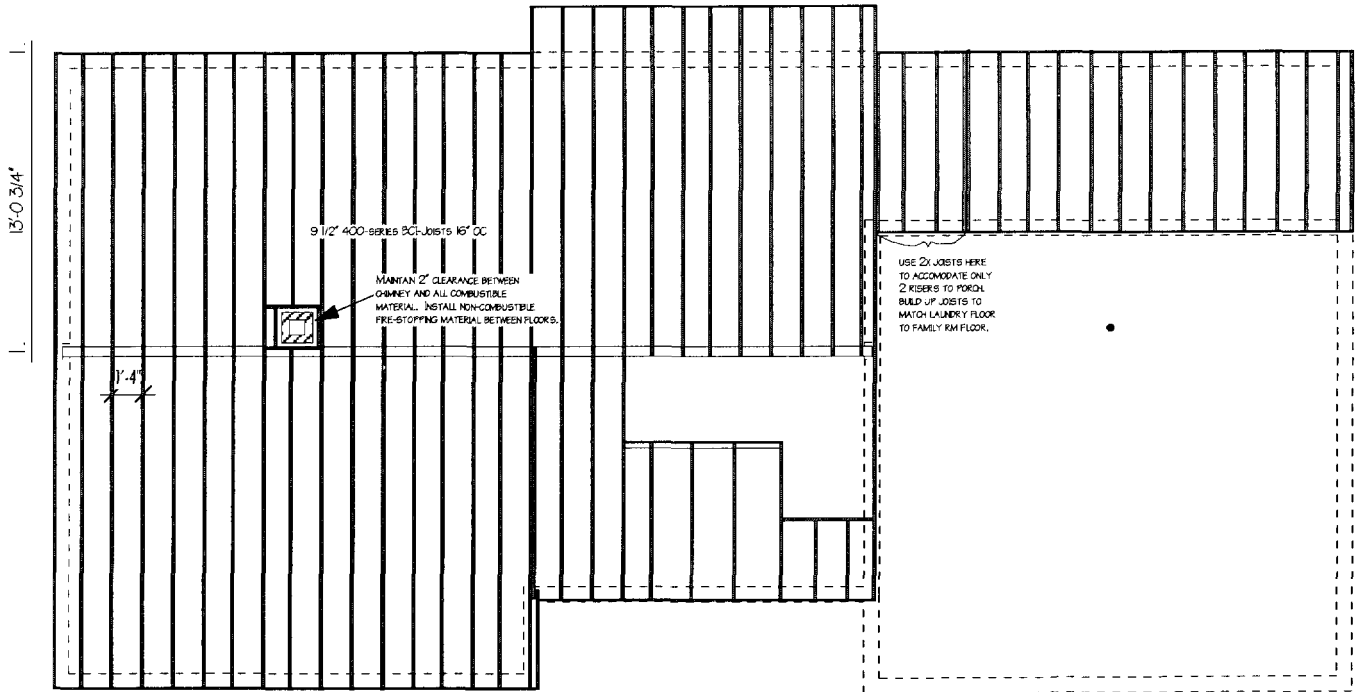


E-Mail: [cltrdstn@owenscorning.com](mailto:cltrdstn@owenscorning.com)  
Or for additional information, visit our  
website at <http://www.culturedstoM.com>





**SECOND FLOOR FRAMING PLAN**



**FIRST FLOOR FRAMING PLAN**



**WILTSHIRE MANOR**

LOT 4 STEPPING STONE LANE  
AUTUMN GLEN SUBDIVISION  
PORTLAND, ME

**FLOOR FRAMING  
PLAN 5**

DATE  
8/13/04

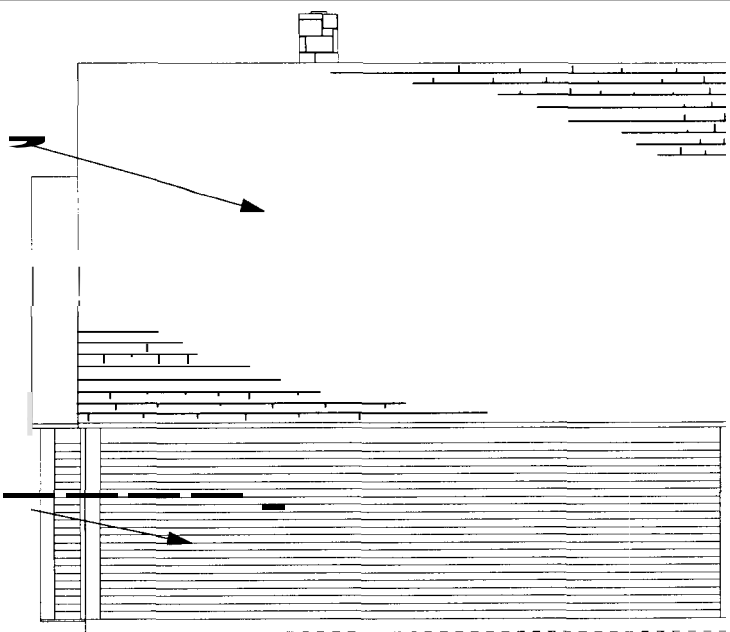
SCALE  
1/8" = 1'-0"

**A-8**



"AUTHENTIC" RUBBER SLATE RANDOM BLEND OF 25% DARK GRAY, 25% UGM GRAY, 25% GREEN, AND 25% PLUM  
 INSTALLED OVER ASPHALT-SATURATED TYPE 30 FELT MEETING CLASS C FIRE RATING

RUSTIC CEDAR SIDING



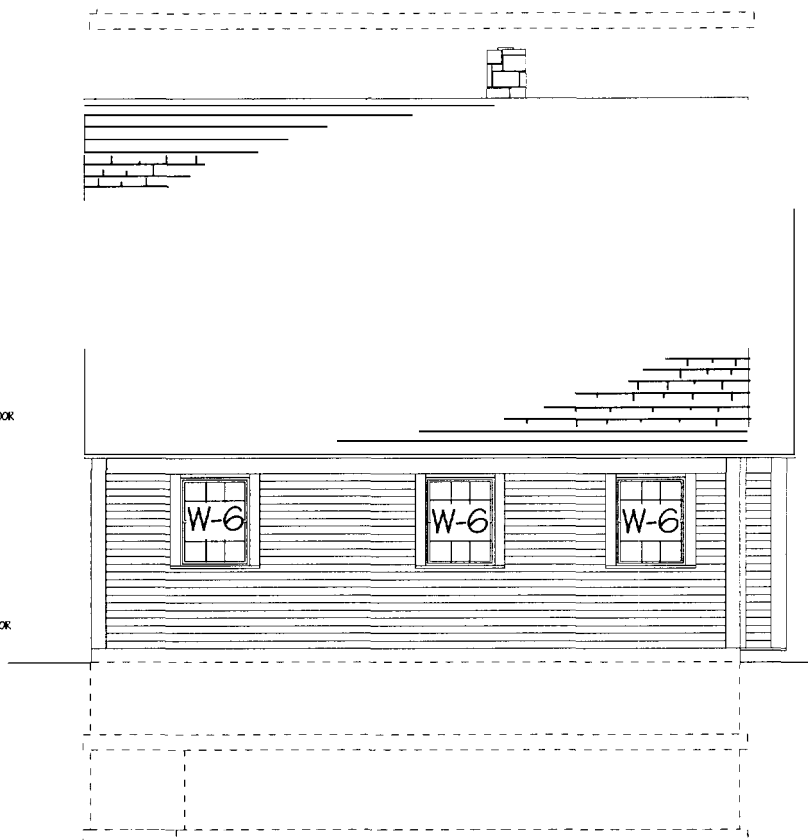
LEFT ELEVATION



TOP OF 2ND FLR. SUBFLOOR  
 102' - 7 3/4"

TOP OF 1ST FLR. SUBFLOOR  
 93' - 5 1/4"

BOTTOM OF FOOTING  
 83' - 11 1/2"



RIGHT ELEVATION

**W**  
Homes

**WILTSHIRE MANOR**

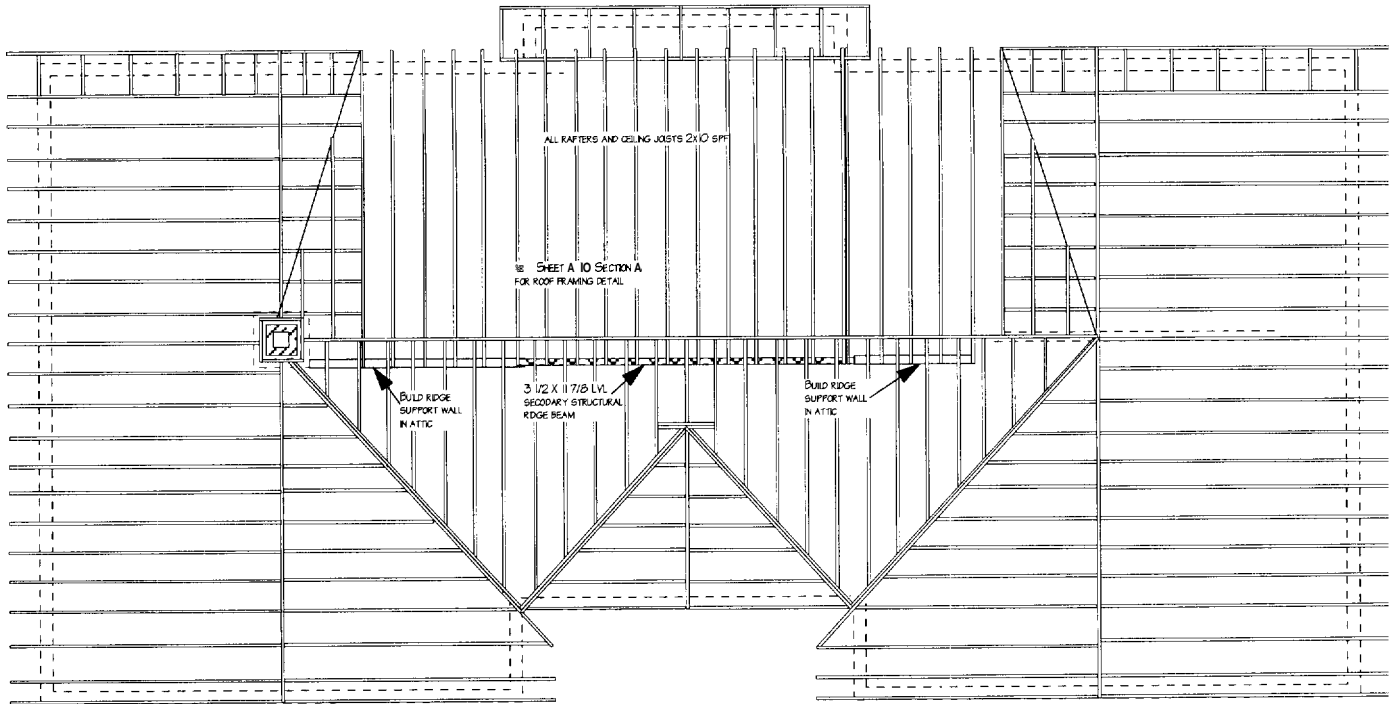
LOT 4 STEPPING STONE LANE  
 AUTUMN GLEN SUBDIVISION  
 PORTLAND, ME

SIDE  
 ELEVATIONS

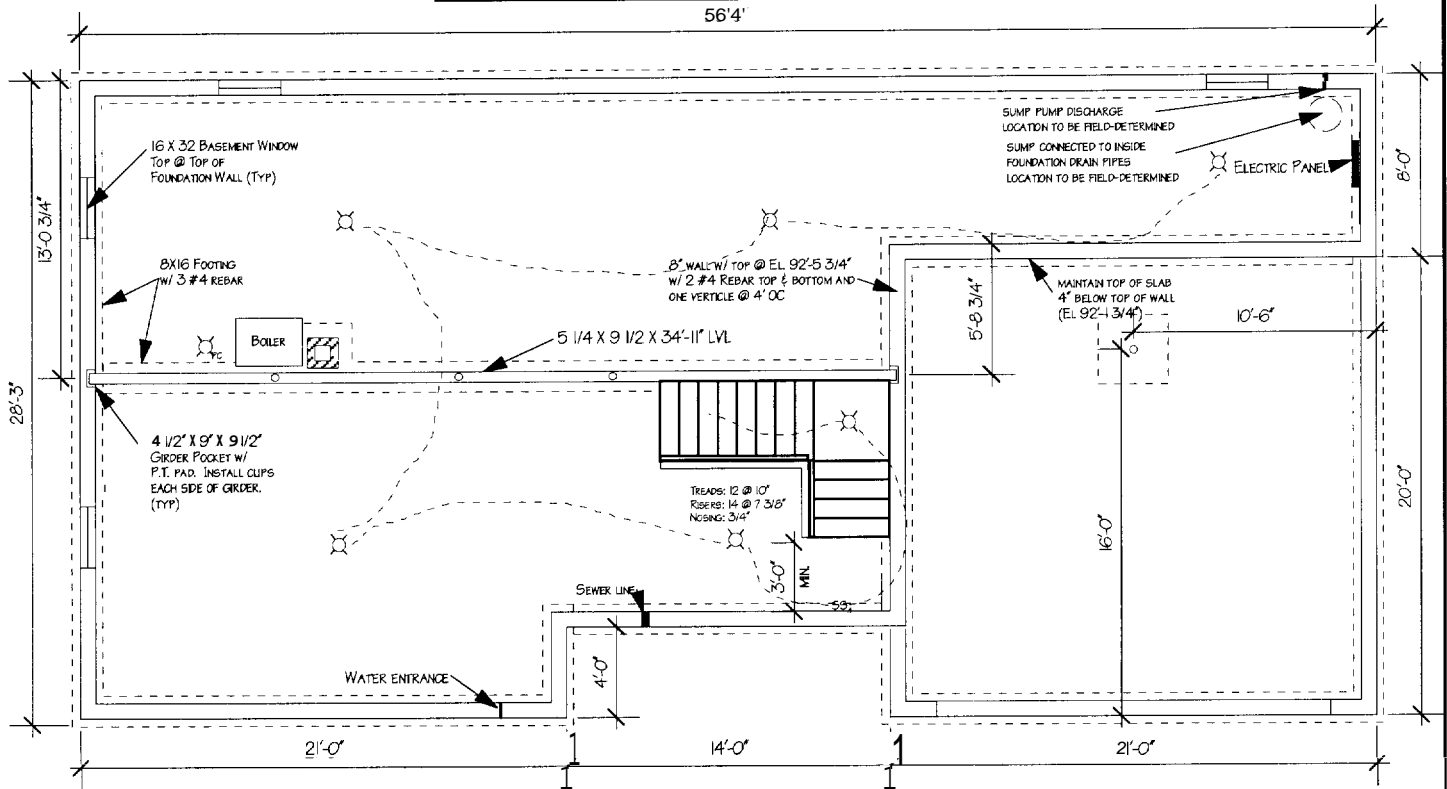
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 8/13/04

