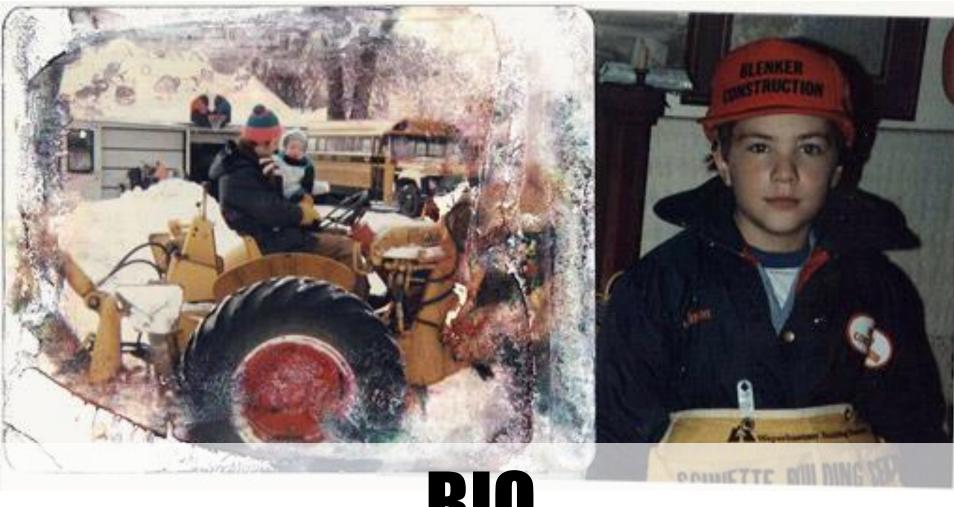


Leverage Building Systems

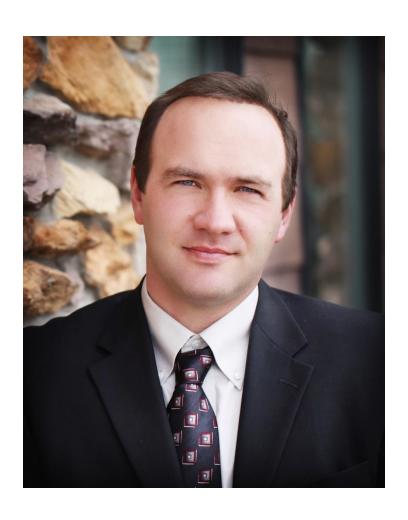
For:

Speed, Quality, & Profit





BIO



Jason Blenker

Blenker Building Systems, Inc.
Amherst, WI

- Past Chair of the Building Systems
 Council of the NAHB
- Blenker Building Systems provides structural building components and building materials to builders throughout the Midwest
- Jason provides value by applying inventive but realistic solutions to help build businesses.
 - IBS speaker

September 2008





Engineered for Success

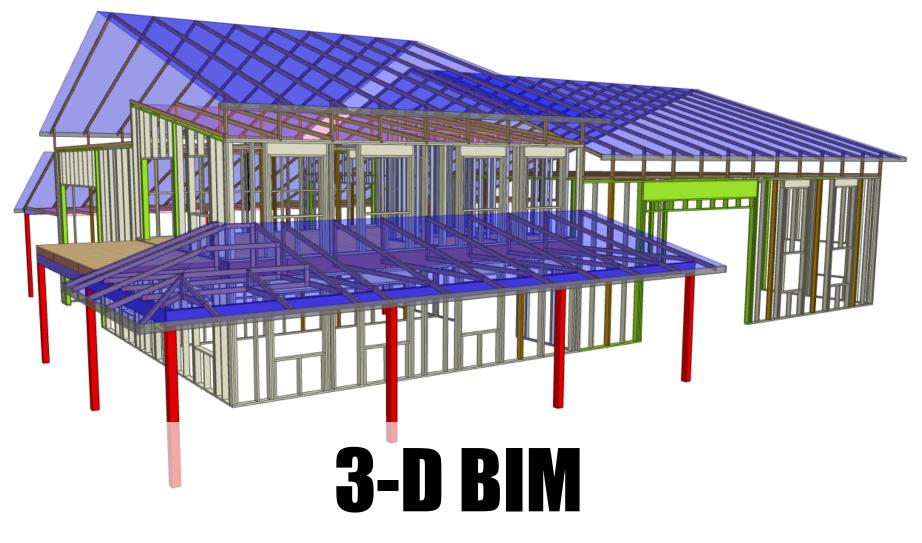






What are Building Systems?

