#### MAINE DESIGN CRITERIA

2009 INTERNATIONAL RESIDENTIAL CODE W/EXCEPTIONS
2011 NFPA 31 STD FOR THE INSTALLATION OF OIL BURNING EQUIP.
2009 NFPA 54 NATIONAL FUEL GAS CODE
2008 NFPA 58 LIQUIFIED PETROLEUM GAS CODE
2011 NFPA 70 NATIONAL ELECTRICAL CODE W/EXCEPTIONS
2010 NFPA 211 STANDARDS FOR CHIMNEYS, FIREPLACES, VENTS
AND SOLID FUEL BURNING APPLIANCES
2009 UNIFORM PLUMBING CODE W/EXCEPTIONS
2011 STATE OF MAINE OIL AND SOLID FUEL BOARD LAW & RULES

#### CONSTRUCTION TYPE

IRC: Wood Frame Unprotected VB

### USE GROUP CLASSIFICATION

IRC: SINGLE FAMILY

# OCCUPANCY

ONE FAMILY DWELLING

#### DESIGN BASIS

NON SLEEPING AREA

LIVE LOAD=40 PSF

DEAD LOAD=10 PSF OR ACTUAL WEIGHT

WIND LOAD

WINDWARD SIDE=25 PSF (8)=20 PSF

WINDWARD SIDE=25 PSF (8)=20 PS

UPLIFT: ROOF=20(1.25)=25 PSF

OVERHANGS=25(2)=50 PSF

WIND SPEED (3-sec) LESS THAN 100 MPH

# GROUND SNOW LOAD=50 PSF

TRUSSES TOP CHORD LIVE LOAD=34.7 PSF
TRUSSES TOP CHORD LIVE LOAD(VALLEY SET)=34.7 PSF
TOP CHORD DEAD LOAD=10 PSF
BOTTOM CHORD DEAD LOAD=10 PSF

#### HEATING

SUPPLY AND INSTALLATION OF FUEL-FIRED HEATING EQUIPMENT BY

HOT WATER BASEBOARD HEATING, ELEMENTS ONLY INSTALLED IN FACTORY FOR FIELD—CONNECTION BY OTHERS TO HOT WATER FURNACE

HEAT LOSS CALCULATIONS AND INSTALLED HEATING QUANTITIES AS PER HEATING PLAN

SUPPLY AND INSTALLATION OF FLUE/VENTING ON SITE BY BUILDER/OWNER

#### GENERAL NOTES

ALL DOCUMENTS, DRAWINGS, CONCEPTS, SPECIFICATIONS, AND DESIGNS CREATED BY PRESTIGE HOMES INC. ARE THE SOLE PROPERTY OF PRESTIGE HOMES INC. AND ARE SUBJECT TO COPYRIGHT PROTECTION UNDER THE CANADIAN INTELLECTUAL PROPERTY ACT. ALL METHODS OF CONSTRUCTION AND DETAILS SHALL BE KEPT CONFIDENTIAL. ANY ATTEMPT AT UTILIZING THESE DOCUMENTS, DRAWINGS, CONCEPTS, SPECIFICATIONS, AND/OR DESIGNS IN WHOLE OR IN PART WITHOUT EXPRESS WRITTEN PERMISSION IS STRICTLY PROHIBITED.

PRESTIGE HOMES INC. WILL BE CONSIDERED AS A "SUB-CONTRACTOR" IN ALL BUILDING PROJECTS, SUPPLYING A BUILDING COMPONENT TO A "GENERAL CONTRACTOR" OR "BUILDER". THE DOCUMENTS, DRAWINGS, AND SPECIFICATIONS ENCLOSED ARE FOR DESCRIBING AND DETAILING THE PROPER USE OF OUR MANUFACTURED BUILDING MODULE AND ITS CONSTRUCTION. COMPLETE BUILDING PROJECT DESIGN (EG. SITE, FOUNDATION, DECK, PORCHES, ETC.) SHALL BE BY THE BUILDER/OWNER CONTRACT. ALL NOTES PERTAINING TO "IN FIELD", "ON SITE", "BY BUILDER", AND "BY OTHERS" SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

THESE PLANS MUST NOT BE SCALED FOR DIMENSIONAL REFERENCE.
ALL DIMENSION LINES AND NOTES SUPERCEDE ANY SUCH
REFERENCES.

THE THIRD PARTY AGENCY SHALL BE PFS CORP.. LABELS SHALL BE LOCATED AS FOLLOWS: STATE INSIGNIA, DATA, WARRANTY AND THIRD PARTY LABELS SHALL BE LOCATED ON WALL BELOW KITCHEN SINK. ADDITIONAL THIRD PARTY LABELS SHALL BE ONE LABEL PER MODULE. (UNDER SINK AND IN BEDROOMS)

# HOUSE SPECIFICATIONS

DIMENSIONS 55x32 TWO STOREY ELEVATIONS 3. ROOF PITCH 6/12 4. CEILING 8 FT GARAGE IN FACTORY 6. BEDROOM(S) FOUR FOUR 7. BATH(S)

3256

GYPSUM BD

# SHIPPING TO

SQ. FOOTAGE

INT. FINISH

STREET: 69 FALL BROOK STREET

CITY: PORTLAND STATE: MAINE

9.

# **PFS CORPORATION**

**Approval Limited to Factory Built Portion Only** 

State: Maine Signature: Harold Rauf

Title: Staff Plan Reviewer Date: 3/3/17



Date Received at PFS
IBC Transmittal No. (by PFS)
 Project No. (by PFS)

R12859A

12827A

differently.

D

Sheet

Cover

#### ADDITIONAL OR MODIFIED ACCEPTANCE (MODULARS/PANELIZED)

This form is to be used only when the manufacturer is seeking acceptance of an additional model, modified model or model name change which uses a previously accepted building system.

Current PFS Building Sy	stem Acceptance #	533	
Model Name/No. 128	27A TWO STOREY D	DUPLEX	
Manfacturer's Name	Prestige Homes		
Plant(s) at which model	will be produced	Sussex, New Brunswick Canada	

TECHNICAL DATA			
		Confo	rms
Floor Plan Showing:	Yes	No	N/A
Braced Wall Method or Shearwalls	✓		
Building Size (L X W Dimensions)	✓		
Room Sizes, Light & Ventilation Schedule	✓		
Exit Requirements	✓		
Electrical Outlet Spacing & Smoke Detector	✓		
Location of Labels & Data Plates	✓		
Use Group, Type Const., Total Sq.Ft., Area	✓		
Plumbing System Design or Reference No. (See attached)	✓		
Heat Loss Calculations or Reference No. (See attached)	✓		
HVAC/F Furnace Size/Model No. (On site by others)			✓
Thermal Performance Calculations or Reference No. (See attached)	✓		
Electrical Load Calculations or Reference No. (Typical)			✓
Service Size and Location ( 200 amp/basement )	✓		
Applicable Building Codes See Cover Sheet	✓		
Submit model to the following states: Maine			_
* Description of Modification			_
			_
Requested by: Rae King Date: Jan 1/2017			_
(designer)			
For PFS Use			
Staff Plan Reviewer IBC Certification#	Date:		_
Structural Calculation(s) Reviewed by: P.E.#:	Date:		_
Remarks			_
			_
** (1) copy sent to IBC within 15 days of approval.			
VERBAL APPROVAL GIVEN By Whom: To Whom	Date		_
MODEL WAS DEVIATED Revision Number			

THIS FORM CHALL BE FILLED OUT COMPLETELY WITH EACH MODEL ACCEPTANCE OR MODIFICATION PRIOR TO SUBMITTAL TO PFS.