SCALE  
 1/8" =

**A-6**



**ROOF FRAMING PLAN**



**FOUNDATION PLAN**

**Windemere Homes**

**WILTSHIRE MANOR**

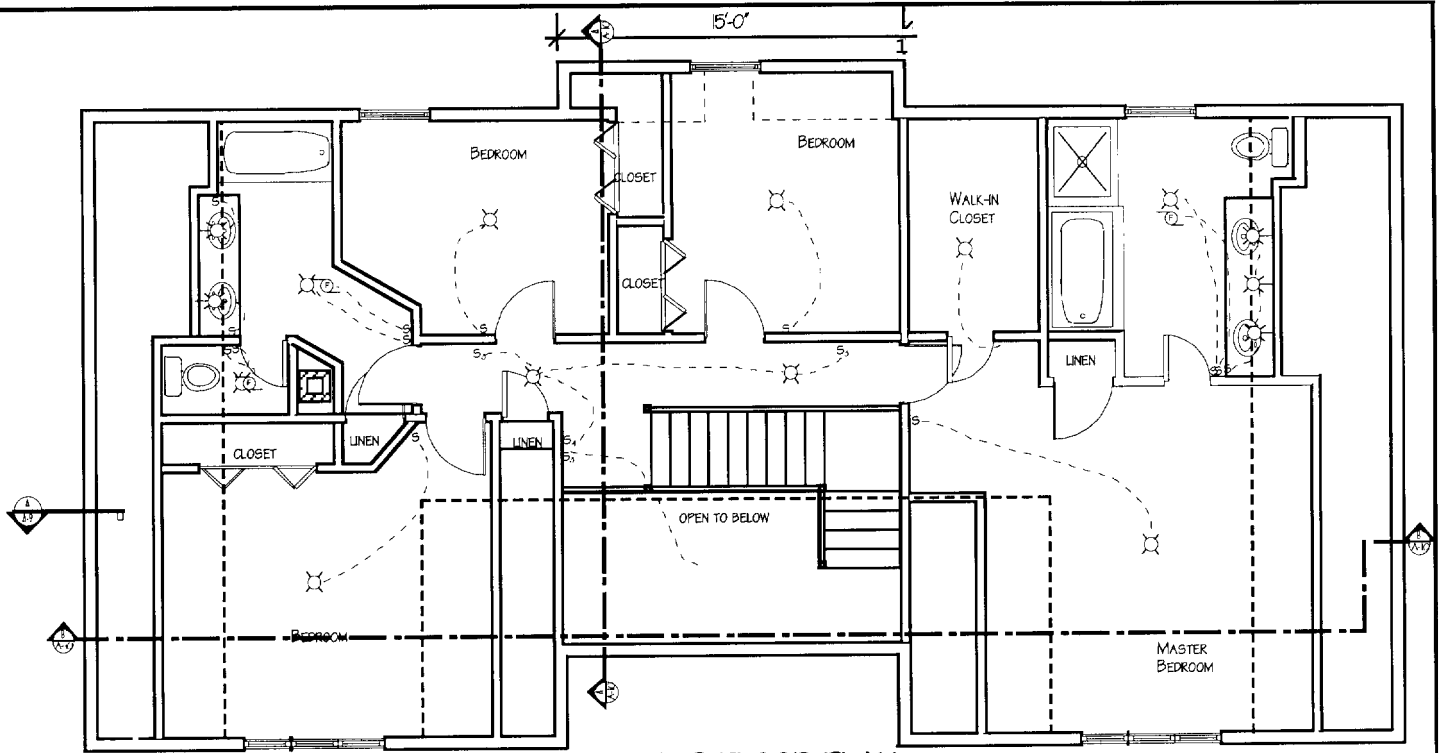
LOT 4 STEPPING STONE LANE  
AUTUMN GLEN SUBDIVISION  
PORTLAND, ME

**ROOF FRAMING & FOUNDATION PLANS**

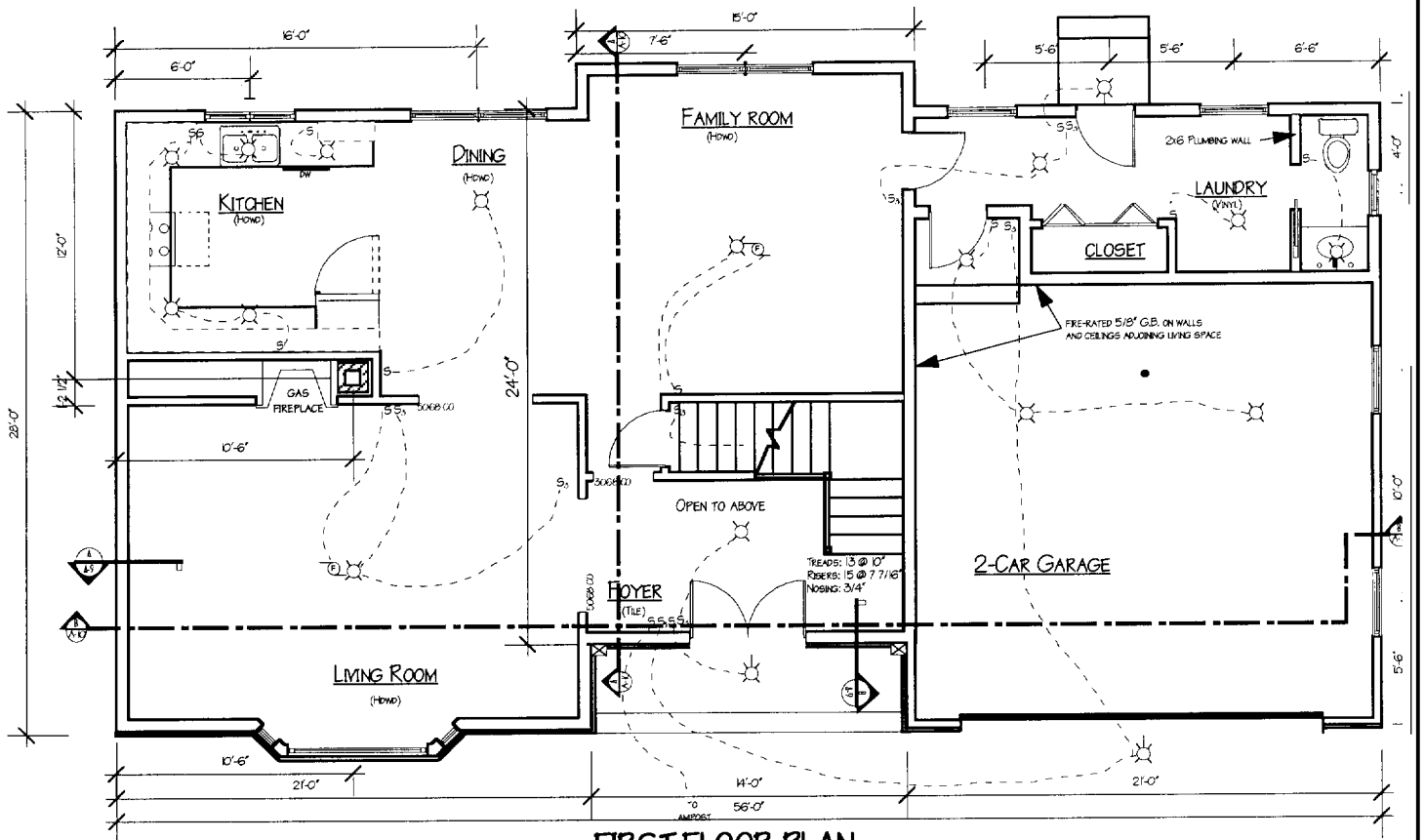
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8/13/04

SCALE  
1/8" = 1'-0"

**A-7**



**SECOND FLOOR PLAN**



**FIRST FLOOR PLAN**

**Windemere  
Homes**

**WILTSHIRE MANOR**

LOT 4 STEPPING STONE LANE  
AUTUMN GLEN SUBDIVISION  
PORTLAND, ME

**FLOOR PLANS**

DATE  
8/13/04  
SCALE  
1/8" = 1'-0"


**A-3**

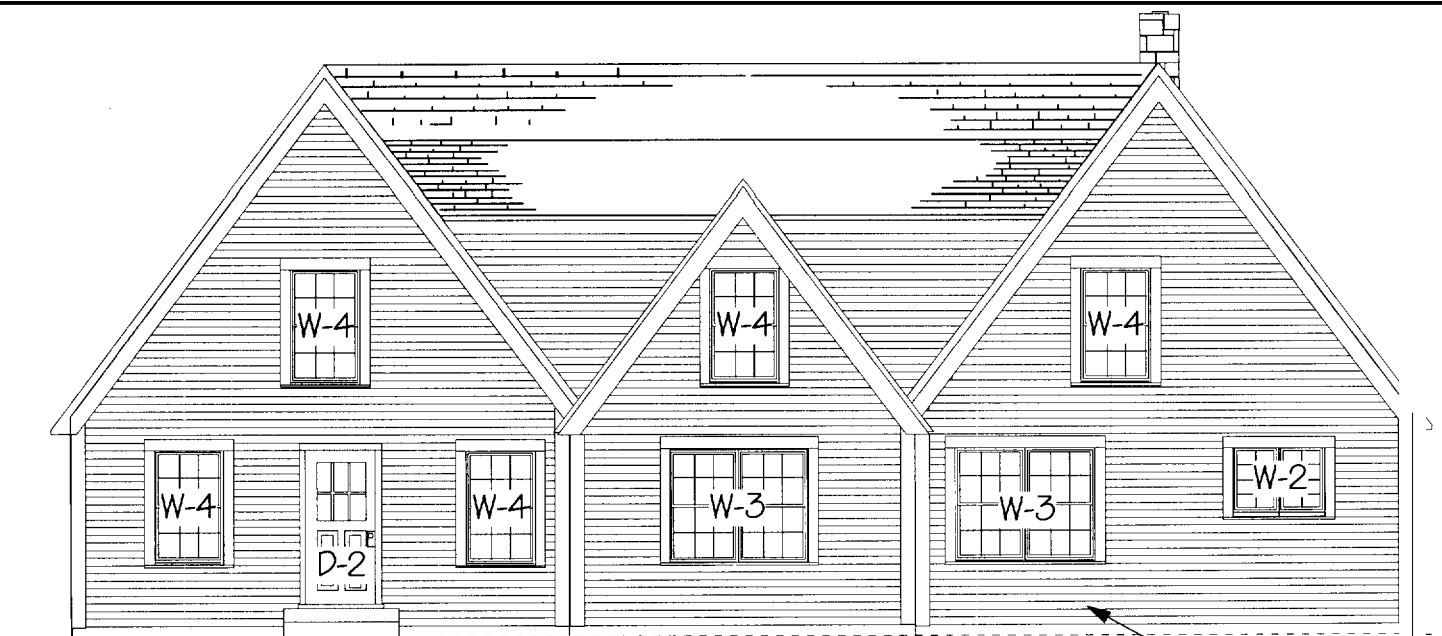
# WINDOW & DOOR SCHEDULE

NUMBER	MANUFACTURER	MODEL	ROUGH OPENING	HEADER SIZE
W-1	Andersen	45-6050-20	9'2 3/8" x 5' 1 7/8"	2-2x10
w-2	Andersen	CW23	4'9" x 3'0 1/2"	2-2X6
w-3	Andersen	244-DH-3050-2	6' x 5'	2-2X8
w-4	Andersen	244-DH-3050**	3' x 5'	2-2X4
w-5	Andersen	CW15-3**	6' x 5'0 3/8"	2-2x10
W-6	Andersen	244-DH-2432	2'6" x 3'5 1/4"	2-2X4
w-7			approx 6' x 3'	2-2X10
* Meets or exceeds Egress requirements				
D-1	Custom		approx 6' x 6'8"	2-2x10
D-2	Therma-Tru or App'd Equal		2'8"x 6'8"	2-2X4

# ROOM FINISH SCHEDULE

Room	Floor	Wall	Window	Door	Stairs
Foyer	Tile	DW/Paint	DW/Paint	Stairs - Hdwd	
Livina Room	Hardwood	DW/Paint	DW/Paint		
Laundry Room	Tile	DW/Paint	DW/Paint		
Family Room	Hdwd	DW/Paint	DW/Paint		
Dining Room	Hdwd	DW/Paint	DW/Paint		
Kitchen	Hdwd	DW/Paint	DW/Paint		
MBR	Carpet	DW/Paint	DW/Paint		
Bedroom 1	Carpet	DW/Paint	DW/Paint		
Bath 1	Tile	DW/Paint	DW/Paint		
Master Bath	Tile	DW/Paint	DW/Paint		
2nd Flr Hall	Hdwd	DW/Paint	DW/Paint		
NOTES:					
Hardwood is 2 1/4" Red oak					
Tile is 12 inch square terracotta					