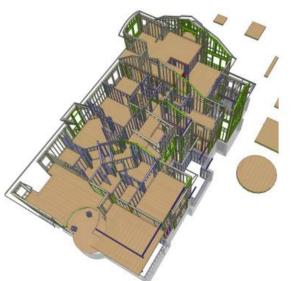
- Fully Engineered Structural Building Components
 - Floor Trusses
 - Roof Trusses
 - Wall Panels
 - Floor Panels

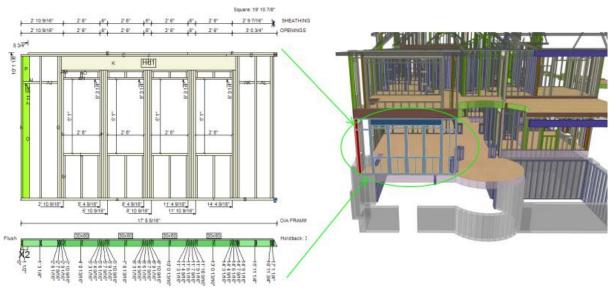


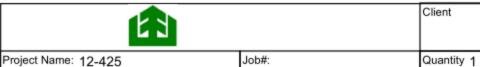
Fully Engineered









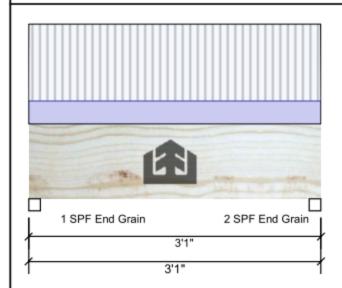


Description:

LBW HEADERS West Fraser 1.8 1.5" X 9.5"

3/19/2013 12:58 PM Page 1 of 1 Designer:

Shipping



9 1/2

Type:	Girder
Plies:	1
Moisture Condition:	Dry
Deflection LL:	360
Deflection TL:	240
Importance:	Normal
Temperature:	Temp <= 100°F
I	

Application:	Floor
Design Method:	ASD
Building Code:	IBC/IRC
Load Sharing:	No
Deck:	Not Checked
Vibration:	Not Checked

Reaction	ons				
Brg	Live	Dead	Snow	Wind	Const
1	666	205	0	0	0
2	666	205	0	0	0

							1
nalysis	Actual	Location	Allowed	Capacity	Load Comb.	Ld. Case	L
/loment	644 ft-lb	1'6 1/2"	5080 ft-lb	0.127 (13%)	D+L	L	ŀ
Shear	405 lb	10 1/4"	2755.0 lb	0.147 (15%)	D+L	L	ľ
L Defl inch	0.004 (L/8831)	1'6 1/2"	0.099 (L/360)	0.040 (4%)	L	L	Ŀ

Bearin	gs						
	Input			React D/L lb	Total	Ld. Case	Ld. Comb
1 - SPF End Grain	1.500"	Analysis 1.500"	52%	205 / 666	871	L	D+L
2 - SPF	1.500"	1.500"	52%	205 / 666	871	L	D+L



CS Beam4.605 kmBeamEngine 4.6026 Materials Database 1421

Member Data

Description:

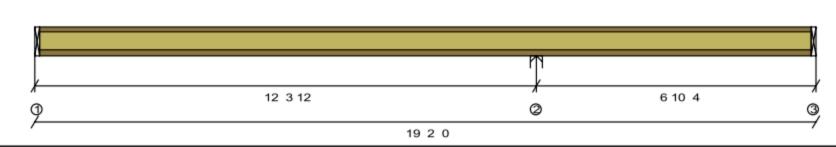
Standard Load:

Member Type: Joist Application: Floor Top Lateral Bracing: Continuous

Bottom Lateral Bracing: (See Below)

Live Load: 40 PSF Dead Load: 12 PSF Moisture Condition: Dry Deflection Criteria: L/480 live, L/240 total