Job Truss Truss Type Qty Ρlγ U1277446 12827A2 61216 HINGED MONO 1 Job Reference (optional) 8.010 s May 28 2016 MiTek Industries, Inc. Fri Jan 20 10:40:37 2017 Page 1 MMH Prestige Homes, Sussex NB  $ID: TWFZ\_MBom37FDEWEhP8zuZztXdY-je0jDqq6SmGrO2WFk0B7gXMXQkD5HrKoiqidS8ztVQ8$ 15-10-12 16-0-0 -1-2-8 <sub>1</sub>1-2-8 Scale = 1:61.9 MTH18E 56 16 MTH18A 3x7 \\ 6.00 12 0-1H12 1x4 4x8 15 15 3x7 12 11 10 98 11 6x6 = 1x4 | 3x9 =1x4

Plate Offsets (X,Y)-- [2:0-1-3,0-0-9], [2:0-7-0,0-0-1], [4:0-0-11,0-1-2], [5:0-0-11,0-1-2], [13:0-3-8,0-2-0], [14:0-4-0,0-2-4]

8-9-8

LOADING (psf)   34.7   (Ground Snow=50.0)   TCDL   10.0   RCLL   0.0 *	SPACING-         2-0-0           Plate Grip DOL         1.15           Lumber DOL         1.15           Rep Stress Incr         YES	CSI. TC 0.76 BC 0.52 WB 0.66	DEFL.         in (loc)         l/defl         L/d           Vert(LL)         -0.07         11-12         >999         240           Vert(TL)         -0.14         11-12         >999         180           Horz(TL)         0.04         9         n/a         n/a	PLATES         GRIP           MT20         197/144           MT18HS         197/144
BCLL 0.0 * BCDL 10.0	Code IBC2009/TPI2007	Matrix-R	11012(1L) 0.04 9 11/a 11/a	Weight: 92 lb FT = 0%

8-9-8

**BRACING-**

TOP CHORD

BOT CHORD

WFBS

**JOINTS** 

16-0-0

except end verticals.

1 Brace at Jt(s): 13, 15

1 Row at midpt

Structural wood sheathing directly applied or 4-3-8 oc purlins,

13-15

Rigid ceiling directly applied or 9-0-13 oc bracing.

LUMBER-TOP CHORD 2x6 SPF No.2 \*Except\*

4-6: 2x8 SPF No.2, 6-7: 2x4 SPF No.2

2x4 SPF No.2 BOT CHORD

2x3 SPF No.2 \*Except\* WFBS 9-13: 2x4 SPF No.2

**OTHERS** 2x4 SPF No 2

REACTIONS. (size) 2=0-3-8, 9=0-2-8, 7=0-1-8

Max Horz 2=379(LC 7)

Max Uplift 2=-181(LC 10), 9=-206(LC 10), 7=-47(LC 10) Max Grav 2=1025(LC 17), 9=1014(LC 17), 7=128(LC 17)

FORCES. (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/64, 2-3=-1768/239, 3-5=-292/180, 5-7=-73/51, 5-14=-719/235, 9-13=-1/4 **BOT CHORD** 2-12=-415/1556, 11-12=-418/1554, 10-11=-127/759, 9-10=-127/759, 8-9=0/0

3-15=-1455/325, 14-15=-1455/325, 13-14=-24/23, 3-12=0/177, 10-14=0/184, 9-14=-1245/244, 11-15=-104/24, **WEBS** 

3-11=-139/274, 11-14=-103/749

- Maximum Compression (lb)/ Maximum Tension (lb)/ Maximum Shear (lb)/ Maximum Moment (lb-in)Factory Built Portion REQUIRED FIELD JOINT CONNECTIONS 6=65/0/115/0, 14=719/235/83/0

1) Wind: ASCE 7-05; 110mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; enclosed; MWFRS (low-rise) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33

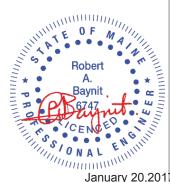
2) TCLL: ASCE 7-05; Pg= 50.0 psf (ground snow); Pf=34.7 psf (flat roof snow); Category II; Exp B; Fully Exp.; Ct=1.1

3) Unbalanced snow loads have been considered for this design.

- 4) This truss has been designed for greater of min roof live load of 18.0 psf or 2.00 times flat roof load of 34.6 psf on overhangs non-concurrent with other live loads.
- 5) This truss has been designed for basic load combinations, which include cases with reductions for multiple concurrent live loads.
- 6) All plates are MT20 plates unless otherwise indicated.
- 7) See HINGE PLATE DETAILS for plate placement.
- 8) Provisions must be made to prevent lateral movement of hinged member(s) during transportation.
- 9) All additional member connections shall be provided by others for forces as indicated.
- 10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 11) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- 12) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 9, 7.
- 13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 181 lb uplift at joint 2, 206 lb uplift at ioint 9 and 47 lb uplift at joint 7.
- 14) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 7.
- 15) This truss is designed in accordance with the 2009 International Building Code section 2306.1 and referenced standard ANSI/TPI
- 16) Load case(s) 2, 3, 4, 5, 19, 20, 21, 22, 23 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.

Ullugu on page 2
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERANCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE Design volid for use only with MiTek® contectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see 

ANSI/TP11 Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



**PFS Corporation** 

**Northeast Region** 

**APPROVED** 

H Raup - 3

3/3/17

Approval limited to

January 20,2017



Job	Truss	Truss Type	Qty	Ply		14077440
12827A2	61216	HINGED MONO	1	1	U	J1277446
					Ich Peference (optional)	

MMH Prestige Homes, Sussex NB

8.010 s May 28 2016 MiTek Industries, Inc. Fri Jan 20 10:40:37 2017 Page 2 ID:TWFZ\_MBom37FDEWEhP8zuZztXdY-je0jDqq6SmGrO2WFk0B7gXMXQkD5HrKoiqidS8ztVQ8

#### LOAD CASE(S) Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15

Uniform Loads (plf)

Vert: 1-5=-89, 5-7=-89, 2-8=-20

2) Dead + 0.75 Snow (balanced) + 0.75 Uninhab. Attic Storage: Lumber Increase=1.15, Plate Increase=1.15 Uniform Loads (plf)

Vert: 1-5=-72, 5-7=-72, 2-8=-20, 13-17=-30(F)

3) Dead + 0.75 Snow (Unbal. Left) + 0.75 Uninhab. Attic Storage: Lumber Increase=1.15, Plate Increase=1.15 Uniform Loads (plf)

Vert: 1-16=-72, 5-16=-107, 5-7=-107, 2-8=-20, 13-17=-30(F)