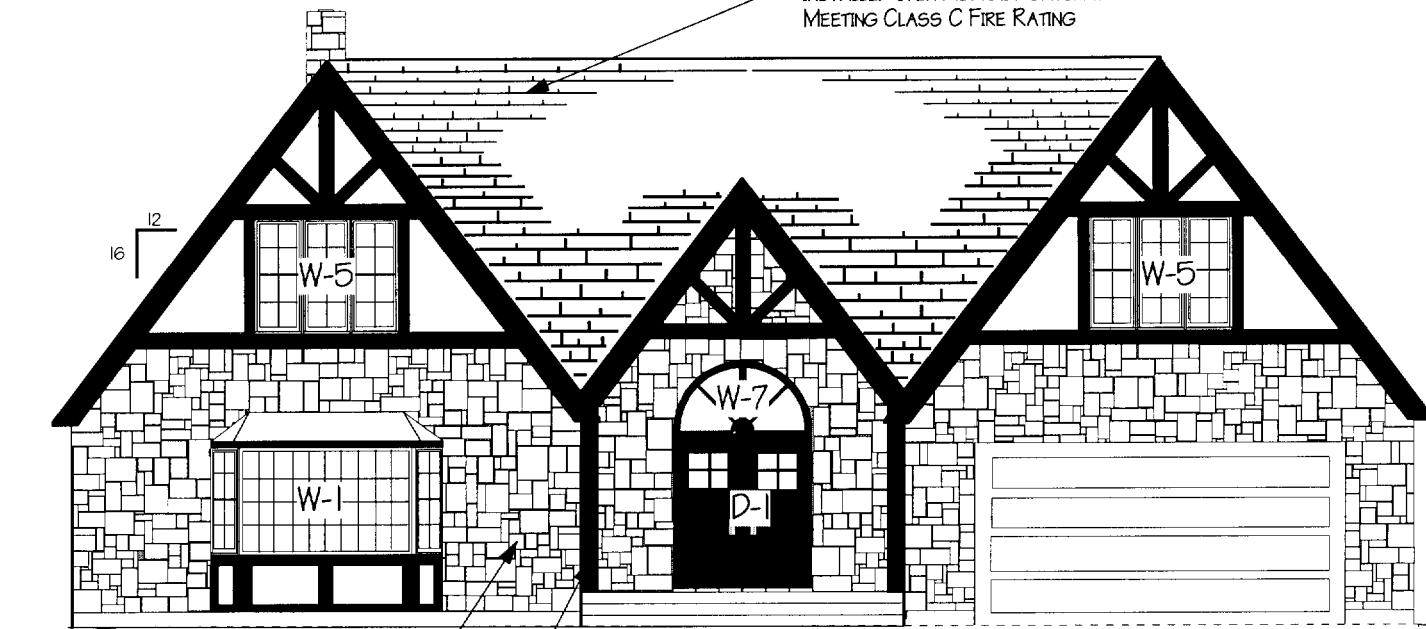
	<b>WILTSHIRE MANOR</b> Lot 4 Stepping Stone Lane Autumn Glen Subdivision Portland, ME	<b>SCHEDULES</b>	DATE 8/13/04	<b>A-4</b>
			SCALE NONE	



**REAR ELEVATION**

RUSTIC CEDAR SIDING

"AUTHENTIC" RUBBER SLATE RANDOM BLEND OF 25% DARK GRAY, 25% LIGHT GRAY, 25% GREEN, AND 25% PLUM. INSTALLED OVER ASPHALT-SATURATED TYPE 30 FELT MEETING CLASS C FIRE RATING



CULTURED STONE VENEER  
TIMBERFRAME TRIM

**FRONT ELEVATION**

**Windemere  
Homes**

**WILTSHIRE MANOR**

LOT 4 STEPPING STONE LANE  
AUTUMN GLEN SUBDIVISION  
PORTLAND, ME

**FRONT & REAR  
ELEVATION 5**

DATE  
8/13/04  
SCALE  
1/8" = 1'-0"

**A-5**

# PLUMBING APPLICATION

Department of Human Sciences  
Division of Health Engineering

## PROPERTY ADDRESS

Town or Plantation: \_\_\_\_\_

Street Subdivision Lot #: \_\_\_\_\_

## PROPERTY OWNERS NAME

Last: \_\_\_\_\_ First: Homes

Applicant Name: \_\_\_\_\_

Mailing Address of Owner/Applicant (If Different): \_\_\_\_\_

## Owner/Applicant Statement

I certify that the information submitted is correct to the best of my knowledge and understand that any falsification is reason for the Local Plumbing Inspectors to deny a permit.

Signature of Owner/Applicant \_\_\_\_\_

Date \_\_\_\_\_

058020

PORTLAND PERMIT # 9242 TOWN COPY

Date Permit Issued: 1/10/05 \$ 1102.00  Double Fee Charged

John Reel L.P.I. # 0726  
Local Plumbing Inspector Signature

406 F 054

## Caution: Inspection Required

I have inspected the installation authorized above and found it to be in compliance with the Maine Plumbing Rules.

Local Plumbing inspector Signature \_\_\_\_\_

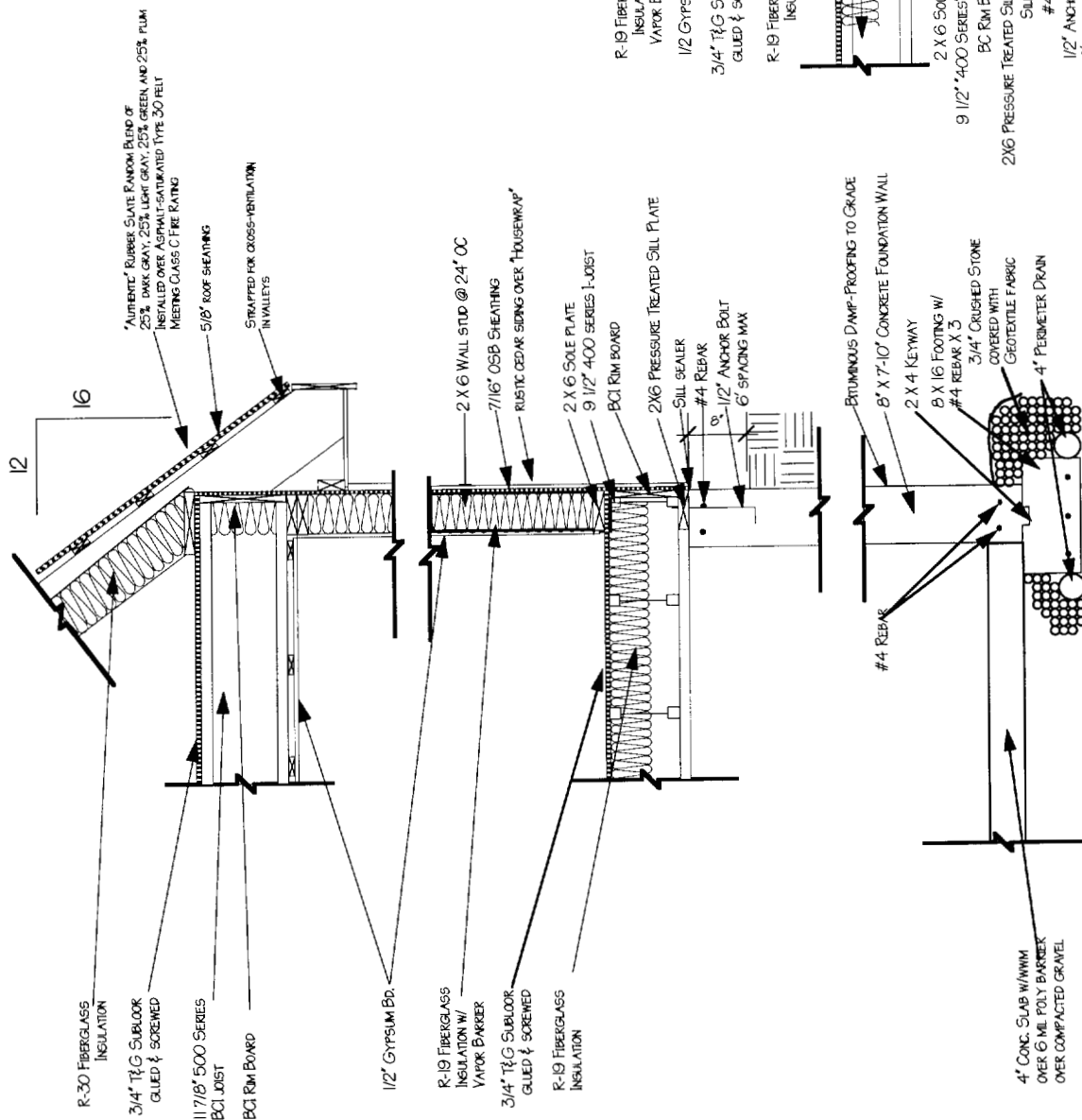
Date Approved \_\_\_\_\_

## PERMIT INFORMATION

<p><b>This Application is for</b></p> <p>1. <input checked="" type="checkbox"/> NEW PLUMBING</p> <p>2. <input type="checkbox"/> RELOCATED PLUMBING</p>	<p><b>Type of Structure To Be Served:</b></p> <p>1. <input checked="" type="checkbox"/> SINGLE FAMILY DWELLING</p> <p>2. <input type="checkbox"/> MODULAR OR MOBILE HOME</p> <p>3. <input type="checkbox"/> MULTIPLE FAMILY DWELLING</p> <p>4. <input type="checkbox"/> OTHER - SPECIFY _____</p>	<p><b>Plumbing To Be Installed By:</b></p> <p><input checked="" type="checkbox"/> M/ LUMBEF</p> <p>2. <input type="checkbox"/> OIL JF</p> <p>3. <input type="checkbox"/> MFG'D. HOUSING DEALER/MECHANIC</p> <p>4. <input type="checkbox"/> PUBLIC UTILITY EMPLOYEE</p> <p>5. <input type="checkbox"/> EF II</p> <p style="text-align: right;">:NSE <u>1/10/05</u></p>
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Hook-Up & Piping Relocation Maximum of 1 Hook-Up	Number	Column 2 Type of Fixture	Number	Column 1 Type of Fixture
OR		Hosebibb / Sillcock	2	Bathtub (and Shower)
		Floor Drain	1	Shower (Separate)
		Urinal	1	Sink
		Drinking Fountain	1	Wash Basin
OR		Indirect Waste	1	Water Closet (Toilet)
		Water Treatment Softener, Filter, etc	1	Clothes Washer
		Grease / Oil Separator	1	Dish Washer
		Dental Cuspidor	1	Garbage Disposal
OR		Bidet	1	Laundry Tub
		Other: _____	1	Water Heater
	<div style="border: 1px solid black; width: 50px; height: 20px; margin: 0 auto;"></div> <p>TRANSFER FEE [\$6.00]</p>		1	
		Fixtures (Subtotal) Column 2	16	Fixtures (Subtotal) Column 1
			16	Fixtures (Subtotal) Column 2
			16	Total Fixtures
				Fixture Fee
				Transfer Fee
				Hook-Up & Relocation Fee
				Permit Fee (Total)

SEE PERMIT FEE SCHEDULE  
FOR CALCULATING FEE



**A**

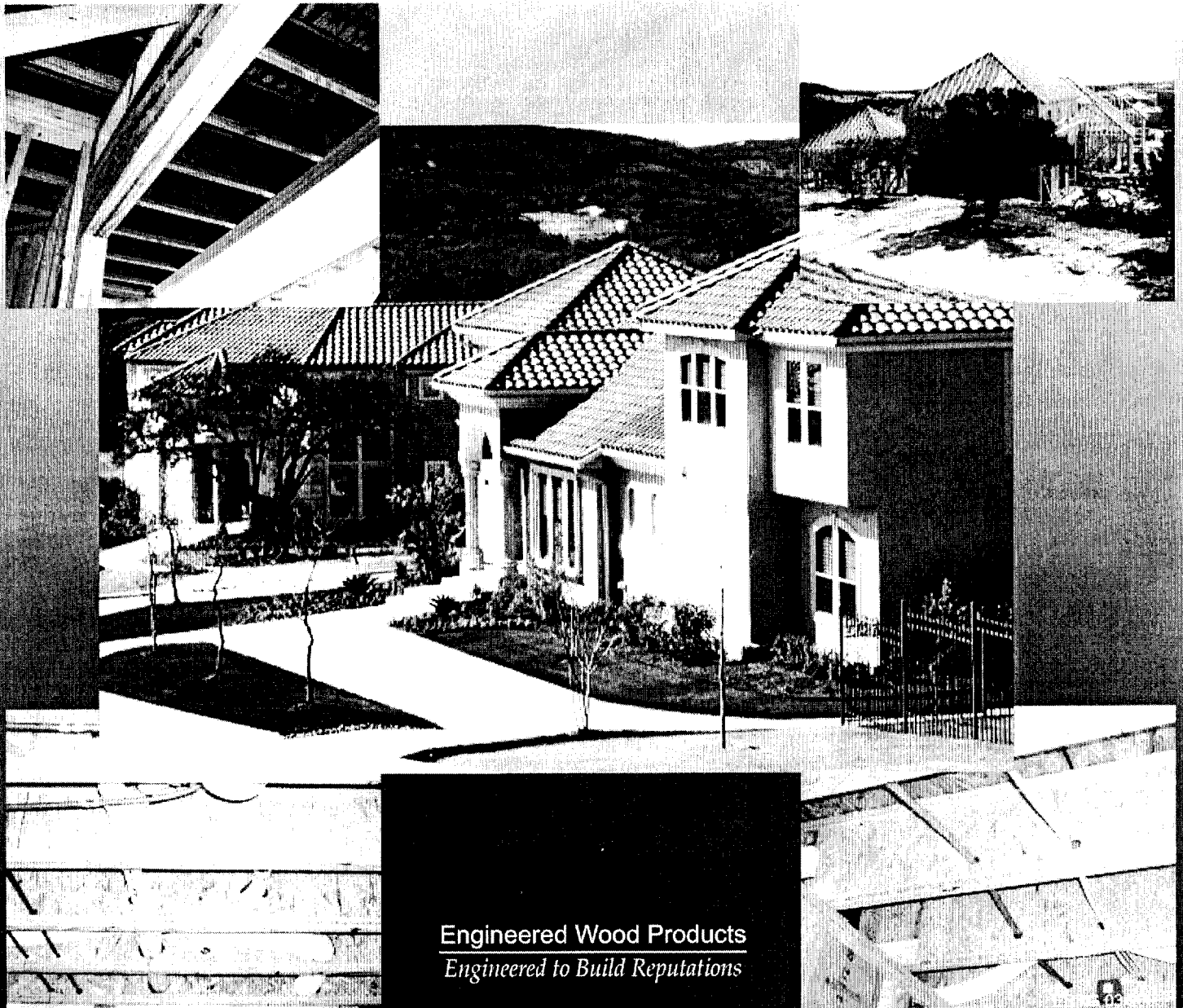
**B**

**BOISE<sup>SM</sup>**

Building Solutions  
Engineered Wood Products

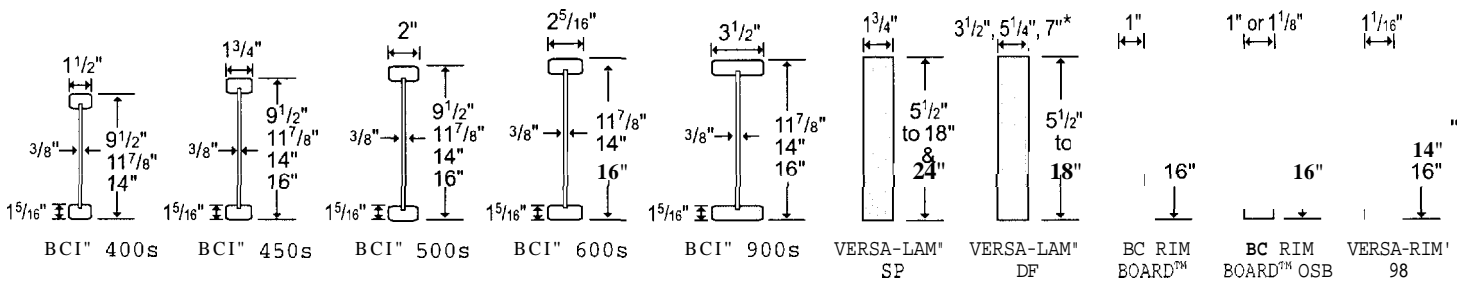
# *THE BUILDERS GUIDE*

for Residential Construction  
with BCI,<sup>®</sup> VERSA-LAM<sup>®</sup> and VERSA-RIM<sup>®</sup> Products



Engineered Wood Products  
*Engineered to Build Reputations*





\*Product may not be available. Check with supplier or Boise representative for availability.