Deck Connection: Glued & Nailed Filename: Beam1



Bearings and Reactions

l				Input	Min	Gravity	Gravity
l	Location	Type	Material	Length	Required	Reaction	Uplift
1	0' 0.000"	Girder	Steel	1.500"	N/A	528#	
2	12' 3.750"	Wall	LVL/PSL(DF/SP) Plate (500psi)	3.500"	3.500"	1319#	
3	19' 2.000"	Girder	Steel	1.500"	N/A	276#	-110#

Maximum Load Case Reactions

Used for applying point loads (or line loads) to carrying members

	Live	Deau
1	409#(204plf)	119#(59plf)
2	1015#(507plf)	304#(152plf
3	245#(123plf)	31#(15plf)

Design spans

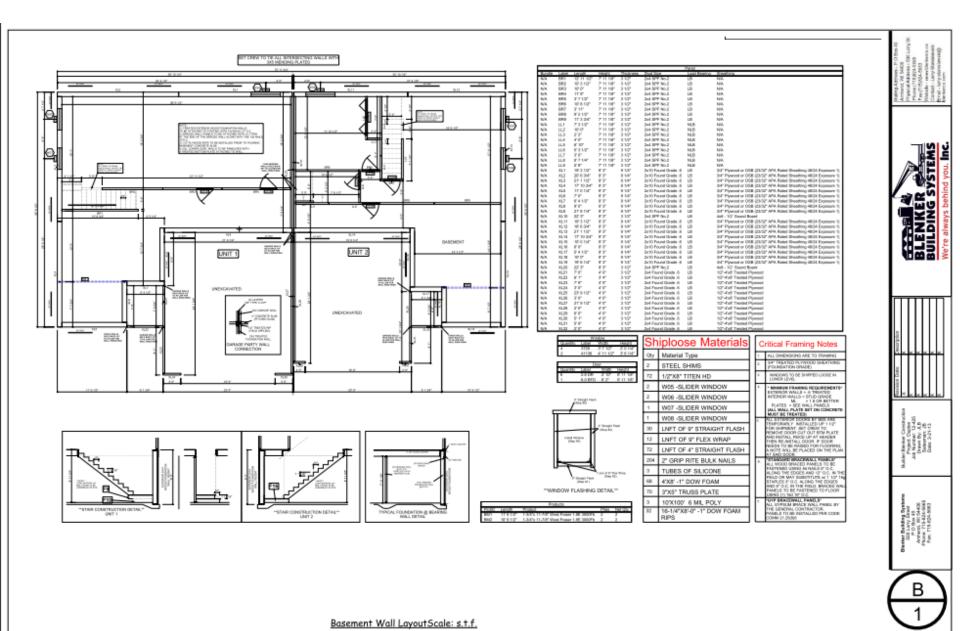
12' 2.250" 6' 8.750"

Product: PowerJoist PJI40 11 7/8" 24.0" O.C.

PASSES DESIGN CHECKS

Building Code: IBC/IRC

1.250" max. LL









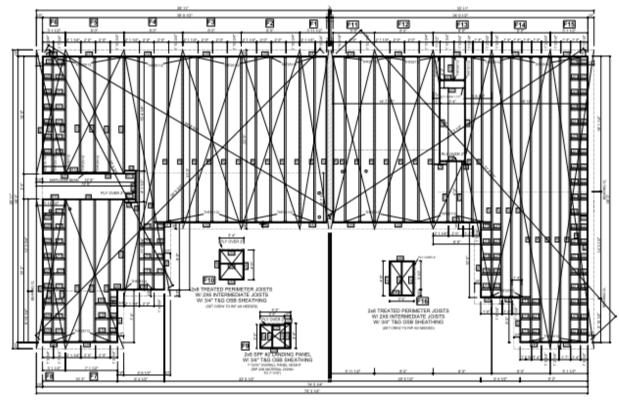
Shiploose Materials Oty Material Type 7 SUBFLOOR ADHESIVE