4) Dead + 0.75 Snow (Unbal. Right) + 0.75 Uninhab. Attic Storage: Lumber Increase=1.15, Plate Increase=1.15 Uniform Loads (plf)

Vert: 1-5=-36, 5-7=-36, 2-8=-20, 13-17=-30(F)

5) Dead + Uninhabitable Attic Without Storage: Lumber Increase=1.25, Plate Increase=1.25

Uniform Loads (plf)

Vert: 1-5=-20, 5-7=-20, 2-8=-40, 13-17=-40(F)

19) Dead + Uninhabitable Attic Storage: Lumber Increase=1.25, Plate Increase=1.25

Uniform Loads (plf)

Vert: 1-5=-20, 5-7=-20, 2-8=-20, 13-17=-40(F)

20) Dead + 0.75 Snow (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.33, Plate Increase=1.33 Uniform Loads (plf)

Vert: 1-2=-67, 2-5=-72, 5-7=-72, 2-8=-20, 13-17=-30(F)

Horz: 1-2=-5, 2-5=-0, 5-7=-0, 5-14=8, 9-13=8

Drag: 5-14=0

21) Dead + 0.75 Snow (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.33, Plate Increase=1.33 Uniform Loads (plf)

Vert: 1-2=-56, 2-5=-61, 5-7=-61, 2-8=-20, 13-17=-30(F)

Horz: 1-2=-16, 2-5=-11, 5-7=-11, 5-14=-24, 9-13=-24

Drag: 5-14=-0

22) Dead + 0.75 Snow (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.33, Plate Increase=1.33 Uniform Loads (plf)

Vert: 1-2=-42, 2-5=-47, 5-7=-47, 2-8=-20, 13-17=-30(F)

Horz: 1-2=-30, 2-5=-25, 5-7=-25, 5-14=7, 9-13=7

Drag: 5-14=0

23) Dead + 0.75 Snow (bal.) + 0.75 Uninhab. Attic Storage + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.33, Plate Increase=1.33 Uniform Loads (plf)

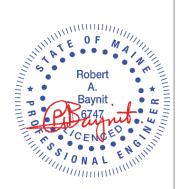
Vert: 1-2=-53, 2-5=-58, 5-7=-58, 2-8=-20, 13-17=-30(F)

Horz: 1-2=-19, 2-5=-14, 5-7=-14, 5-14=7, 9-13=7

Drag: 5-14=0

PFS Corporation Northeast Region APPROVED H Raup - 3 3/3/17

Approval limited to Factory Built Portion



January 20,2017



Job Truss Truss Type Qty Ρlγ U1277447 12827A2 612113 HINGED MONO 1 1 Job Reference (optional) 8.010 s May 28 2016 MiTek Industries, Inc. Fri Jan 20 08:53:58 2017 Page 1 MMH Prestige Homes, Sussex NB ID:TWFZ MBom37FDEWEhP8zuZztXdY-aaseCoOFRg2oBfqQNctXq6q6dFl8UrlwGn7WMXztX\_7 -1-2-8 - <u>1-2-8</u> 11-1-12 11-3-0 0-1-4 Scale = 1:40.9 MTH18E 5 MTH18A 14 0-1<u>-1</u>12 6-4-14 6.00 12 5x8 = 3x5 3 13 4x8 = 3-0-0 2-0-15 11 10 3x5 1x4 || 3x5 =8-9-8 11-3-0

Plate Offsets (X,Y)-- [4:0-0-5,0-1-2], [5:0-0-11,0-1-2], [13:0-3-8,0-2-0]

LOADING (p TCLL (Ground Snow TCDL	34.7 v=50.0) 10.0	SPACING- Plate Grip DOL Lumber DOL Rep Stress Incr	2-0-0 1.15 1.15 YES	CSI. TC BC WB	0.30 0.32 0.39	DEFL. Vert(LL) Vert(TL) Horz(TL)	in -0.03 1 -0.08 1 0.02		I/defl >999 >999 n/a	L/d 240 180 n/a	PLATES MT20 MT18HS	<b>GRIP</b> 197/144 197/144	
BCLL BCDL	0.0 * 10.0	Code IBC2009/Ti		Matri		Horz(TL)	0.02	9	n/a	n/a	Weight: 60 lb	FT = 0%	

**BRACING-**

TOP CHORD

BOT CHORD

JOINTS

8-9-8

LUMBER-

TOP CHORD 2x6 SPF No.2 \*Except\*

6-7: 2x4 SPF No.2 2x4 SPF No.2 **BOT CHORD** 

2x3 SPF No.2 \*Except\* WFBS 9-13: 2x4 SPF No.2

**OTHERS** 2x4 SPF No.2

REACTIONS. (size) 2=0-3-8, 9=0-2-8, 7=0-1-8

Max Horz 2=269(LC 6)

Max Uplift 2=-144(LC 7), 9=-155(LC 7), 7=-30(LC 7) Max Grav 2=753(LC 2), 9=719(LC 2), 7=76(LC 2)

FORCES. (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/64, 2-3=-1096/102, 3-5=-146/134, 5-7=-86/25, 5-12=-493/165, 9-13=-6/4

**BOT CHORD** 2-11=-220/924, 10-11=-223/920, 9-10=-87/544, 8-9=0/0

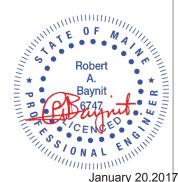
3-12=-544/163, 12-13=-11/23, 3-11=0/204, 9-12=-896/177, 10-12=0/286, 3-10=-420/143 **WEBS** 

REQUIRED FIELD JOINT CONNECTIONS - Maximum Compression (lb)/ Maximum Tension (lb)/ Maximum Shear (lb)/ Maximum Moment (lb-in) 6=38/0/68/0, 12=493/165/36/0

#### NOTES-

- 1) Wind: ASCE 7-05; 110mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; enclosed; MWFRS (low-rise) gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33
- 2) TCLL: ASCE 7-05; Pq= 50.0 psf (ground snow); Pf=34.7 psf (flat roof snow); Category II; Exp B; Fully Exp.; Ct=1.1
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 18.0 psf or 2.00 times flat roof load of 34.6 psf on overhangs non-concurrent with other live loads.
- 5) All plates are MT20 plates unless otherwise indicated.
- 6) See HINGE PLATE DETAILS for plate placement.
- 7) Provisions must be made to prevent lateral movement of hinged member(s) during transportation.
- 8) All additional member connections shall be provided by others for forces as indicated.
- 9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 10) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 11) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 9, 7.
- 12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 144 lb uplift at joint 2, 155 lb uplift at joint 9 and 30 lb uplift at joint 7.
- 13) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 7.
- 14) This truss is designed in accordance with the 2009 International Building Code section 2306.1 and referenced standard ANSI/TPI

LOAD CASE(S) Standard



**PFS Corporation** 

Northeast Region

**APPROVED** 

H Raup - 3

3/3/17

Approval limited to

**Factory Built Portion** 

Structural wood sheathing directly applied or 6-0-0 oc purlins,

Rigid ceiling directly applied or 10-0-0 oc bracing

except end verticals.