## Residential Floor Span Table

Joist Depth	BCI® Joist Series	★★★ THREE STAR ★★★					★★★★ FOUR STAR ★★★★★					★ MINIMUM STIFFNESS ALLOWED BY CODE ★ CAUTION				
		12" o. c.	16" o. c.	19.2" o. c.	24" o. c.	32" o. c.	12" o. c.	16" o. c.	19.2" o. c.	24" o. c.	32" o. c.	12" o. c.	16" o. c.	19.2" o. c.	24" o. c.	32" o. c.
9½"	400s	17'-3"	15'-9"	14'-11"	13'-10"	12'-3"	11'-5"	11'-5"	11'-1"	10'-9"	9'-9"	19'-0"	17'-5"	16'-2"	14'-5"	12'-3"
	450s	17'-11"	16'-5"	15'-6"	14'-5"	13'-2"	11'-10"	11'-10"	11'-5"	11'-2"	10'-2"	19'-10"	18'-2"	17'-2"	15'-8"	13'-4"
	500s	18'-7"	17'-0"	16'-0"	14'-11"	13'-7"	12'-3"	12'-3"	11'-10"	11'-6"	10'-5"	20'-7"	18'-10"	17'-9"	16'-7"	14'-3"
11⅞"	400s	20'-5"	18'-8"	17'-8"	16'-6"	14'-1"	14'-10"	14'-7"	13'-9"	12'-9"	11'-7"	22'-7"	20'-5"	18'-8"	16'-8"	14'-1"
	450s	21'-4"	19'-6"	18'-5"	17'-2"	15'-0"	15'-4"	15'-2"	14'-4"	13'-4"	12'-1"	23'-7"	21'-7"	20'-3"	18'-1"	15'-0"
	500s	22'-2"	20'-3"	19'-1"	17'-9"	15'-0"	15'-10"	15'-9"	14'-10"	13'-9"	12'-6"	24'-6"	22'-4"	21'-2"	19'-5"	15'-0"
	600s	23'-0"	21'-0"	19'-9"	18'-5"	16'-9"	17'-11"	16'-4"	15'-4"	14'-3"	12'-11"	25'-5"	23'-3"	21'-11"	20'-5"	17'-3"
	900s	26'-0"	23'-8"	22'-3"	20'-9"	18'-10"	20'-3"	18'-5"	17'-3"	16'-0"	14'-5"	28'-9"	26'-2"	24'-8"	23'-0"	19'-4"
14"	400s	23'-3"	21'-3"	20'-1"	18'-5"	14'-3"	18'-2"	16'-7"	15'-7"	14'-6"	13'-2"	25'-8"	22'-7"	20'-7"	18'-5"	14'-3"
	450s	24'-2"	22'-1"	20'-11"	19'-6"	15'-2"	18'-11"	17'-3"	16'-3"	15'-1"	13'-8"	26'-9"	24'-6"	22'-5"	20'-0"	15'-2"
	500s	25'-1"	22'-11"	21'-8"	20'-2"	15'-2"	19'-8"	17'-10"	16'-10"	15'-7"	14'-2"	27'-9"	25'-4"	23'-11"	20'-3"	15'-2"
	600s	26'-1"	23'-9"	22'-5"	20'-10"	17'-5"	20'-4"	18'-6"	17'-5"	16'-2"	14'-7"	28'-10"	26'-4"	24'-10"	23'-1"	17'-5"
	900s	29'-5"	26'-9"	25'-3"	23'-6"	19'-6"	23'-0"	20'-10"	19'-7"	18'-2"	16'-5"	32'-6"	29'-8"	28'-0"	26'-0"	19'-6"
16"	450s	26'-10"	24'-6"	23'-2"	20'-5"	15'-4"	21'-0"	19'-1"	18'-0"	16'-9"	15'-2"	29'-8"	26'-7"	24'-3"	20'-5"	15'-4"
	500s	27'-9"	25'-4"	23'-11"	20'-5"	15'-4"	21'-9"	19'-9"	18'-8"	17'-4"	15'-4"	30'-8"	28'-1"	25'-7"	20'-5"	15'-4"
	600s	28'-10"	26'-4"	24'-10"	23'-1"	17'-7"	22'-7"	20'-6"	19'-4"	17'-11"	16'-2"	31'-11"	29'-1"	27'-6"	23'-5"	17'-7"
	900s	32'-6"	29'-7"	27'-11"	25'-11"	19'-7"	25'-5"	23'-1"	21'-8"	20'-1"	18'-2"	36'-0"	32'-9"	30'-11"	26'-2"	19'-7"

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Additional details available with BC FRAMER® software. (See page 39 of the Eastern Specifier Guide)

**Slope cut joist reinforcement**  
Connection of rafter to wall/reinforced joist per local building code requirements 2x blocking required at bearing (not shown for clarity)

**Minimum Heel Depth**

End Wall Bearing	Roof Pitch				
	6/12	7/12	8/12	9/12	10/12 12/12
2 x 4	4 3/8"	4 5/16"	4 1/2"	4 1/4"	4 1/4"
2 x 6	3 3/8"	3 3/16"	2 9/16"	2 3/4"	2 9/16"

**Minimum Heel Depth**

2 3/32" min plywood/OSB rated sheathing Cut reinforcement as shown below. Install on both sides of the joist, snug to the bottom flange. Coat contact faces with rated sub-floor/joist adhesive and fasten with 3 rows of minimum 10d box nails at 6" o c. Alternate nailing from each side and clinch.

**One 8d common nail each side at bearing**

**1 3/4" minimum bearing length at all floor and roof details**

To avoid splitting flange, start nails at least 1 1/2" from end. Nails may need to be driven at an angle to prevent splitting of bearing plate

**Load bearing wall above (stacked over wall below).**

**2x block.**

**1/16"**

**Exterior sheathing**

1/2" dia through bolts (grade 5 or higher) with washers and nuts or 1/2" dia lag screws (full penetration) See page 31 of the Eastern Specifier Guide for fastener design values

**Treated ledger**

**VERSARIM™ or BC RIM BOARD™**  
Design of moisture control by others (only structural components shown above)

### LATERAL SUPPORT

- BCI® Joists must be laterally supported at the ends with hangers, BCI rim joists, rim boards, BCI blocking panels or x-bracing. BCI blocking panels or x-bracing are required at cantilever supports.

### MINIMUM BEARING LENGTH FOR BCI® JOISTS

- 1 1/4 inches is required at end supports. 3 1/2 inches is required at cantilever and intermediate supports.
- Longer bearing lengths allow higher reaction values. Refer to the building code evaluation report or the BC CALC™ software.

### NAILING REQUIREMENTS

- BCI® rim joist, rim board or closure panel to BCI® Joist
- Rims or closure panels 1 1/4 inches wide and less: 2-8d box nails, one each in the top and bottom flange.
- BCI® 500s rim joist: 2-10d box nails, one each in the top and bottom flange.
- BCI® 600s rim joist: 2-16d box nails, one each in the top and bottom flange.
- BCI® 900s rim joist: Toe-nail top flange to rim joist with 2-10d box nails, one each side of flange.
- BCI® rim joist, rim board or BCI® blocking panel to support:
  - 8d nails at 6 inches on center.
  - When used for shear transfer, follow the building designer's specification.
- BCI® Joist to support:
  - 2-8d nails, one on each side of the web, placed 1 1/2 inches minimum from the end of the BCI® Joist to avoid splitting.

- Sheathing to BCI® Joist:

- See Closest Allowable Nail Spacing on page 4.
- BCI® 400s, 450s & 500s Joist: Maximum nail spacing is 18 inches on-center.
- BCI® 600s & 900s Joist: Maximum nail spacing is 24 inches on-center.
- 14-gauge staples may be substituted for 8d nails if the staples penetrate at least 1 inch into the joist.

### BACKER AND FILLER BLOCK DIMENSIONS

Series	Backer Block Thickness	Filler Block Thickness
400s	1/2" or 5/8" wood panel	Two 1/2" wood panels or 2 x _
450s	5/8" or 3/4" wood panel	Two 5/8" wood panels or 2 x _
500s	3/4" or 7/8" wood panel	Two 3/4" wood panels or 2 x _
600s	Two 1/2" wood panels	2 x _ + 1/2" wood panel
900s	2 x lumber	Double 2 x lumber

- Cut backer and filler blocks to a maximum depth equal to the joist depth minus 3/4 inches to avoid a forced fit.

### WEB STIFFENER REQUIREMENTS

- See Web Stiffener Requirements on page 10.

### PROTECT BCI® JOISTS FROM THE WEATHER

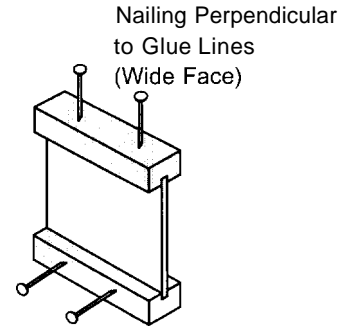
- BCI® Joists are intended only for applications that provide permanent protection from the weather. Bundles of BCI® Joists should be covered and stored off of the ground on stickers

Type <sup>(1)</sup>	Thickness [in]	Depth [in]	Vertical Load Capacity [plf] <sup>(2)</sup>
VERSARIM <sup>(3)</sup>	1 1/16"	16 & less	4250
BC OSB RIM BOARD™ <sup>(4)</sup>	1"	16 & less	3300
	1 1/8"	16 & less	4400
BC RIM BOARD™ <sup>(1)</sup>	1"	16 & less	3300

# Allowable Nail Spacing

## BCI® Joists

Nail Size	All BCI® Joists			
	Nailing Perpendicular to Glue Lines (Wide Face)		Nailing Parallel to Glue Lines (Narrow Face)	
	O.C. Spacing [inches]	End of Joist [inches]	O.C. Spacing [inches]	End of Joist [inches]
8d Box	2	1½	4	1½
8d Common	2	1½	4	3
10d & 12d Box	2	1½	4	3
16d Box	2	1½	4	3
10d & 12d Common	3	2	6	4
16d Sinker	3	2	6	4
16d Common	3	2	6	4

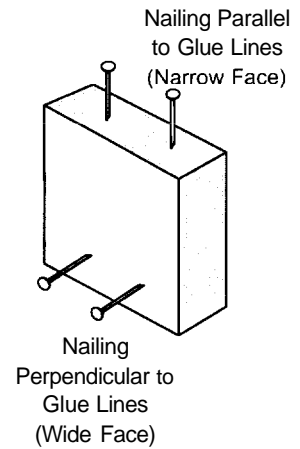


Nailing Parallel to Glue Lines (Narrow Face)

- If more than one row of nails is used the rows must be offset at least ½ in

## VERSA-LAM® & VERSA-RIM® Allowable Nail Spacing

Nail Size	Nailing Parallel to Glue Lines (Narrow Face)						Nailing Perpendicular to Glue Lines (Wide Face)	
	VERSA-RIM® (1½%)		VERSA-LAM® SP (1%)		VERSA-LAM® DF (3½%)		All Products	
	O.C [inches]	End [inches]	O.C [inches]	End [inches]	O.C [inches]	End [inches]	O.C [inches]	End [inches]
8d Box	3	1½	2	1	2	½	2	½
8d Common	4	3	3	2	2	1	2	1
10d & 12d Box	4	3	3	2	2	1	2	1
16d Box	4	3	3	2	2	1	2	1
10d & 12d Common	6	4	4	3	2	2	2	2
16d Sinker	6	4	4	3	2	2	2	2
16d Common	6	4	6	3	2	2	2	2
Simpson A35F							Use	
Simpson LTP4							8d x 1½" Nails	



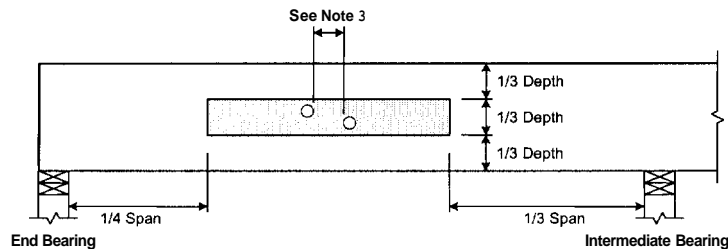
- If more than one row of nails is used, the rows must be offset at least ½ inch

## Allowable Holes in VERSA-LAM® Beams

**Notes**

- 1 Square and rectangular holes are not permitted
- 2 Round holes may be drilled or cut with a hole saw anywhere within the shaded area of the beam
- 3 The horizontal distance between adjacent holes must be at least two times the size of the larger hole
- 4 Do not drill more than three access holes in any four foot long section of beam
- 5 The maximum round hole diameter permitted is

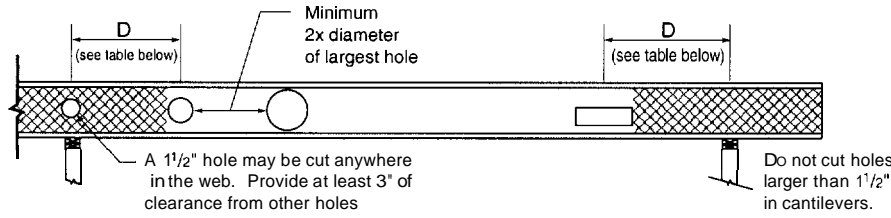
5½"	¾"
7¼"	1"
9¼" and greater	2"