 11-7/8" I-JOISTPJI -40 SERIES FLOOR SYSTEM 24" O.C. UNLESS OTHERWISE NOTED

Critical Framing Notes

3/4" T&G OSB DECKING

3-1/2" SNAP LINES



		Products.		
PiotD R1	Length 37*11.15/16*	Product 1 1/6" x 11 7/6" APA Rim Board	Piles	Net On
11	21"11 738"	1 1/8" x 11 7/9" APA Birn Board	1	ż
R2	19° 0.7116"	1 1/6" x 11 7/6" APA Rim Board	i	î
R3	16" 7 7/16"	1 1/8" x 11 7/9" APA Birn Board	1	1
114	9° 10 T/16"	1 1/6" x 11 7/6" APA Rim Board	i	-
RS	8" 10 7/16"	1 1/8" x 11 7/9" APA Rim Board	1	1
RS.	8.0.	1 V6" x 11 7/6" APA Rim Board	1	1
R7	6" 10 3/8"	1 1/8" x 11 7/9" APA Rim Board	1	1
MB.	5'10 102"	1 1/6" x 11 7/8" APA Rim Board	1	1
R#	3"10 3H"	1 1/8" x 11 7/9" APA Rim Board	1	1
15	3'4"	1 1/6" x 11 7/6" APA Rim Board	1	1
R10	3.0.3/8.	1 1/6" x 11 7/9" APA Rim Board	1	1
13	1.0 10.	1 1/6" x 11 7/8" APA Rim Board	1	1
34	1.8.3/8.	1 1/8" x 11 7/8" APA Rim Board	1	2
R11	1.6 1/5.	1 1/6" x 11 7/8" APA Rim Board 1 1/8" x 11 7/8" APA Rim Board	1	2
15	1'1 1/2"		1	1
36 37	38.0,	2 1/2" x 11 7/9" Joint 2 1/2" x 11 7/9" Joint	1	*
18	31.0	2 1/2" x 11 7/8" Joint	1	ž
13	22"0"	2 1/2" x 11 7/8" Joint	,	20
J100	18" 11 3/8"	2 1/2" x 11 7/3" Joint	-	6
111	15'638"	2 1/2" x 11 7/8" Joint		ž
112	16"4 112"	2 1/2" x 11 7/9" Joint	i	ã.
153	11'11 38'	2 1/2" x 11 7/8" Joint		ī
J14	8'038"	2 1/2" x 11 7/9" Joint	1	ż
195	3'0 1/3"	2 1/2" x 11 7/8" Joint	1	ï
1100	1'9 1/2"	2 1/2" x 11 7/9" Joint	1	7
417	1'6 1(2"	2 1/2" x 11 7/8" Joint	1	15
J18	1'359"	2 1/2" x 11 7/8" Joint	1	
119	113 1/8"	2 1/2" x 11 7/8" Joint	1	3
150	1'2 1/8"	2 1/2" x 11 7/9" Joint	1	16
121	1.1.1(5.	2 1/2" x 11 7/8" Joint	1	27
122	11 1/0"	2 1/2" x 11 7/9" Joint	1	22
123	7158	2x10 DF No.2	1	1
124	4'2"	2x8 SPF No.2	1	1
125	314"	2x8 SPF No.2 2x6 SPF No.2	1	2
	2.11.	2x8 SPF No.2	1	ž
150	10"	2x8 SPF No.2	1	í
129	4'5"	2x6 SPF No.2	1	1
130	3'1"	2x6 SPF No.2		i
131	14"3 116"	1-10°s 11-7/8" West Fisser 1.8E 3000Fb	1	ż
R12	8"11 18"	1-1(2's 11-7/6' West France 1.8E 3000Fb	i	î
132	8.0.	1-10"s 11-7/6" West Fisser 1.8E 3000Fb	1	10
133	7"10 314"	1-1/2"s 11-7/6" West Faster 1.85 3000Pb	1	1
134	3" 1 7/16"	1-1/2"x 11-7/6" West Fisser 1.8E 3000Fb	1	1
135	517 15(16"	1-1/2"s 11-7/6" West Priser 1.85 3000Pb	1	2
136	2.6.	1-1/2"x 11-7/6" West Fisser 1.8E 3000Fb	1	1
131	5123/41	1-1/2"s 11-7/6" West Fraser 1.8E 3000Pb	1	1
138	5'11(2"	1-1/2's 11-7/8' West Fower 1.85 3000Fb	1	1
133	51 17161	1-1/2"x 11-7/6" West Fraser 1.8E 3000Fb	1	1
J40	411121	1-1/2's 11-7/8' West Fower 1.85 3000Fb	1	1
R13	4"1 1(2"	1-1/2"x 11-7/6" West Fraser 1.8E 3000Fb	1	1
J41 J42	3'1011/16'	1-10's 11-7/8' West Foxer 1/85 3800Fb 1-10's 11-7/8' West Foxer 1/85 3800Fb	1	2
J43	3'4"	1-1/2's 11-7/6' West Foxer 1.8E 3000Fb	1	1
345	3" 1 7/116"	1-10"s 11-7/6" West Foser 1.8E 3000Fb	1	ž
J45	1101016	1-1/2's 11-7/8' West France 1.8E 3000Fb		í
146	1'6"	1-10°s 11-7/8" West Faser 1.8E 3000Fb	i	i
347	4157	2 x 8 Green Treat A 5YPV2	i	ż
J48	4'0"	2 x 8 Green Troot A SYP#2	1	ž
149	3' 4"	2 x 8 Green Treat 4 SYPV2	1	2
150	3"1"	2 x 8 Green Treat A SYP#2	1	2
351	31.47	1-1(2" x 11 7/8 Stair Flat	1	1