1 Brace at Jt(s): 12, 13

January 20,2017

👠 WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERANCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see — ANSI/TP11 Quality Criteria, DSB-89 and BCSI Building Component Safety Information—available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.





COMPANY Prestige Homes Sussex NB

Uniform Roof Loads Only June 9, 2016 11:42 US IBC 2012 NDS 2012

Ext Double 2x6 14 US (Updated June 9, 2016).wwb

### **Design Check Calculation Sheet**

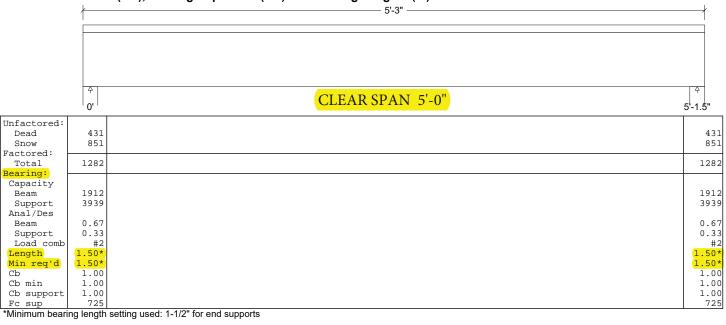
WoodWorks Sizer 10.4

#### Loads:

Load	Type	Distribution	Pat-	Location [ft]		Magnitud	Unit	
			tern	Start	End	Start	End	
DL1	Dead	Full UDL				165.0		plf
SL1	Snow	Full UDL				332.0		plf
Self-weight	Dead	Full UDL				3.3		plf

magnitude does not include Normal Importance factor from Table 4.2.3.2, which is applied during analysis.

Maximum Reactions (lbs), Bearing Capacities (lbs) and Bearing Lengths (in):



Exterior Double 2"x6" Header Maximum Span

Lumber n-ply, S-P-F, No.1/No.2, 2x6, 2-ply (3"x5-1/2")

Supports: All - Lumber n-ply Column, S-P-F Stud

Total length: 5'-3.0"; volume = 0.6 cu.ft.;

Lateral support: top= full, bottom= at supports;

# Analysis vs. Allowable Stress and Deflection using NDS 2012:

•				
Criterion	Analysis Value	Design Value	Unit	Analysis/Design
Shear	fv = 93	Fv' = 155	psi	fv/Fv' = 0.60
Bending(+)	fb = 1303	Fb' = 1308	psi	fb/Fb' = 1.00
Live Defl'n	0.09 = L/694	0.17 = L/360	in	0.52
Total Doflin	0 12 - T/461	0.26 - 1/240	in	0.52

### **Additional Data:**

FACTORS:	F/E(p	si)CD	CM	Ct	CL	CF	Cfu	Cr	Cfrt	Ci	Cn	LC#
Fv'	135	1.15	1.00	1.00	-	-	-	-	1.00	1.00	1.00	2
Fb'+	875	1.15	1.00	1.00	1.000	1.300	1.00	1.00	1.00	1.00	-	2
Fcp'	425	-	1.00	1.00	-	-	-	-	1.00	1.00	-	-
E'	1.4 m	illion	1.00	1.00	_	_	-	_	1.00	1.00	-	2

### CRITICAL LOAD COMBINATIONS:

CALCULATIONS:

Shear : LC #2 = D+S, V = 1282, V design = 1022 lbs

Bending(+): LC #2 = D+S, M = 1643 lbs-ft

Deflection: LC #2 = D+S (live)

LC #2 = D+S (total)

D=dead L=live S=snow W=wind I=impact Lr=roof live Lc=concentrated E=earthquake
All LC's are listed in the Analysis output

Load combinations: ICC-IBC

CALCULATIONS:

CALCULATIONS:

EI =

Deflection: EI = 29.1e06 lb-in2/ply
"Live" deflection = Deflection from all non-dead loads (live, wind, snow...)
Total Deflection = 1.00(Dead Load Deflection) + Live Load Deflection.

# **Design Notes:**

- 1. WoodWorks analysis and design are in accordance with the ICC International Building Code (IBC 2012), the National Design Specification (NDS 2012), and NDS Design Supplement.
- Please verify that the default deflection limits are appropriate for your application.
   Sawn lumber bending members shall be laterally supported according to the provisions of NDS Clause 4.4.1.
- 4. BUILT-UP BEAMS: it is assumed that each ply is a single continuous member (that is, no butt joints are present) fastened together securely at intervals not exceeding 4

each ply is equally top-loaded. Where beams are side-loaded, special fastening details may be required.

5. Ground Snow Load: Ps = 50psf

6. Flat Snow Load: Pf = 35psf (Fully Exposed)

- Unbalanced Snow Load: Punbal = 58psf
- Uniform Loading only
   No concentrated Loads Considered
- 10. To be applied to Single Storey Homes or the Top Floor of Multi-Storey Homes
  11. For Bearing Refer to Jack Stud Calc Sheet "1-2x6 US"





COMPANY Prestige Homes Sussex NB July 18, 2016 16:48

xterior 1-1 3/4"x 9 1/4" LVL Uniform Roof and Floor Loads Only Ext Single 9 25 LVL RF 16 US (Updated July 18, 2016).wwb

# **Design Check Calculation Sheet**

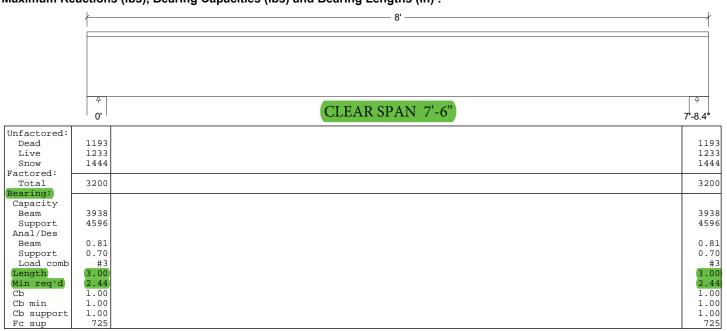
WoodWorks Sizer 10.4

#### Loads:

Load	Type	Distribution	Pat-	Location	[ft]	Magnitude	Unit
			tern	Start	End	Start End	
DL1	Dead	Full UDL				185.0	plf
SL1	Snow	Full UDL				375.0	plf
3	Dead	Full Area				15.00(8.00')	psf
4	Live	Full Area				40.00(8.00')	psf
Self-weight	Dead	Full UDL				4.7	plf

Load magnitude does not include Normal Importance factor from Table 4.2.3.2, which is applied during analysis.