- 6 These limitations apply to holes drilled for plumbing or wiring access only. The size and location of holes drilled for fasteners are governed by the provisions of the National Design Specification for Wood Construction
- 7 Beams deflect under load. Size holes to provide clearance where required
- 8 This hole chart is valid for beams supporting uniform load only. For beams supporting concentrated loads or for beams with larger holes, contact Boise EWP Engineering

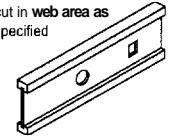
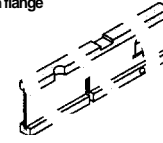
# BCI® Joist Hole Location & Sizing

BCI® Joists are manufactured with 1/2" round perforated knockouts in the web at approximately 12" on center



DO NOT cut or notch flange

DO cut in web area as specified



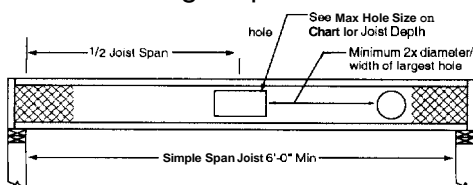
MINIMUM DISTANCE D FROM ANY SUPPORT TO THE CENTERLINE OF THE HOLE

Round Hole Diameter (in)	2	3	4	5	6	6 1/2	7	8	8 7/8	9	10	11	12	13	
Rectangular Hole Side (in)	-	-	2	4	6	6				-	-	-	-	-	
Any 9 1/2" Joist	Span (ft)	8	1'-0"	1'-4"	2'-0"	2'-7"	3'-3"	3'-7"							
		12	1'-2"	2'-1"	3'-0"	3'-11"	4'-10"	5'-4"							
		16	1'-6"	2'-9"	4'-0"	5'-3"	6'-6"	7'-2"							
Round Hole Diameter (in)	2	3	4	5	6	6 1/2	7	8	8 7/8	9	10	11	12	13	
Rectangular Hole Side (in)	-	-	-	2	3	4	5	7	8	-	-	-	-	-	
Any 11 7/8" Joist	Span (ft)	8	1'-0"	1'-2"	1'-7"	2'-0"	2'-6"	2'-8"	2'-11"	3'-4"	3'-8"				
		12	1'-1"	1'-9"	2'-5"	3'-1"	3'-9"	4'-0"	4'-4"	5'-0"	5'-7"				
		16	1'-6"	2'-5"	3'-3"	4'-1"	5'-0"	5'-5"	5'-10"	6'-8"	7'-5"				
		20	1'-11"	3'-0"	4'-1"	5'-2"	6'-3"	6'-9"	7'-3"	8'-4"	9'-4"				
Round Hole Diameter (in)	2	3	4	5	6	6 1/2	7	8	8 7/8	9	10	11	12	13	
Rectangular Hole Side (in)	-	-	-	-	2	3	3	5	6	6	8	9	-	-	
Any 14" Joist	Span (ft)	8	1'-0"	1'-1"	1'-2"	1'-2"	1'-7"	1'-9"	2'-0"	2'-5"	2'-9"	2'-9"	3'-2"	3'-7"	
		12	1'-0"	1'-1"	1'-2"	1'-10"	2'-5"	2'-8"	3'-0"	3'-7"	4'-1"	4'-2"	4'-9"	5'-4"	
		16	1'-0"	1'-1"	1'-7"	2'-5"	3'-2"	3'-7"	4'-0"	4'-10"	5'-6"	5'-7"	6'-5"	7'-2"	
		20	1'-0"	1'-1"	2'-0"	3'-0"	4'-0"	4'-6"	5'-0"	6'-0"	6'-10"	7'-0"	8'-0"	9'-0"	
		24	1'-0"	1'-3"	2'-5"	3'-8"	4'-10"	5'-5"	6'-0"	7'-3"	8'-3"	8'-5"	9'-7"	10'-9"	
Round Hole Diameter (in)	2	3	4	5	6	6 1/2	7	8	8 7/8	9	10	11	12	13	
Rectangular Hole Side (in)	-	-	-	-	-	-	2	3	5	5	6	8	9	10	
Any 16" Joist	Span (ft)	8	1'-0"	1'-1"	1'-2"	1'-2"	1'-3"	1'-3"	1'-5"	1'-9"	2'-1"	2'-1"	2'-6"	2'-10"	3'-2"
		12	1'-0"	1'-1"	1'-2"	1'-2"	1'-7"	1'-10"	2'-1"	2'-8"	3'-1"	3'-2"	3'-9"	4'-3"	4'-9"
		16	1'-0"	1'-1"	1'-2"	1'-5"	2'-2"	2'-6"	2'-10"	3'-7"	4'-2"	4'-3"	5'-0"	5'-8"	6'-5"
		20	1'-0"	1'-1"	1'-2"	1'-9"	2'-8"	3'-1"	3'-7"	4'-5"	5'-3"	5'-4"	6'-3"	7'-1"	8'-0"
		24	1'-0"	1'-1"	1'-2"	2'-2"	3'-3"	3'-9"	4'-3"	5'-4"	6'-3"	6'-5"	7'-6"	8'-6"	9'-7"

- Select a table row based on joist depth and the actual joist span rounded up to the nearest table span. Scan across the row to the column headed by the appropriate round hole diameter or rectangular hole side. Use the longest side of a rectangular hole. The table value is the closest that the centerline of the hole may be to the centerline of the nearest support.
- The entire web may be cut out. **DO NOT** cut the flanges. Holes apply to either single or multiple joists in repetitive member conditions.
- For multiple holes, the amount of uncut web between holes must equal at least twice the diameter (or longest side) of the largest hole.
- Holes may be positioned vertically anywhere in the web. The joist may be set with the 1/2" knockout holes turned either up or down.
- This table was designed to apply to the design conditions covered by tables elsewhere in this publication. Use the BC CALC® software to check other hole sizes or holes under other design conditions. It may be possible to exceed the limitations of this table by analyzing a specific application with the BC CALC® software.

## Large Rectangular Holes in BCI® Joists

### Single Span Joist

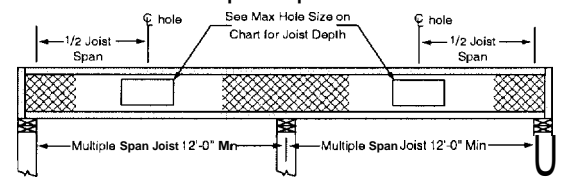


Notes:

Additional holes may be cut in the web provided they meet the specifications as shown in the hole distance chart shown above or as allowed using BC CALC® sizing software

Joist	Max Hole Size	
	Simple	Multiple
9 1/2"	6" x 14"	6" x 12"
11 7/8"	8" x 16"	8" x 13"
16"	9" x 18"	8" x 16"
	10" x 16"	
16"	11" x 18"	10" x 14"
	12" x 16"	

### Multiple Span Joist



Larger holes may be possible for either Single or Multiple span joists; use BC CALC® sizing software for specific analysis.

# Roof Application Tables

## GENERAL NOTES

- Continuous lateral support at the top of the beam is assumed.
- Minimum 3 inch end bearing or see BC Calc software requirements.
- Bearing length specifications assume bearing across the full width of the beam.
- Uniform loading is assumed for all tables.
- Multiple member beams require proper connection schedules.
- Dry service conditions are assumed.
- It may be possible to exceed the limitations of this table by analyzing a specific application with the BC Calc software.

### Roof Notes (see pages 8, 9 & 10)

- Always use roof live and dead loads that meet or exceed the required design loading.
- No roof load reductions have been taken.
- Table assumes 2'-0" roof overhang.

### Ridge Beam (see page 9)

- Deflection is limited to L/240 live load and U180 total load.
- Table based upon either simple or continuous beam span conditions

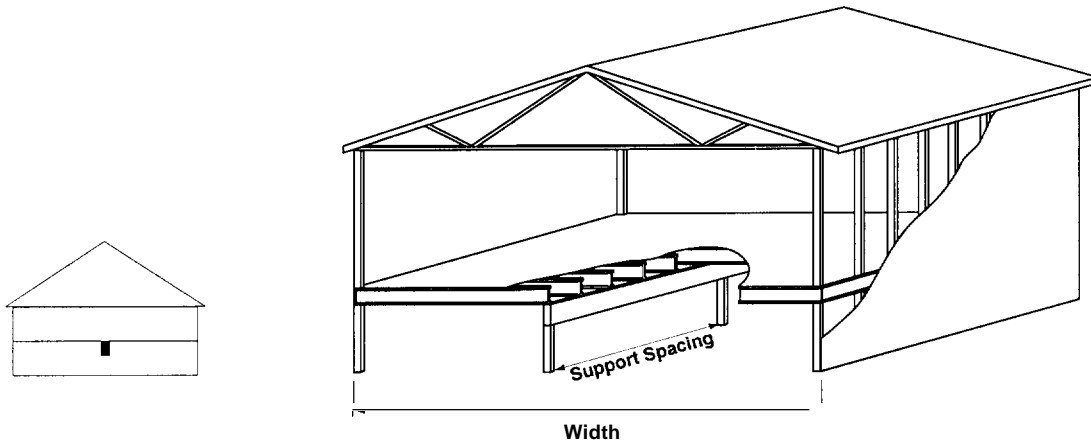
### Header (Roof) (see page 8)

- Deflection is limited to L/240 live load and L/180 total load

### Floor Notes (see pages 6, 7, 10)

- Floor loads are 40 psf live load and 10 psf dead load.
- Deflection is limited to U360 live load and L/240 total load.
- Table based upon either simple or continuous floor joist spans.
- Tables assume a wall weight of 100 plf (pages 7, 10).
- Interior floor support may vary a maximum of 4 feet from centerline (page 10).

# Floor Beam Span Tables

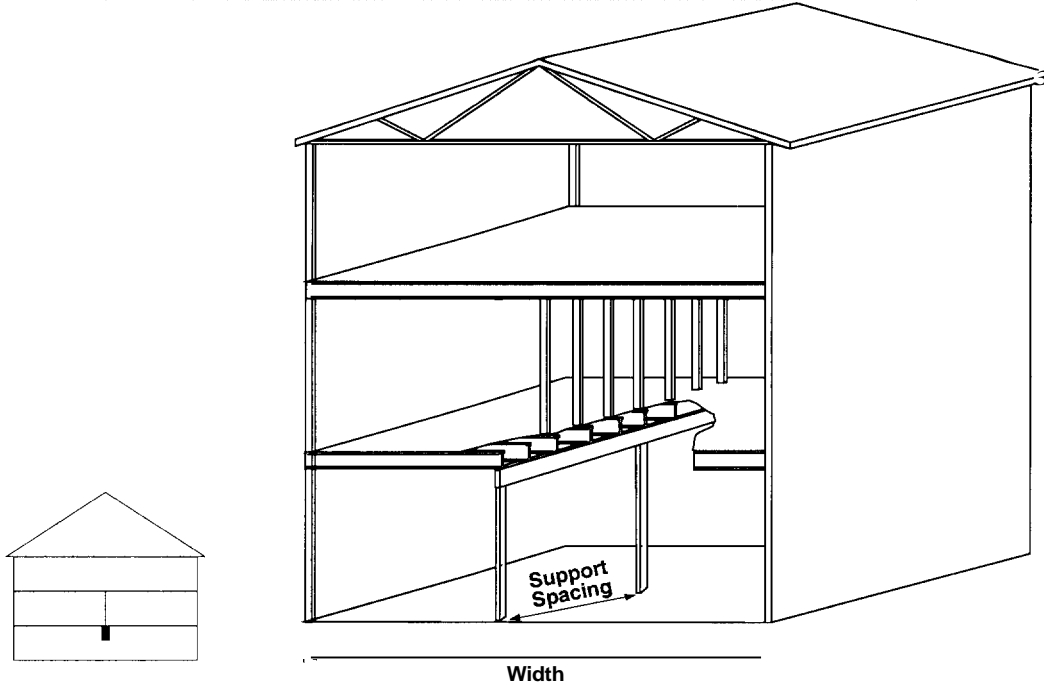


## Required Beam Depths and Bearing Lengths [in]

3080 Fb DF - 3100 Fb SP

Load Duration %	Floor Load [psf]		Beam Support Spacing [Feet]	Width of Building Segment (feet)															
	Live	Dead		20	24	26	28	30	32	36	40								
100	40	10	8'	35x7.25	15/3	3.5x7.25	1.5/3	35x9.5	15/3	35x9.5	15/3	35x9.5	15/45	35x9.5	3/45	35x9.5	3/45		
				525x7.25	15/15	525x7.25	15/3	525x7.25	15/3	525x7.25	1.5/3	525x7.25	15/3	525x7.25	1.5/3	5.25x7.25	15/3	525x9.5	15/3
			10'	35x9.5	1.5/3	35x9.5	15/45	35x9.5	15/45	35x9.5	15/45	35x11.875	3/45	35x11.875	3/45	3.5x11.875	3/6	35x11.875	3/6
				525x9.5	15/3	525x9.5	15/3	525x9.5	15/3	525x9.5	15/3	525x9.5	1.5/3	525x9.5	1.5/3	5.25x9.5	15/45	525x9.5	15/45
			12'	3.5x11.875	1.5/4.5	35x11.875	3/45	35x11.875	3/45	35x11.875	3/45	35x11.875	3/6	35x11.875	3/6	35x14	3/6	35x14	3/75
				525x9.5	15/3	525x9.5	15/3	525x11.875	15/3	525x11.875	15/3	525x11.875	15/145	525x11.875	15/45	5.25x11.875	3/45	5.25x11.875	3/45
			14'	35x11.875	1.5/14.5	35x14	3/45	35x14	3/6	35x14	3/6	35x14	3/6	35x14	3/6	35x16	3/75	35x16	3/75
				525x11.875	15/3	525x11.875	15/3	525x11.875	15/145	525x11.875	15/145	525x11.875	15/145	525x14	3/45	525x14	3/45	525x14	3/6
			16'	35x14	3/45	35x16	3/6	35x16	3/6	35x16	3/6	35x16	3/75	35x16	3/75	3.5x18	45/9	35x18	45/9
				525x11.875	15/3	525x14	15/145	525x14	15/145	525x14	15/145	525x14	3/45	525x14	3/45	525x16	3/6	525x16	3/6
			18'	35x16	3/6	35x16	3/6	35x18	3/7.5	35x18	3/7.5	35x18	3/7.5	35x18	4.5/9	5.25x16	3/6	5.25x16	3/7.5
				525x14	1.5/4.5	525x14	3/45	525x16	3/45	525x16	3/45	5.25x16	3/6	525x16	3/6	7x16	3/45	7x16	3/6
20'	35x18	3/6	35x18	3/7.5	525x16	3/6	5.25x18	3/6	5.25x18	3/6	5.25x18	3/6	5.25x18	3/7.5	-	-			
	5.25x16	1.5/4.5	5.25x16	3/45	7x16	1.5/4.5	7x16	15/45	7x16	3/45	7x16	3/45	7x18	3/6	7x18	3/6			