Address - P.O Bos J.
rt, Vill Select
al Address - Sitt Lony
(27) Birth 61905
Spot-5903
- I want birthward on
- Lany Streethers





Project Copies Job Number: 13-425 Driven By: A.B. Salvamer: JB Date: 3-21-13

508 Larry Street P.D. Box 49 Antheust, IIII 54400 Phore: T15-424-5665 Per: T15-424-5983



THIRD FLOOR WALL LAYOUT

REVIEW PLANS COMPLETELY BEFORE INSTALLATION





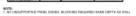


AL MANAGEMENT OF THE PROPERTY	·		
Exterior C	ommercial	Wrap D	etails SEAMS
FLDOR LEVEL	Y.O.Y	B.D.W	ROLL
Will Level.	+15 3/8"	+6'	100

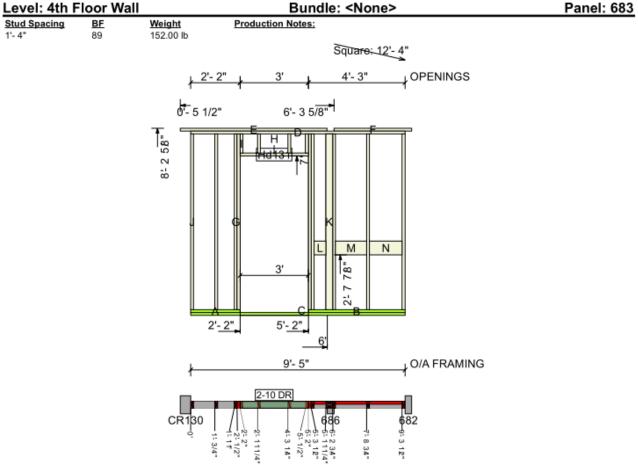
	-	_		1		
Quarters.	Lative	9500	Height			
v	15100	7.0	9.81%			
10	3-0 (SARW)	2.97	618 107			
40	5-10 OR.	0.00	8.18.10			
	3-10 DAIG	3.0	419 107			
r	3-100W	2.5	0.18 NO			
	304 DR	3110	48	_		
	311 DR	2119	40.00	_		ndn.
	213.00	5119	6.17	0.0	1851 Labor	9500
	SSED4	2110	TIF		2000	77
100	540 0000	2139	0.5 10		9099	10.10
-	3,008	3 2 12"	4.9192		9096	0.0
	367 DR	2.5	0.00	_		
16	4.000609	3.46	68 105			
	e-cmes	0.00	0.00			
	sex per, per	0.0	6.95			

100	Material Type
٠.	UNIT DATA SPRESBACKS BASISSE
	ROUGHT THEK STAFE
ž.	Secretar symposis temperati
1	CHIATE (FORT BALE)
2	PROSBETZ (PROF GAP SETS)
	STATE OLIGINOCHES STARRALL
H	A KEY SET THEORY RIP (KINSE)
	52 ROUS-OF CMSTH STREPPING