Maximum Reactions (lbs), Bearing Capacities (lbs) and Bearing Lengths (in):



# Exterior Single 9 1/4" LVL 1.9E Header Maximum Span

LVL n-ply, 1.9E, 2600Fb, 1-3/4"x9-1/4", 1-ply
Supports: All - Lumber n-ply Column, S-P-F Stud
(Total length: 8'; volume = 0.9 cu.ft.;
Lateral support: top= full, bottom= at supports;

# Analysis vs. Allowable Stress and Deflection using NDS 2012:

	•				
	Criterion	Analysis Value	Design Value	Unit	Analysis/Design
	Shear	fv = 229	Fv' = 328	psi	fv/Fv' = 0.70
	Bending(+)	fb = 2964	Fb' = 2990	psi	fb/Fb' = 0.99
ĺ	Live Defl'n	0.19 = L/490	0.26 = L/360	in	0.73
	Total Doflin	0 20 - T/207	0 20 - T/240	in	0.70

## Additional Data:

FACTORS:	F/E(psi	) CD	CM	Ct	CL	CV	Cfu	Cr	Cfrt	Ci	Cn	LC#
Fv'	285	1.15	-	1.00	-	-	-	-	1.00	-	1.00	3
Fb'+	2600	1.15	-	1.00	1.000	1.00	-	1.00	1.00	-	-	3
Fcp'	750	-	-	1.00	-	-	-	-	1.00	-	-	-
E '	1.9 mil	lion	-	1.00	_	-	-	-	1.00	-	-	3
Eminy'	0.98 mil	lion	-	1.00	_	_	_	_	1.00	_	_	3

CRITICAL LOAD COMBINATIONS:

Shear : LC #3 = D+.75(L+S), V = 3200, V design = 2475 lbs

Bending(+): LC #3 = D+.75(L+S), M = 6163 lbs-ft

Deflection: LC #3 = D+.75(L+S) (live)

LC #3 = D+.75(L+S) (total)

D=dead L=live S=snow W=wind I=impact Lr=roof live Lc=concentrated E=earthquake

All LC's are listed in the Analysis output

Load combinations: ICC-IBC

CALCULATIONS:

Deflection: EI = 219e06 lb-in2

"Live" deflection = Deflection form

Deflection: EI = 219e06 lb-in2
"Live" deflection = Deflection from all non-dead loads (live, wind, snow...)
Total Deflection = 1.00(Dead Load Deflection) + Live Load Deflection.

# **Design Notes:**

- 1. WoodWorks analysis and design are in accordance with the ICC International Building Code (IBC 2012), the National Design Specification (NDS 2012), and NDS Design Supplement.
- 2. Please verify that the default deflection limits are appropriate for your application
- 2.1 rease very that the detailed effection minds are appropriate for your appropriate for your appropriate for your appropriate for your local SCL manufacturer.

  3. SCL-BEAMS (Structural Composite Lumber): the attached SCL selection is for preliminary design only. For final member design contact your local SCL manufacturer.

  4. Size factors vary from one manufacturer to another for SCL materials. They can be changed in the database editor.

  5. BUILT-UP SCL-BEAMS: contact manufacturer for connection details when loads are not applied equally to all plys.

- Ground Snow Load: Ps = 50psf Flat Snow Load: Pf = 35psf (Fully Exposed) Unbalanced Snow Load: Punbal = 58psf

- 8. Unbalanced Snow Load: Punbal = 58psf)
  9. Uniform Loading only
  10. No concentrated Loads Considered
  11. To be applied to the First Floor of Two Storey Residential Homes
  12. Bearing to be Determined by Beam Bearing Capacity





COMPANY Prestige Homes Sussex NB May 23, 2016 23:45 PROJECT Uniform Roof and Floor Loads Only US IBC 2012 NDS 2012

Ext Double 2x6 14 RF US (Updated May 23, 2016).wwb

# **Design Check Calculation Sheet**

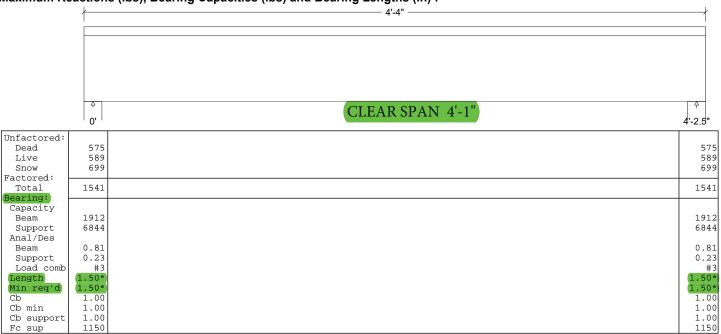
WoodWorks Sizer 10.4

#### Loads:

Load	Type	Distribution	Pat-	Location	[ft]	Magnitude	Unit
			tern	Start	End	Start End	
DL1	Dead	Full UDL				165.0	plf
SL1	Snow	Full UDL				332.0	plf
3	Dead	Full Area				15.00(7.00')	psf
4	Live	Full Area				40.00(7.00')	psf
Self-weight	t Dead	Full UDL				3.3	plf

Load magnitude does not include Normal Importance factor from Table 4.2.3.2, which is applied during analysis.

Maximum Reactions (lbs), Bearing Capacities (lbs) and Bearing Lengths (in):



FC sup | LLDU| Minimum bearing length setting used: 1-1/2" for end supports

Exterior Double 2"x6" Header Maximum Span

Lumber n-ply, S-P-F, No.1/No.2, 2x6, 2-ply (3"x5-1/2")

Supports: All - Lumber n-ply Column, S-P-F No.1/No.2

(Total length: 4'-4.0"; volume = 0.5 cu.ft.;)

Lateral support: top= full, bottom= at supports;

## Analysis vs. Allowable Stress and Deflection using NDS 2012:

Criterion	Analysis Value	Design Value	Unit	Analysis/Design
Shear	fv = 105	Fv' = 155	psi	fv/Fv' = 0.68
Bending(+)	fb = 1286	Fb' = 1308	psi	fb/Fb' = 0.98
Live Defl'n	0.06 = L/907	0.14 = L/360	in	0.40
Total Defl'n	0.09 = L/568	0.21 = L/240	in	0.42

# Additional Data:

FACTORS:	F/E(ps	i)CD	CM	Ct	CL	CF	Cfu	Cr	Cfrt	Ci	Cn	LC#
Fv'	135	1.15	1.00	1.00	-	-	-	-	1.00	1.00	1.00	3
Fb'+	875	1.15	1.00	1.00	1.000	1.300	1.00	1.00	1.00	1.00	-	3
Fcp'	425	-	1.00	1.00	-	-	-	-	1.00	1.00	-	-
E !	1 /1 mi	11 i on	1 00	1 00	_	_	_	_	1 00	1 00	_	2

E' 1.4 million 1.00 1.00 - - - 1.00 1.00 
CRITICAL LOAD COMBINATIONS:
Shear : LC #3 = D+.75(L+S), V = 1541, V design = 1160 lbs

Bending(+): LC #3 = D+.75(L+S), M = 1621 lbs-ft

Deflection: LC #3 = D+.75(L+S) (live)

LC #3 = D+.75(L+S) (total)

D=dead L=live S=snow W=wind I=impact Lr=roof live Lc=concentrated E=earthquake
All LC's are listed in the Analysis output

Load Cumbinations: ICC-IBC

CALCULATIONS:

Deflection: EI = 29.1e06 lb-in2/ply

"Live" deflection = Deflection from all non-dead loads (live, wind, sometime of the state of the

# **Design Notes:**

1. WoodWorks analysis and design are in accordance with the ICC International Building Code (IBC 2012), the National Design Specification (NDS 2012), and NDS Design

Supplement.