# Two Floor Beam Spacing

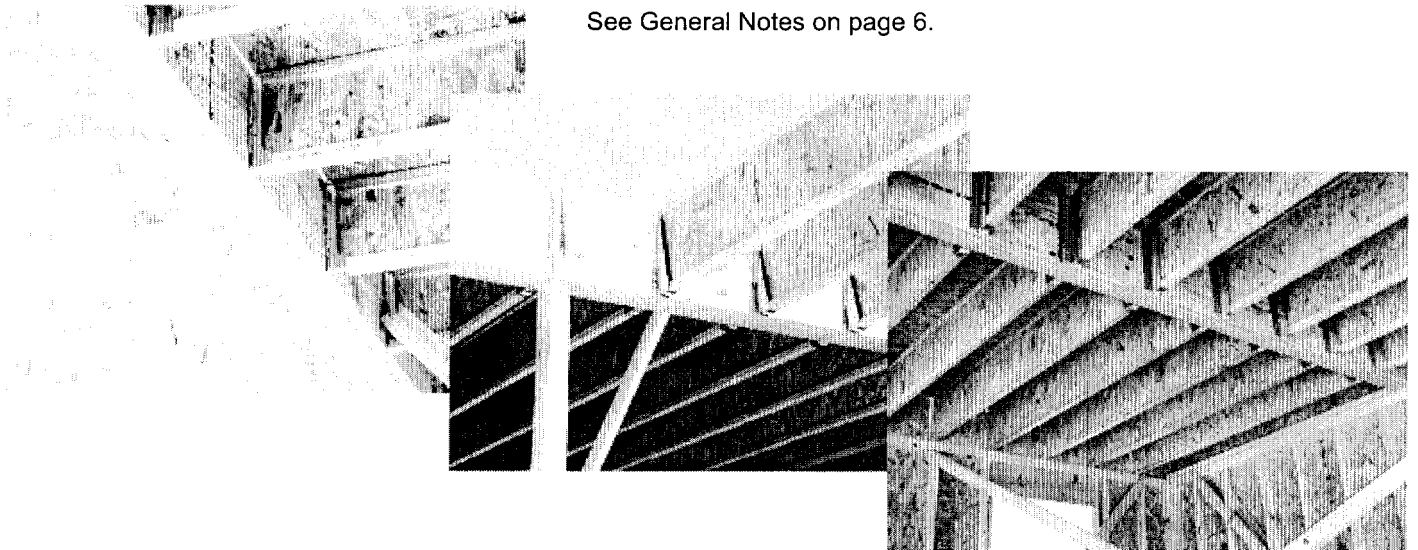


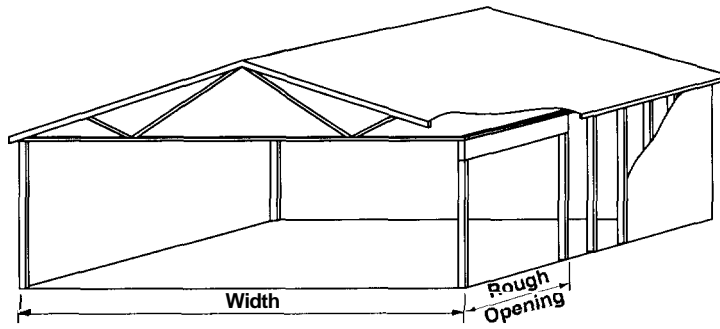
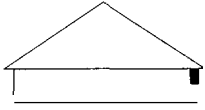
## Required Beam Depths and Bearing Lengths [in]

3080 Fb DF - 3100 Fb SP

Load Duration %	Floor Load [psf]		Beam Support Spacing [Feet]	Width of Building Segment [ft]																		
	Live	Dead		20	24	26	28	30	32	36	40											
100	40	10	8'	3.5 x 9.5	3145	35 x 11.875	316	3.5 x 11.875	3/6	35 x 11.875	316	3.5 x 11.875	3/7.5	35 x 14	3175	35 x 14	4519	35 x 16	4.5/9			
				5.25 x 9.5	1513	5.25 x 9.5	15145	5.25 x 9.5	3/45	5.25 x 9.5	3145	5.25 x 9.5	3145	5.25 x 9.5	3145	5.25 x 9.5	316	5.25 x 11.875	316	5.25 x 11.875	316	
			10'	3.5 x 11.875	316	35 x 14	3175	35 x 14	3/7.5	35 x 14	3175	3.5 x 16	4519	35 x 16	4519	35 x 18	451105	5.25 x 14	3175			
				5.25 x 9.5	15145	5.25 x 11.875	3145	5.25 x 11.875	3/6	5.25 x 11.875	316	5.25 x 11.875	3/6	5.25 x 11.875	316	5.25 x 14	3/7.5	7 x 11.875	316			
			12'	35 x 14	3175	35 x 16	4519	35 x 16	4.5/9	35 x 18	4519	3.5 x 18	451105	5.25 x 14	3175	5.25 x 16	4519	5.25 x 16	4519			
				5.25 x 11.875	3/45	5.25 x 11.875	316	5.25 x 14	316	5.25 x 14	3/6	5.25 x 14	3175	7 x 11.875	3/6	7 x 14	316	7 x 14	3175			
			14'	35 x 16	4519	35 x 18	451105	5.25 x 16	3/7.5	5.25 x 16	3/7.5	5.25 x 16	4519	5.25 x 16	4519	5.25 x 18	451105					
				5.25 x 14	316	5.25 x 14	3175	7 x 14	316	7 x 14	3/6	7 x 14	316	7 x 14	3/7.5	7 x 16	3175	7 x 16	4519			
			16'	3.5 x 18	4519	5.25 x 16	3/7.5	5.25 x 18	4519	5.25 x 18	4519	5.25 x 18	4519	-								
				5.25 x 16	316	7 x 16	316	7 x 16	316	7 x 16	3/6	7 x 16	3175	7 x 16	3/7.5	7 x 18	4519	7 x 18	4519			
			18'	5.25 x 18	3175	5.25 x 18	4519	-														
				7 x 16	316	7 x 16	316	7 x 18	3175	7 x 18	3175	7 x 18	3/7.5	7 x 18	4519	-						
20'																						
	7 x 18	316	7 x 18	3175	-																	

See General Notes on page 6.





- Minimum end bearing 3 inches or see BC CALC<sup>®</sup> software requirement.
- 4.5 inch bearing length required in shaded areas
- See General Notes on page 6.

## Required Beam Depths [in]

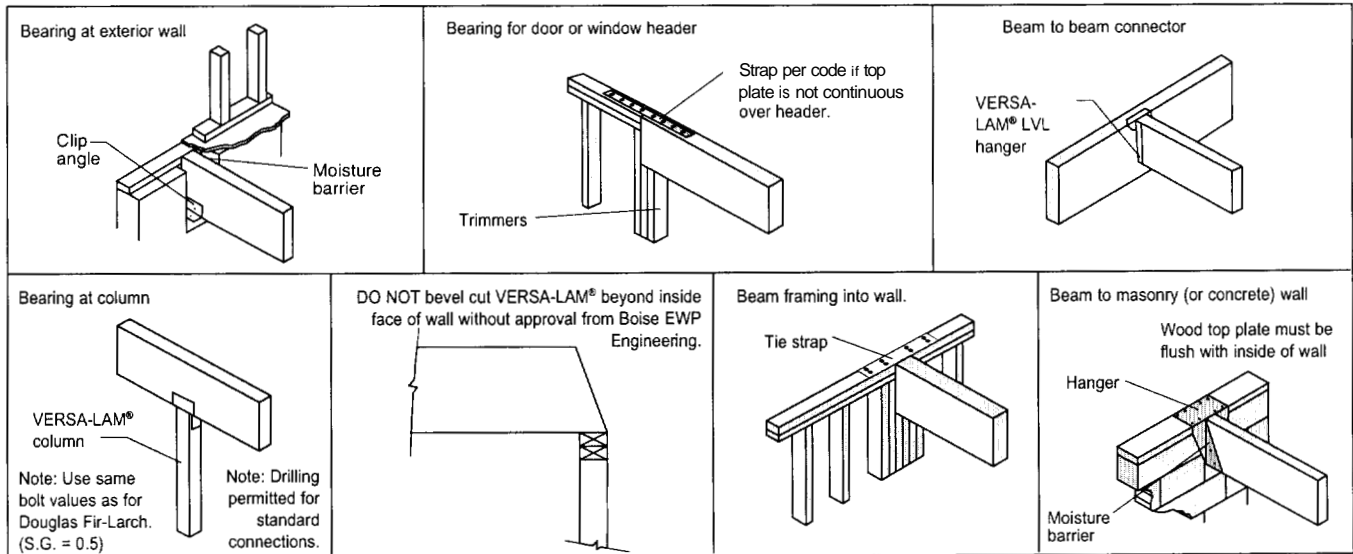
3080 Fb DF - 3100 Fb SP

Load Duration %	Roof Load [psf]		Rough Opening [Feet]	Width of Building Segment [Feet]									
	Live	Dead		20	24	26	28	30	32	36	40		
125	20	15	9'	3.5 x 7.25	3.5 x 7.25	3.5 x 7.25	3.5 x 7.25	3.5 x 7.25	3.5 x 7.25	3.5 x 7.25	3.5 x 7.25	3.5 x 7.25	
				5.25 x 7.25	5.25 x 7.25	5.25 x 7.25	5.25 x 7.25	5.25 x 7.25	5.25 x 7.25	5.25 x 7.25	5.25 x 7.25	5.25 x 7.25	
			12'	3.5 x 9.5	3.5 x 9.5	3.5 x 9.5	3.5 x 9.5	3.5 x 9.5	3.5 x 9.5	3.5 x 9.5	3.5 x 9.5	3.5 x 9.5	3.5 x 9.5
				5.25 x 7.25	5.25 x 7.25	5.25 x 7.25	5.25 x 9.5	5.25 x 9.5	5.25 x 9.5	5.25 x 9.5	5.25 x 9.5	5.25 x 9.5	5.25 x 9.5
			16'	3.5 x 11.875	3.5 x 11.875	3.5 x 11.875	3.5 x 11.875	3.5 x 11.875	3.5 x 11.875	3.5 x 11.875	3.5 x 11.875	3.5 x 14	3.5 x 14
				5.25 x 9.5	5.25 x 9.5	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875
	20	20	9'	3.5 x 11.875	3.5 x 14	3.5 x 14	3.5 x 14	3.5 x 14	3.5 x 14	3.5 x 14	3.5 x 14	3.5 x 14	
				5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 14	
			12'	3.5 x 7.25	3.5 x 7.25	3.5 x 7.25	3.5 x 7.25	3.5 x 7.25	3.5 x 7.25	3.5 x 7.25	3.5 x 7.25	3.5 x 7.25	3.5 x 9.5
				5.25 x 7.25	5.25 x 7.25	5.25 x 7.25	5.25 x 7.25	5.25 x 7.25	5.25 x 7.25	5.25 x 7.25	5.25 x 7.25	5.25 x 7.25	5.25 x 7.25
			16'	3.5 x 9.5	3.5 x 9.5	3.5 x 9.5	3.5 x 9.5	3.5 x 9.5	3.5 x 9.5	3.5 x 9.5	3.5 x 9.5	3.5 x 9.5	3.5 x 11.875
				5.25 x 7.25	5.25 x 9.5	5.25 x 9.5	5.25 x 9.5	5.25 x 9.5	5.25 x 9.5	5.25 x 9.5	5.25 x 9.5	5.25 x 9.5	5.25 x 9.5
115	20	15	9'	3.5 x 11.875	3.5 x 11.875	3.5 x 11.875	3.5 x 11.875	3.5 x 11.875	3.5 x 11.875	3.5 x 11.875	3.5 x 11.875		
				5.25 x 9.5	5.25 x 9.5	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	
			12'	3.5 x 9.5	3.5 x 9.5	3.5 x 9.5	3.5 x 9.5	3.5 x 9.5	3.5 x 9.5	3.5 x 9.5	3.5 x 9.5	3.5 x 9.5	3.5 x 9.5
				5.25 x 7.25	5.25 x 7.25	5.25 x 7.25	5.25 x 9.5	5.25 x 9.5	5.25 x 9.5	5.25 x 9.5	5.25 x 9.5	5.25 x 9.5	5.25 x 9.5
			16'	3.5 x 11.875	3.5 x 11.875	3.5 x 11.875	3.5 x 11.875	3.5 x 11.875	3.5 x 11.875	3.5 x 11.875	3.5 x 11.875	3.5 x 14	3.5 x 14
				5.25 x 9.5	5.25 x 9.5	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875
	25	15	9'	3.5 x 14	3.5 x 14	3.5 x 14	3.5 x 14	3.5 x 14	3.5 x 14	3.5 x 14	3.5 x 16	3.5 x 16	
				5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 14	
			12'	3.5 x 7.25	3.5 x 7.25	3.5 x 7.25	3.5 x 7.25	3.5 x 7.25	3.5 x 7.25	3.5 x 7.25	3.5 x 7.25	3.5 x 7.25	3.5 x 9.5
				5.25 x 7.25	5.25 x 7.25	5.25 x 7.25	5.25 x 7.25	5.25 x 7.25	5.25 x 7.25	5.25 x 7.25	5.25 x 7.25	5.25 x 7.25	5.25 x 7.25
			16'	3.5 x 9.5	3.5 x 9.5	3.5 x 9.5	3.5 x 9.5	3.5 x 9.5	3.5 x 9.5	3.5 x 9.5	3.5 x 9.5	3.5 x 11.875	3.5 x 11.875
				5.25 x 9.5	5.25 x 9.5	5.25 x 9.5	5.25 x 9.5	5.25 x 9.5	5.25 x 9.5	5.25 x 9.5	5.25 x 9.5	5.25 x 9.5	5.25 x 9.5
115	30	15	9'	3.5 x 11.875	3.5 x 11.875	3.5 x 14	3.5 x 14	3.5 x 14	3.5 x 14	3.5 x 14	3.5 x 14		
				5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	
			12'	3.5 x 14	3.5 x 14	3.5 x 14	3.5 x 14	3.5 x 14	3.5 x 14	3.5 x 14	3.5 x 14	3.5 x 16	3.5 x 16
				5.25 x 9.5	5.25 x 9.5	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875
			16'	3.5 x 7.25	3.5 x 7.25	3.5 x 7.25	3.5 x 7.25	3.5 x 7.25	3.5 x 7.25	3.5 x 7.25	3.5 x 7.25	3.5 x 7.25	3.5 x 9.5
				5.25 x 7.25	5.25 x 7.25	5.25 x 7.25	5.25 x 7.25	5.25 x 7.25	5.25 x 7.25	5.25 x 7.25	5.25 x 7.25	5.25 x 7.25	5.25 x 7.25
	40	15	9'	3.5 x 9.5	3.5 x 9.5	3.5 x 9.5	3.5 x 9.5	3.5 x 9.5	3.5 x 9.5	3.5 x 11.875	3.5 x 11.875	3.5 x 11.875	
				5.25 x 9.5	5.25 x 9.5	5.25 x 9.5	5.25 x 9.5	5.25 x 9.5	5.25 x 9.5	5.25 x 9.5	5.25 x 9.5	5.25 x 9.5	
			12'	3.5 x 11.875	3.5 x 11.875	3.5 x 11.875	3.5 x 11.875	3.5 x 11.875	3.5 x 11.875	3.5 x 11.875	3.5 x 11.875	3.5 x 14	3.5 x 14
				5.25 x 9.5	5.25 x 9.5	5.25 x 9.5	5.25 x 9.5	5.25 x 9.5	5.25 x 9.5	5.25 x 9.5	5.25 x 9.5	5.25 x 9.5	5.25 x 9.5
			16'	3.5 x 14	3.5 x 14	3.5 x 14	3.5 x 14	3.5 x 14	3.5 x 14	3.5 x 14	3.5 x 14	3.5 x 16	3.5 x 16
				5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 14	5.25 x 14
50	15	9'	3.5 x 7.25	3.5 x 9.5	3.5 x 9.5	3.5 x 9.5	3.5 x 9.5	3.5 x 9.5	3.5 x 9.5	3.5 x 9.5	3.5 x 11.875		
			5.25 x 7.25	5.25 x 7.25	5.25 x 7.25	5.25 x 7.25	5.25 x 7.25	5.25 x 7.25	5.25 x 7.25	5.25 x 7.25	5.25 x 7.25	5.25 x 9.5	
		12'	3.5 x 11.875	3.5 x 11.875	3.5 x 11.875	3.5 x 11.875	3.5 x 11.875	3.5 x 11.875	3.5 x 11.875	3.5 x 11.875	3.5 x 14	3.5 x 14	
			5.25 x 9.5	5.25 x 9.5	5.25 x 9.5	5.25 x 9.5	5.25 x 9.5	5.25 x 9.5	5.25 x 9.5	5.25 x 9.5	5.25 x 11.875	5.25 x 11.875	
		16'	3.5 x 14	3.5 x 14	3.5 x 16	3.5 x 16	3.5 x 16	3.5 x 16	3.5 x 16	3.5 x 16	3.5 x 18	3.5 x 18	
			5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 11.875	5.25 x 14	5.25 x 14	