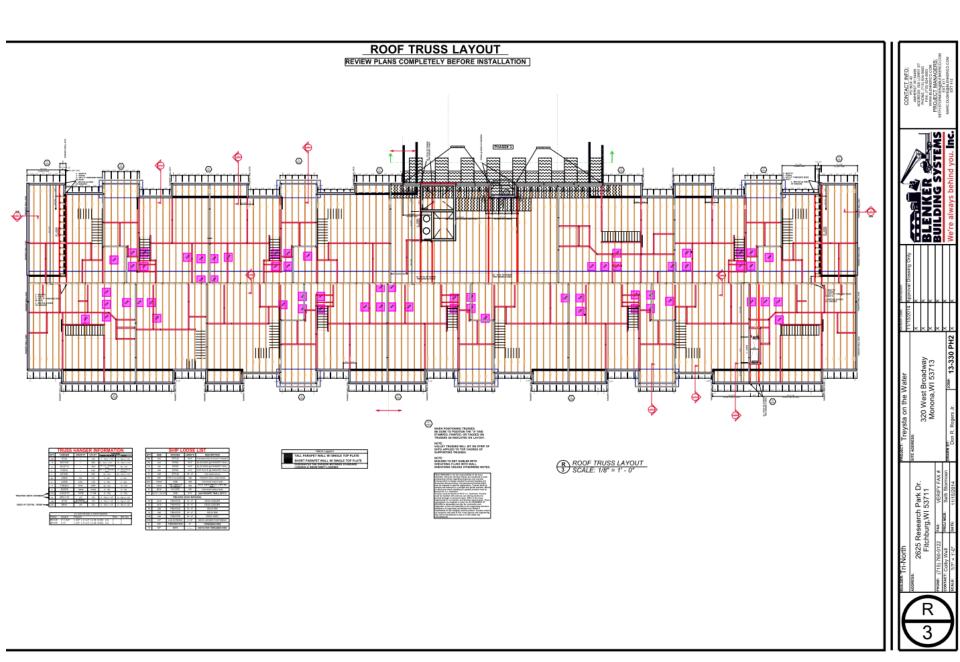
SHEARWALL SCHEDULE					
MARK	D-BATWING	2000 C	AMCHOR		
ROOF TO LOFT DEMORIG WALL			2000 GPI 8		
LOFT TO 4TH DEMSHIG WALL	sur ove	(0.0000 204 (0.00000 204 (0.0000 204 (0.00000 204 (0.0000 204 (0.0	1018 TOTALS STEACHEST		
4TH TO 3RD DEMSING WILL	NE CHE	(2,0000 200 (8 07 8 A	DOS 101 BIS METACHIBERE		
SRD TO JND DEMSING WALL	trial color.	G10012H 0	COS STEN		
2ND WALL ON PRECAST	58"-517	igner mission is	PHODA PHOMBOS		