2. Please verify that the default deflection limits are appropriate for your application.

3. Sawn lumber bending members shall be laterally supported according to the provisions of NDS Clause 4.4.1.
4. BUILT-UP BEAMS: it is assumed that each ply is a single continuous member (that is, no butt joints are present) fastened together securely at intervals not exceeding 4 times the depth and that

each ply is equally top-loaded. Where beams are side-loaded, special fastening details may be required.

each pry is equally top-loaded. Where bearns are side-loaded.

5. Ground Snow Load: Ps = 50psf

6. Flat Snow Load: Pf = 35psf (Fully Exposed)

7. Unbalanced Snow Load: Punbal = 58psf

8. Uniform Roof and Single Floor Loading only

9. No concentrated Loads Considered

10. To be applied to First Floor of Two Storey Residential S

11. For Bearing Refer to Jack Stud Calc Sheet "1-2x6 US"





# **Model 950XL**

# **Double Check Valve Assembly**

#### **Application**

Designed for installation on water lines to protect against both backsiphonage and backpressure of polluted water into the potable water supply. Assembly shall provide protection where a potential health hazard does not exist.

#### **Standards Compliance**

(All sizes approved horizontal. Vertical approvals as listed below.)

- ASSE® Listed 1015 (vertical 3/4", 1 1/4", 1 1/2" & 2")
- IAPMO® Listed (vertical 1 1/4"-2")
- CSA® Listed (vertical 3/4", 1 1/4", 1 1/2" & 2")
- AWWA Compliant C510 (vertical 3/4")
- UL® Classified (less shut-off valves only)
- C-UL® Classified (less shut-off valves only)
- Approved by the Foundation for Cross Connection Control and Hydraulic Research at the University of Southern California (vertical 3/4")
- City of Los Angeles Approved (vertical 1-1/4"-2")
- NYC MEA 426-89-M VOL 3

#### **Materials**

Main valve body
Access covers
Cast Bronze ASTM B 584
Cast Bronze ASTM B 584
Internals
Stainless Steel, 300 Series
Elastomers
Silicone (FDA approved)
Buna Nitrile (FDA approved)

Polymers Noryl<sup>TM</sup>, NSF Listed

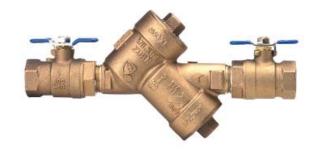
Springs Stainless steel, 300 series

#### **Features**

Sizes: 3/4", 1", 1 1/4", 1 1/2", 2"

Maximum working water pressure 175 PSI
Maximum working water temperature 180°F
Hydrostatic test pressure 350 PSI

End connections Threaded ANSI B1.20.1



#### **Options**

(Suffixes can be combined)

-	with	fu	II po	ort (	QΤ	ball	valves	(stand	ard)

L - less ball valves

U - with union ball valves

S - with bronze "Y" type strainer TCU - with test cocks "vertical" up

V - with union swivel elbows (3/4" & 1")

OSY - with OS & Y gate valves

FDC - with fire hydrant connection (2" only)

FT - with integral male 45° flare SAE test fitting
PF - with Z-Bite™ push fit connections\* (1/2"-1" only)

PR - with Z-Press™ press fit connections\*

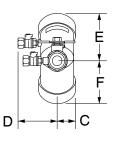
\*Fittings ship in box with valve and must be threaded into valve by hand on site.

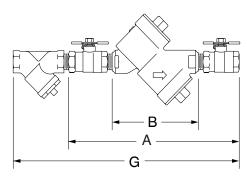
#### **Accessories**

Repair kit (rubber only)

Thermal expansion tank (Model XT)

☐ QT-SET Quick Test Fitting Set





#### Dimensions & Weights (do not include pkg.)

		DIMENSIONS (approximate)														WEIGHT			-								
MOD	EL			A UNIO	NC	B LESS I	ο A I I											LE	SS	W	ΗT						
SIZ	Έ	Α		BALI	L	VALVE			)	D		E	Ξ	F	=	G		B/	۱LL	B/	٩LL						
				VALVE	S	VALVE	_0																	VAL	VES	VAL	VES
in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs	kg	lbs.	kg						
3/4	20	11 1/4	286	12 1/2	318	7	178	1 1/2	38	3	76	3 1/2	89	3	76	15	381	5	2.3	7	3.2						
1	25	12 1/4	311	13 7/8	353	7	178	1 1/2	38	3	76	3 1/2	89	3	76	17 3/4	451	8	3.6	12	5.4						
1 1/4	32	15 1/2	419	18 1/2	470	10 9/16	268	2	51	3 1/2	89	4 1/2	114	4 1/2	114	21 1/2	546	16	7.3	22	10						
1 1/2	40	17 1/8	435	19 1/8	486	10 9/16	268	2	51	3 1/2	89	4 1/2	114	4 1/2	114	22 3/4	578	16	7.3	22	10						
2	50	18 1/4	460	20	508	10 9/16	268	2	51	3 1/2	89	4 1/2	114	4 1/2	114	25 1/8	638	16	7.3	28	12.7						

Zurn Industries, LLC | Wilkins

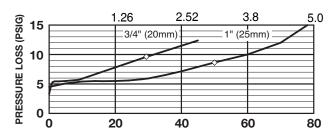
1747 Commerce Way, Paso Robles, CA U.S.A. 93446 Ph. 855-663-9876, Fax 805-238-5766 In Canada | **Zurn Industries Limited** 

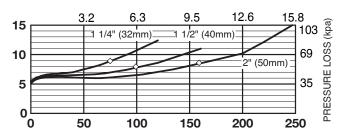
3544 Nashua Drive, Mississauga, Ontario L4V 1L2 Ph. 905-405-8272, Fax 905-405-1292

Rev. C Date: 10/14 Document No. BF-950XL Product No. Model 950XL

#### MODEL 950XL 3/4", 1", 1 1/4", 1 1/2" & 2" (STANDARD & METRIC)

FLOW RATES (I/s)



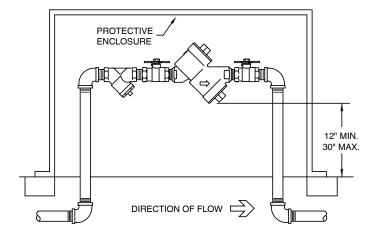


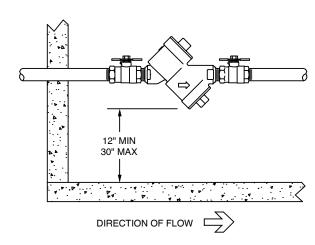
FLOW RATES (GPM)

#### **Typical Installation**

Local codes shall govern installation requirements. To be installed in accordance with the manufacturer's instructions and the latest edition of the Uniform Plumbing Code. Unless otherwise specified, the assembly shall be mounted at a minimum of 12" (305mm) and a maximum of 30" (762mm) above adequate drains with sufficient side clearance for testing and maintenance. The installation shall be made so that no part of the unit can be submerged.