## Multiple Member Connections

### SIDE-LOADED APPLICATIONS

Number of Members	Maximum Uniform Side Load (plf)							
	Nailed		1/2" Dia. Through Bolt <sup>(1)</sup>			5/8" Dia. Through Bolt <sup>(1)</sup>		
	2 rows 16d Sinks @ 12" o.c.	3 rows 16d Sinks @ 12" o.c.	2 rows @ 24" o.c. staggered	2 rows @ 12" o.c. staggered	2 rows @ 6" o.c. staggered	2 rows @ 24" o.c. staggered	2 rows @ 12" o.c. staggered	2 rows @ 6" o.c. staggered
<b>1 3/4" VERSA-LAM® (Depths of 18" and less)</b>								
2	470	705	505	1010	2020	560	1120	2245
3 <sup>(2)</sup>	350	525	375	755	1515	420	840	1685
4 <sup>(3)</sup>	use bolt schedule		335	670	1345	370	745	1495
<b>3 1/2" VERSA-LAM®</b>								
2 <sup>(3)</sup>	use bolt schedule		855	1715	N/A	1125	2250	N/A
<b>1 3/4" x 24" VERSA-LAM®</b>								
Number of Members	Nailed		1/2" Dia. Through Bolt <sup>(1)</sup>			5/8" Dia. Through Bolt <sup>(1)</sup>		
	3 rows 16d Sinks @ 12" o.c.	4 rows 16d Sinks @ 12" o.c.	3 rows @ 24" o.c. 8" staggered	3 rows @ 18" o.c. 4" staggered	3 rows @ 12" o.c. 4" staggered	3 rows @ 24" o.c. 8" staggered	3 rows @ 18" o.c. 6" staggered	3 rows @ 12" o.c. 4" staggered
	2	705	940	755	1010	1515	840	1120
3 <sup>(2)</sup>	525	705	565	755	1135	630	840	1260
4 <sup>(3)</sup>	use bolt schedule		505	670	1010	560	745	1120

- Design values apply to common bolts that conform to ANSI/ASME standard B18.21-1981 (Grade 5 or higher). A washer not less than a standard cut washer shall be between the wood and the bolt head and between the wood and the nut. The distance from the edge of the beam to the bolt holes must be at least 2" for 1/2" bolts and 2 1/2" for 5/8" bolts. Bolt holes shall be the same diameter as the bolt.
- The nail schedules shown apply to both sides of a three member beam.
- 7" wide beams must be top-loaded or loaded from both sides.

### TOP-LOADED APPLICATIONS

For top-loaded beams and beams with side loads with less than those shown:

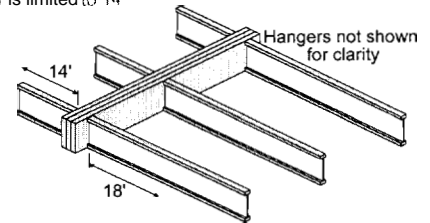
Piles	Depth	Nailing	Maximum Uniform Load from One Side
(2) 1 3/4" plies	Depth 11 7/8" & less	2 rows 16d box/sinker nails @ 12" o.c.	400 plf
	Depth 14" - 18"	3 rows 16d box/sinker nails @ 12" o.c.	600 plf
	Depth = 24"	4 rows 16d box/sinker nails @ 12" o.c.	800 plf
(3) 1 3/4" plies <sup>(2)</sup>	Depth 11 7/8" & less	2 rows 16d box/sinker nails @ 12" o.c.	300 plf
	Depth 14" - 18"	3 rows 16d box/sinker nails @ 12" o.c.	450 plf
	Depth = 24"	4 rows 16d box/sinker nails @ 12" o.c.	600 plf
(4) 1 3/4" plies	Depth 18" & less	2 rows 1/2" bolts @ 24" o.c., staggered	335 plf
	Depth = 24"	3 rows 1/2" bolts @ 24" o.c., staggered every 8"	505 plf
(2) 3 1/2" plies	Depth 18" & less	2 rows 1/2" bolts @ 24" o.c., staggered	855 plf
	Depth 20 - 24"	3 rows 1/2" bolts @ 24" o.c., staggered every 8"	1285 plf

- Beams wider than 7" must be designed by the engineer of record.
- All values in these tables may be increased by 15% for snow-load roofs and by 25% for snow-load roofs where the building code allows.
- Use allowable load tables or BC CALC® software to size beams.
- An equivalent specific gravity of 0.5 may be used when designing specific connections with VERSA-LAM®.
- Connection values are based upon the 1997 NDS.
- Contact Boise EWP Engineering for information on structural screw connections.

### Designing Connections for Multiple VERSA-LAM® Members

When using multiple ply VERSA-LAM® beams to create a wider member, the connection of the plies is as critical as determining the beam size. When side loaded beams are not connected properly, the inside plies do not support their share of the load and thus the load carrying capacity of the full member decreases significantly. The following is an example of how to size and connect a multiple ply VERSA-LAM® floor beam.

Given: Beam shown below is supporting residential floor load (40 psf live load, 10 psf dead load) and is spanning 16'-0". Beam depth is limited to 14".



Find: A multiple 1 3/4" ply VERSA-LAM® that is adequate to support the design loads and the member's proper connection schedule

- Calculate the tributary width that beam is supporting:  
 $12' / 2 + 18' / 2 = 16'$
- Use PLF tables on pages 30-35 of the Eastern Specifier Guide, pages 6-10 of this guide, or BC CALC® to size beam.  
A Triple 1 3/4" x 14" VERSA-LAM® 3100 is found to adequately support the design loads.
- Calculate the maximum plf load from one side (the right side in this case).  
Max. Side Load =  $(18' / 2) \times (40 + 10 \text{ psf}) = 450 \text{ plf}$
- Go to the Multiple Member Connection Table, Side-Loaded Applications, 1 3/4" VERSA-LAM®, 3 members
- The proper connection schedule must have a capacity greater than the max. side load:  
Nailed: 3 rows 16d sinks @ 12" o.c.  
525 plf is greater than 450 plf OK  
Bolts: 1/2" diameter 2 rows @ 12" staggered:  
755 plf is greater than 450 plf OK

# Understanding Floor Performance

To improve the performance of a floor system, a designer must evaluate appropriate deflection criteria to the builder's expectations. By reducing the on-center spacing of the joist, the load capacity of the joist system will be increased but the "feel" of the floor system will not be significantly changed. On the other hand, **the stiffness of the floor system** is significantly

increased and the vibrations reduced by increasing the joist depth. See BCI® residential floor span tables.

The performance of a floor is a matter of opinion. The "feel" that might be acceptable to one person may not be acceptable to another. The following factors affect the floor performance and need to be discussed with the builder and/or homeowner.

## Owner Expectations

- Joist depth
- Continuous or simple spans
- Decking and flooring material
- Gluing and nailing decking

- On-center spacing of joist system
- Lack of drywall attached to underside of joist
- Level bearings
- Location of walls and furniture

# Call on Boise for Support

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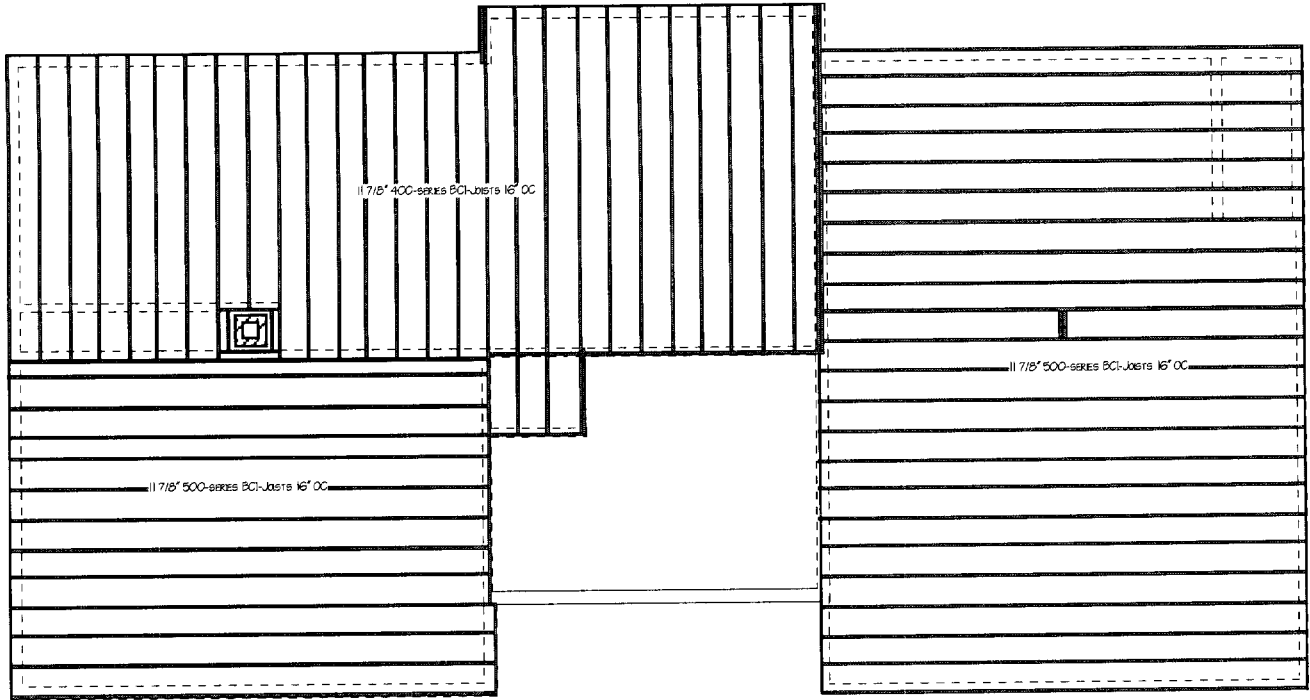
[www.BoiseBuilding.com/EWP](http://www.BoiseBuilding.com/EWP)