Capacity thru Schedule 40 Pipe											
Pipe size	5 ft/sec	7.5 ft/sec	10 ft/sec	15 ft/sec							
1/8"	1	1	2	3							
1/4"	2	2	3	5							
3/8"	3	4	6	9							
1/2	5	7	9	14							
3/4"	8	12	17	25							
1"	13	20	27	40							
1 1/4"	23	35	47	70							
1 1/2"	32	48	63	95							
2"	52	78	105	167							





**OUTDOOR INSTALLATION** 

**INDOOR INSTALLATION** 

#### **Specifications**

The Double Check Valve Backflow Preventer shall be ASSE® Listed 1015 approved, and supplied with full port ball valves. The main body and access covers shall be bronze (ASTM B 584), the seat rings and all internal polymers shall be NSF® Listed Noryl™ and the seat disc elastomers shall be silicone. The first and second checks shall be accessible for maintenance without removing the device from the line. The Double Check Valve Backflow Preventer shall be a ZURN WILKINS Model 950XL.



# HYDRAULIC CALCULATIONS



THIS DRWG HAS BEEN REVIEWED BY A NICET CERTIFIED AUTOMATIC SPRINKLER AYOUT TECHNICIAN

**NICET NO. 103123** 

LEVEL IV

**RMS NO. 572** 

Vipond Fire Protection 309 English Drive Moncton, N.B. E1E 3Y8 (506)857-8505

Project Name

: DERASPE RESIDENCE BDRM2 SECOND FLR

Address

: 69 FALL BROOK STREET, PORTLAND, MAINE, USA

Calculation Area Location

: E-2318

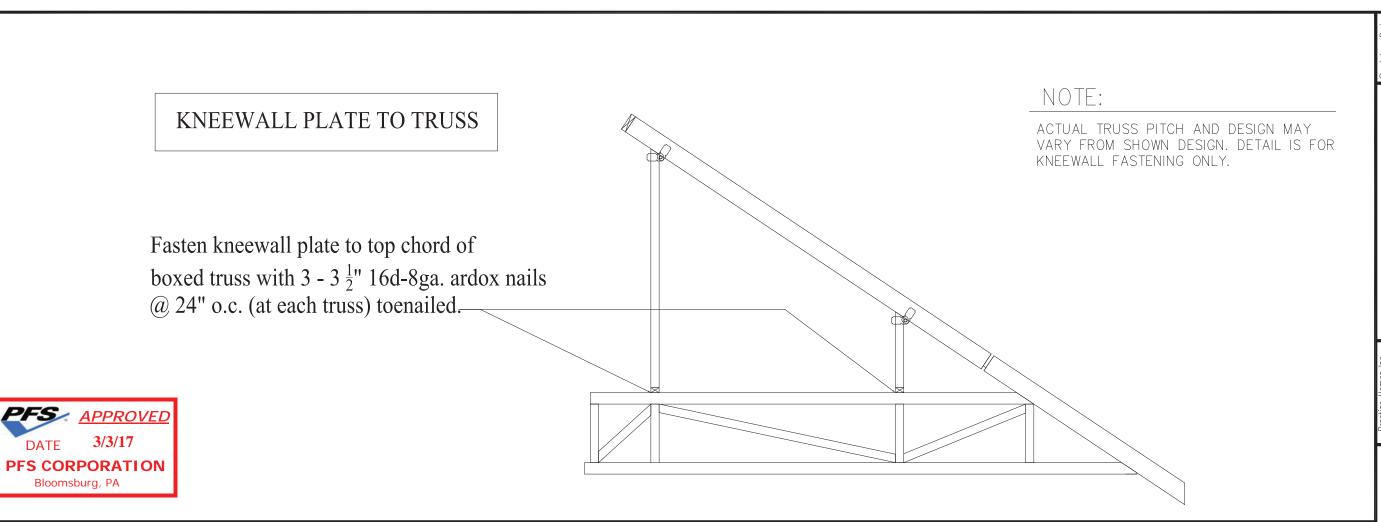
System

: 110726.WXB

Contract

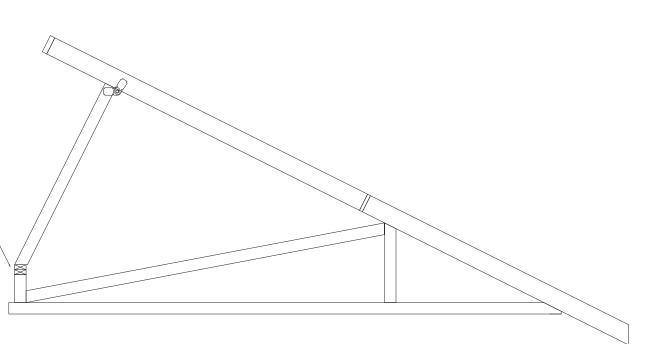
: 110726

Calculation Data File Name : 110726.WXB

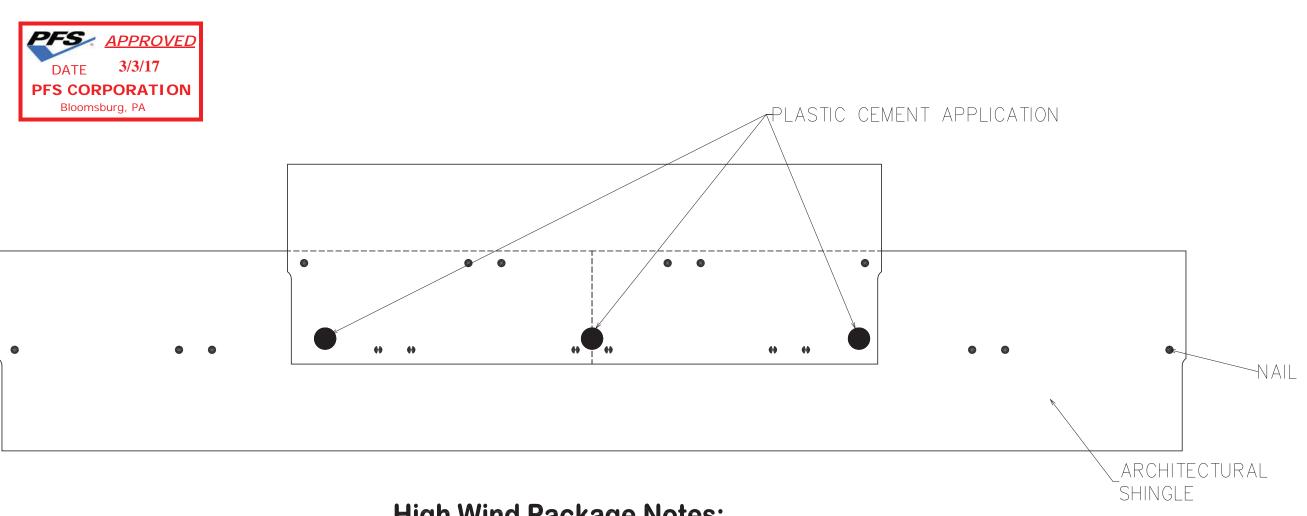


# KNEEWALL PLATE TO TRUSS PIN PLATE

Fasten kneewall plates to top plate of – truss pin with 2 -  $3\frac{1}{2}$ " 16d-8ga. ardox nails @ 16" o.c.