### PRODUCT WARRANTY

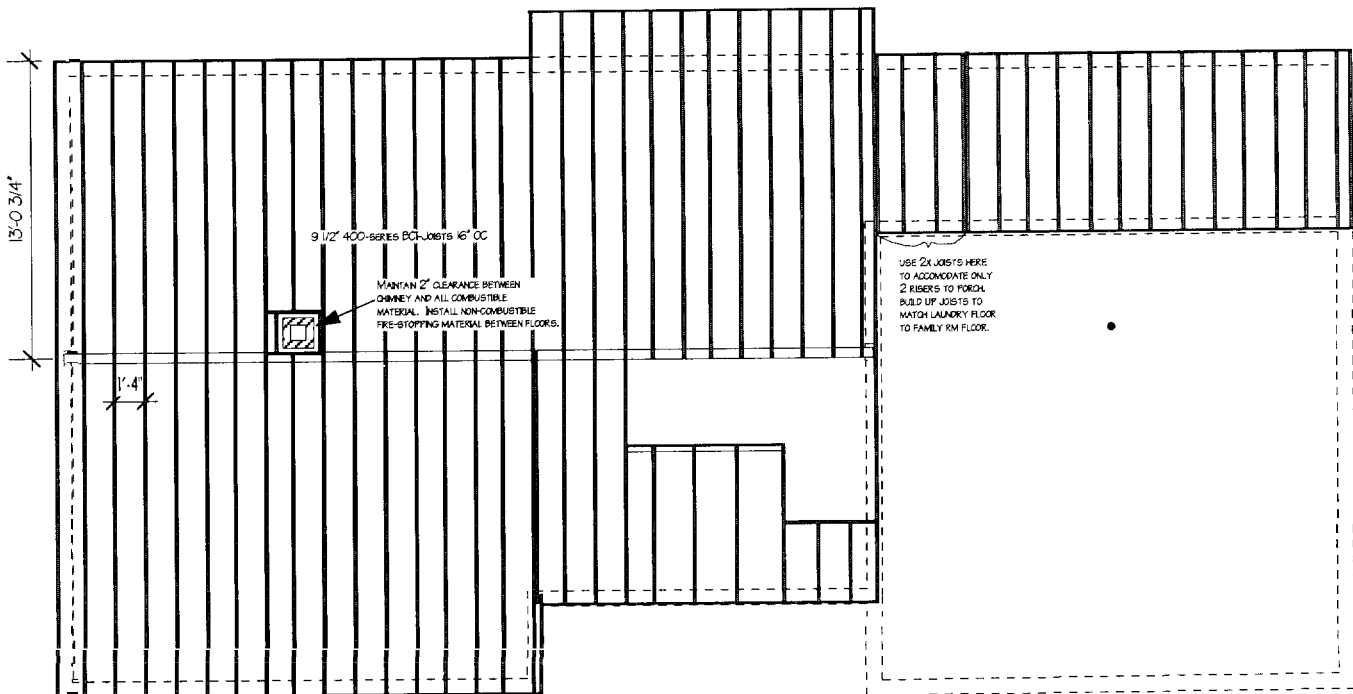
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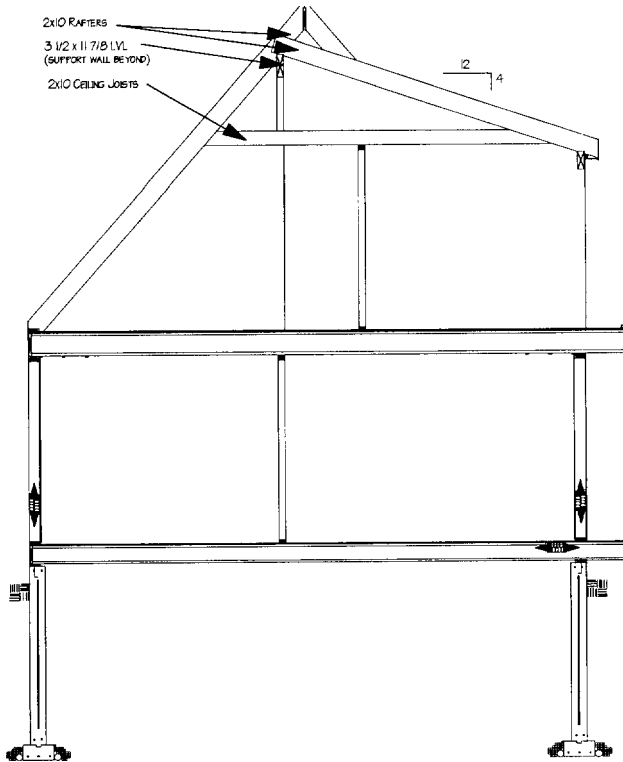


**SECOND FLOOR FRAMING PLAN**

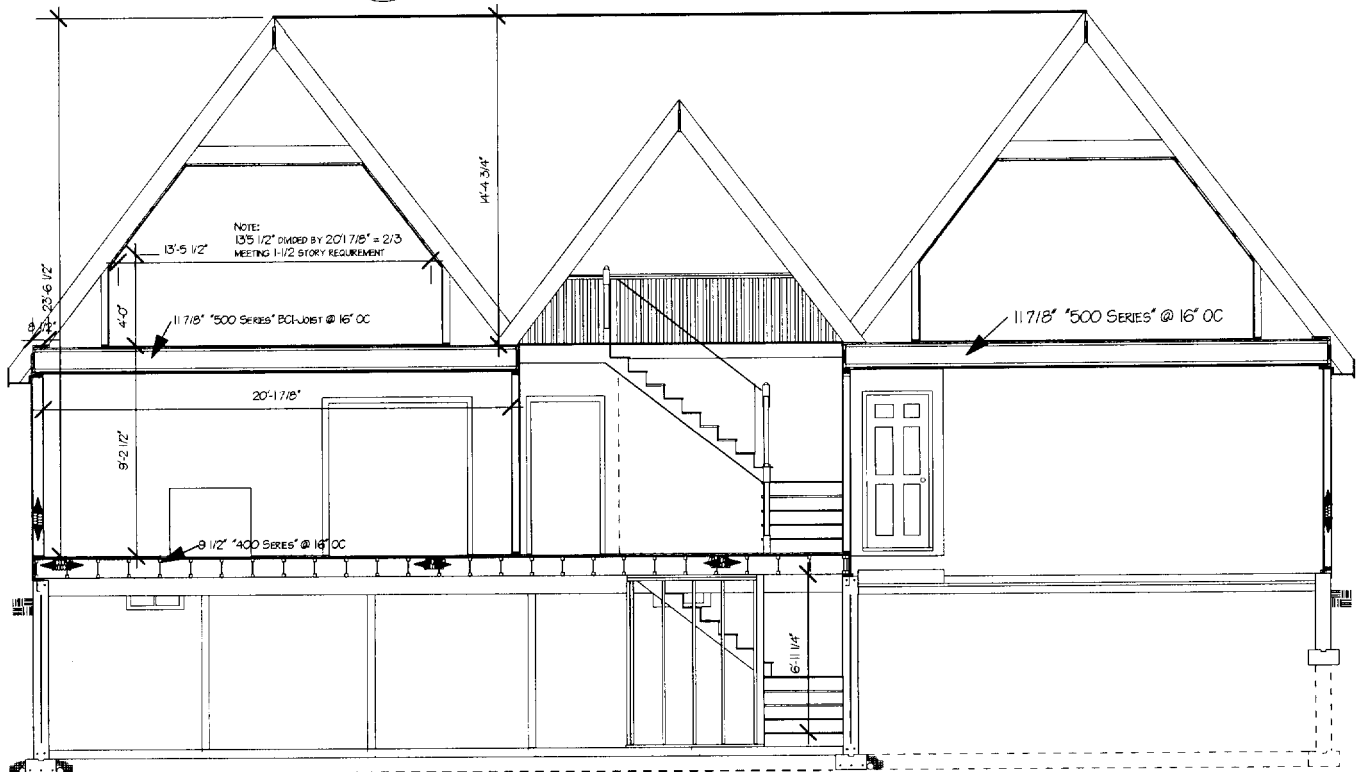


**FIRST FLOOR FRAMING PLAN**

	<b>WILTSHIRE MANOR</b>	<b>FLOOR FRAMING PLAN 5</b>	DATE 8/13/04	<b>A-0</b>
	Lot 4 STEPPING STONE LANE AUTUMN GLEN SUBDIVISION PORTLAND, ME		SCALE 1/8" = 1'-0"	



**A** FRAMING SECTION THRU FAMILY ROOM



**B** BUILDING SECTION

**Windemere  
 Homes**

**WILTSHIRE MANOR**  
 LOT 4 STEPPING STONE LANE  
 AUTUMN GLEN SUBDIVISION  
 PORTLAND, ME

**BUILDING  
 SECTIONS**

DATE  
 8/13/04

SCALE  
 1/8" = 1'0"

**A-10**

**EARTHWORK**

1. Excavating: The subcontractor shall do all excavating as required on the drawings. Earth banks shall be braced against caving in the working area. The bottoms of all footing excavations shall be exactly level on solid undisturbed earth. Excavations are to be kept free of standing water. Contractor will be responsible for rough and finish grade.

- A. Excavate topsoil and stockpile in area designated on site.
- B. Excavate subsoil required for building foundations, construction operations and other work.
- C. In excavating for footings and foundations, take care not to disturb bottom of excavation. Excavate the entire area of the basement as shown on the drawings. Same to be made 18 inches larger than outside wall dimensions in every direction to allow for inspection, waterproofing, drain tile, etc.
- D. Excavate and backfill in a manner and sequence that will provide proper drainage at all times. Drain pipe and trenching WILL be required. Drain pipe to be installed both inside and outside the foundation with the inside connected to sump and outside pipe connected to inside pipe. Subcontractor to provide drain pipe and sump.
- E. Protect active utility lines. If damaged, repair or replace at no additional cost to the owner. If existing utilities are found to interfere with the permanent facilities being constructed, immediately notify the owner and secure his instructions.
- F. Where rocks, boulders, granite or similar material is encountered, remove such material by means which will neither cause additional cost to the owner nor endanger buildings or structures on or off the site.

**TRENCHES**

- A. Dig trenches for foundation walls and footings to dimensions shown on the drawings. Sewer trench shall be pitched with a uniform fall and the trench backfilled upon completion of the installation and after proper inspection.
- B. Dig trench for utilities to standards required by utility companies. Backfill to same standards.

2. Backfilling: Backfill excavations as promptly as progress of the work permits, but not until completion of the following:
- A. Acceptance of construction below grade.
  - B. Removal of concrete formwork.
  - C. Inspecting, testing, and approving underground utilities.
  - D. Removing trash and debris.
  - E. Placement of horizontal bracing on horizontally supported walls.
  - F. Application of dampproofing

The contractor shall bring the rough grade to 12 inches below top of foundation wall with clean fill and stockpiled sub soil. Backfill to be well puddled and tamped.

- G. Fill and backfill materials: Provide soil materials free from organic matter and deleterious substances, containing no rocks or lumps over 3 inches in greatest dimension.

**3. Grading:**

- A. The contractor shall bring the finish grade to 12" below the top of the foundation wall with stockpiled top soil. Backfill to be well puddled and tamped.
- B. grade the area to provide drainage away from the structures and to prevent ponding.
- C. Where and if shown on the Drawings or otherwise required, provide topsoil consisting of friable, fertile soil of loamy character, containing an amount of organic matter normal to the region, capable of sustaining healthy plant life, and reasonable free from subsoil, roots, heavy or stiff clay, stones larger than 2 inches in greatest dimension, noxious weeds, sticks, brush, litter and other deleterious matter.

**DAMP-PROOFING**

- 1. PROVIDE ASPHALT BITUMEN DAMPPROOFING AS SHOWN ON THE DRAWINGS, AS SPECIFIED HEREIN AND AS NEEDED FOR A COMPLETE AND PROPER INSTALLATION.
- 2. USE MATERIALS THAT COMPLY WITH THE FOLLOWING STANDARDS:
  - A. ASPHALT: ASTM D449, TYPE I.

**GENERAL REQUIREMENTS**

- 1. The Sub-Contractor shall maintain, at his own expense, full and complete insurance on its work until final approval of the work described in the contract. The Sub-contractor shall not hold the Contractor liable from any and all costs, damages, fees and expenses from any claims arising on the project. Failure of the Sub-Contractor to maintain appropriate insurance coverage may deem a material breach allowing the Contractor to terminate this contract or to provide insurance at the Sub-Contractor's expense. Prior to the start of work, subcontractor shall provide to the contractor, a certificate of insurance showing, as applicable general liability and workmen's compensation coverage for each workman.
- 2. Prior to the start of work, subcontractor shall provide to the contractor a completed IRS form W-9..
- 3. Sub-contractor understands and agrees that no change orders or contract additions will be made unless agreed to in writing by Contractor. If any additional work is performed and not covered in this contract, the Sub-contractor proceeds at his own risk and expense. No alterations, additions, or small changes can be made in the work or method of the performance, without the written change order signed by the Contractor and Sub-Contractor.
- 4. Sub-Contractor will be responsible for cleaning up the job on a daily basis, including all generated construction debris, drink cans, food wrappers, and/or other trash. If it becomes necessary, the Sub-Contractor will be back charged for appropriate clean up by deducting clean up costs from payments.
- 5. Sub-contractor shall warranty all labor, materials and equipment furnished on the project for one year against defects in workmanship or materials utilized. The manufacturers warranty will prevail.

**CONCRETE**

**CONCRETE FORMWORK**

- 1. Provide formwork for cast-in-place concrete for the construction shown on the Drawings, as specified herein and as needed for a complete and proper installation.
- 2. For foundations, use wood, metal or fiberglass forms substantially constructed to prevent bowing or disfigurement during concrete placement and curing.
- 3. Construct formwork so concrete members and structures are of correct size, shape alignment, elevation and position.
- 4. For footings and foundations, use boards or planks secured to wood or steel stakes, substantially constructed to shapes indicated and to support the required loads.

**CAST-IN-PLACE CONCRETE**

- 1. Provide cast-in-place concrete where shown on the Drawings, as specified herein and as needed for a complete and proper installation.
- 2. Concrete:
  - A. Provide a standard brand of portland cement, Type I or II.
  - B. Fine aggregate: Provide washed natural sand having strong, hard, durable particles. Grade from coarse to fine.
  - C. Coarse aggregate: Use coarse aggregate of the largest practicable size for each condition of placement.
  - D. Use only clean potable water.
- 3. Unless otherwise directed use portland cement to achieve a weight of not more than 110 pcf and an ultimate compressive strength of 3000 psi at 28 days.
- 4. Concrete floors to be 4" thick with monolithic finish troweled to a hard smooth surface. Provide 6" X 6" #8/8 welded wire mesh reinforcing (or equivalent) where shown on drawings. Install 6-mil poly below slabs and overlap seams 12 inches.
- 5. Curing: Prevent premature drying and excessive hot or cold temperatures.



**WILTSHIRE MANOR**  
LOT 4 STEPPING STONE LANE  
AUTUMNGLEN SUBDIVISION  
PORTLAND, ME

**SUBCONTRACTOR**  
**SPECIFICATIONS**  
**SHEET 1**

DATE  
8/13/04  
SCALE  
NONE

**A-II**