Kneewall Fastening Pattern

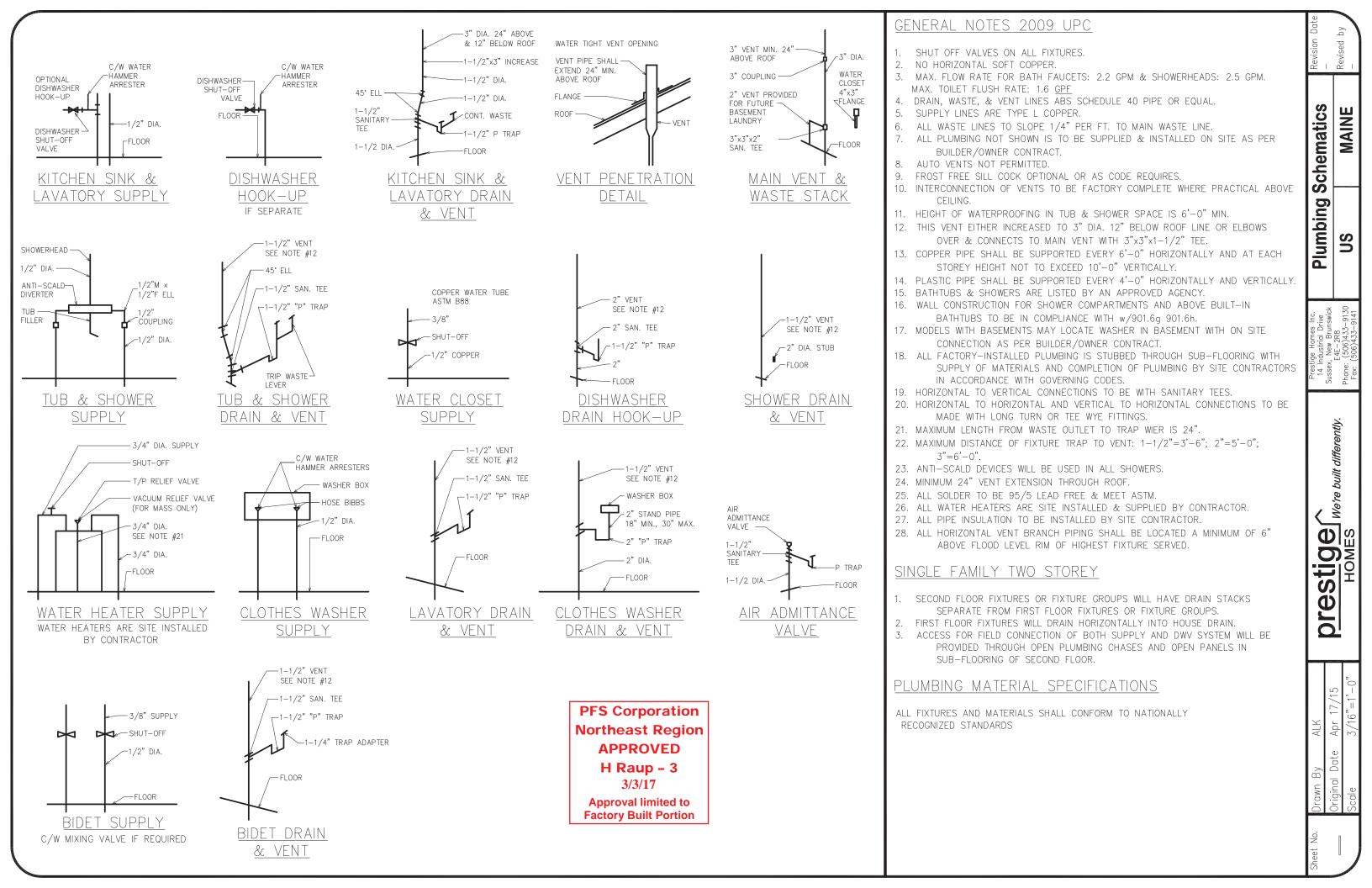


# **High Wind Package Notes:**

6 NAILS PER SHINGLE & 3-1" SPOTS OF ASPHALT PLASTIC CEMENT UNDER EACH SHINGLE

HIGH WIND Shingle Fastening Detail

MAINE



#### Maine Energy Requirements for 2013(using 2009 IRC)

Prestige Homes agrees to comply with the following as of production start date of May 8,2013 as noted below:

 Homes must comply to the minimum stds as outlined in the Energy Specifications Table below:

**Energy Specifications Table** 

				Maxi	mum	Maximum	Maximum
Mini	mum Inquilat	ion D V	alua	Fenestr	ation for	Fenestration	Fenestration
IVIIIII	mum Insulat	1011 K-V	alue	Exterior	Doors U-	for Windows	for Skylights
					ctor	U-Factor	U-Factor
			Floors				
			Ву				
Ceilings	Roof/Ceilings	Walls	Builder	Entrance	Specialty		
R-38	R-38	R-19	R-19	0.35	0.45	0.35	0.6

- 1. For 2-story homes, the perimeter of the space between the top of the 2<sup>nd</sup> floor rim joists and finished ceiling below shall be insulated to a value of R-19
- 2. re: 2 pc capes with unfinished 2<sup>nd</sup> floors:
  - a. Stair enclosures. The ceilings of the stair enclosures shall be insulated to R-30. The walls of the stair enclosures shall be insulated to R-11. (see floor plan)
  - b. Doors. Doors within stair enclosures shall be insulated by any means, including temporary means, to be a value of R-19 to prevent heat loss into unfinished space.
  - c. Ceilings. The floor/ceiling assembly between the first and second stories shall be insulated to a value of R-30, except that the ceiling area beginning at the outside walls and extending to the knee walls shall be insulated to a value of R-38. (see cross section)
- 3. re: Homes with unconditioned basement shall be insulated as described below:
  - Basement stair enclosures. The ceilings of the basement stair enclosures shall be insulated to R-19. The walls of the basement stair enclosures shall be insulated to R-11. (see floor plan)
  - b. Basement door to c/w weather stripping and door sweep by retailer or manufacturer. (see floor plan or foundation plan)
  - c. All floor insulation as specified in Cross Section shall be installed by Builder on site
- 4. re: Kitchen exhaust:
  - A cooking appliance shall be equipped with a separate ventilating fan/hood, independent of other ventilating systems, with a minimum rating of 100 CFM.
     This equipment shall exhaust at the outside of the home. This paragraph does not apply to microwave ovens, provided that:
    - i. The microwave oven is not sold with a separate ventilating system; and
    - ii. The manufacturer's instructions do not require that the microwave oven be operated with a separate ventilating system.
- 5. re: Bathroom exhaust:
  - a. Each bathroom with or without a tub shower unit shall be equipped with a separate ventilating fan, independent of other ventilating systems, with a minimum rating of 50 CFM. The fan shall exhaust at the outside of the home and shall be rated for sound at a maximum of 3 sone.
- re: Homes with Conditioned Basement walls shall be insulated by builder on site as per Res Check

PFS Corporation
Northeast Region
APPROVED
H Raup - 3
3/3/17
Approval limited to
Factory Built Portion

Document last updated: June 12, 2013