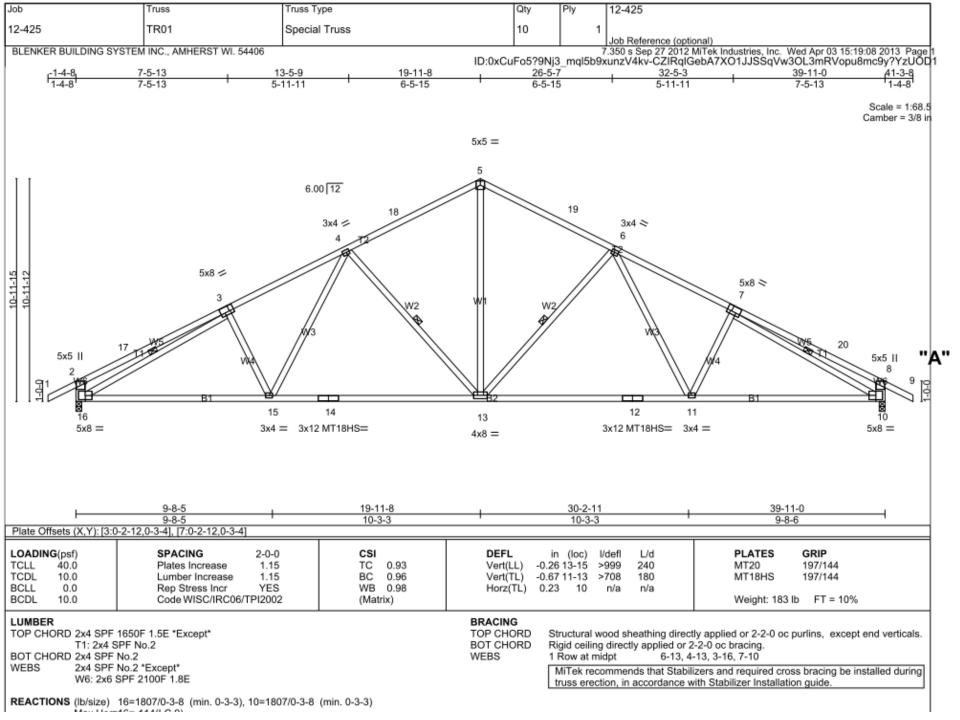






Cutting List									
Label	Member	Description	Qty	Length	Width	L Miter	R Miter	L Bevel	R Bevel
Α	Bottom Plate	2x4 SPF No.2	(1)	2'- 2"	0'				
В	Bottom Plate	2x4 SPF No.2	(1)	4'- 3"	0'				
С	VBP	2x4 SPF No.2	(1)	9'- 5"	0,				
D	Top Plate	2x4 SPF No.2	(1)	9'- 5"	0'				
E	VTP	2x4 SPF No.2	(1)	6'- 5 3/8"	0'				
F	VTP	2x4 SPF No.2	(1)	3'- 4 7/8"	0'				
G	King Stud	2x4 SPF Stud	(4)	7'- 8 5/8"	0'				
Н	Header	2x4 SPF No.2	(1)	3'	0'				
I	Header Cripple	2x4 SPF No.2	(4)	0'- 10 1/8"	0'				
J	Stud	2x4 SPF Stud	(5)	7'- 8 5/8"	0'				
K	Flat Stud	2x4 SPF Stud	(2)	7'- 8 5/8"	0'				
L	Block	2x8 SPF No.2	(1)	0'- 6 1/4"	0'				
M	Block	2x8 SPF No.2	(1)	1'- 4 1/2"	0'				
N	Block	2x8 SPF No.2	(1)	1'- 5 1/4"	0'				





LOADING(psf) SPACING 2-0-0	CSI	DEFL in (loc) I/defl L/d	PLATES GRIP
TCLL 40.0 Plates Increase 1.15	TC 0.93	Vert(LL) -0.26 13-15 >999 240	MT20 197/144
TCDL 10.0 Lumber Increase 1.15	BC 0.96	Vert(TL) -0.67 11-13 >708 180	MT18HS 197/144
BCLL 0.0 Rep Stress Incr YES	WB 0.98	Horz(TL) 0.23 10 n/a n/a	
BCDL 10.0 Code WISC/IRC06/TPI2002	(Matrix)		Weight: 183 lb FT = 10%

BRACING TOP CHORD

WEBS

BOT CHORD

Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals.

MiTek recommends that Stabilizers and required cross bracing be installed during

6-13, 4-13, 3-16, 7-10

truss erection, in accordance with Stabilizer Installation guide.

Rigid ceiling directly applied or 2-2-0 oc bracing.

1 Row at midpt

LUMBER

TOP CHORD 2x4 SPF 1650F 1.5E *Except*

T1: 2x4 SPF No.2

BOT CHORD 2x4 SPF No.2 WEBS 2x4 SPF No.2 *Except*

W6: 2x6 SPF 2100F 1.8E

REACTIONS (lb/size) 16=1807/0-3-8 (min. 0-3-3), 10=1807/0-3-8 (min. 0-3-3)

Max Horz16=-114(LC 9)

Max Uplift16=-127(LC 11), 10=-127(LC 12) Max Grav16=2528(LC 3), 10=2528(LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/72, 2-17=-950/124, 3-17=-771/160, 3-4=-3558/178, 4-18=-2632/175, 5-18=-2476/197, 5-19=-2476/197, 6-19=-2632/176, 6-7=-3558/178,

7-20=-771/159, 8-20=-950/124, 8-9=0/72, 2-16=-906/186, 8-10=-906/186

BOT CHORD 15-16=-120/3196, 14-15=-48/2832, 13-14=-48/2832, 12-13=0/2832, 11-12=0/2832, 10-11=-7/3196

WEBS 5-13=-44/1595, 6-13=-985/171, 6-11=-15/586, 7-11=-357/154, 4-13=-985/170, 4-15=-15/586, 3-15=-357/154, 3-16=-2938/0, 7-10=-2938/0

JOINT STRESS INDEX

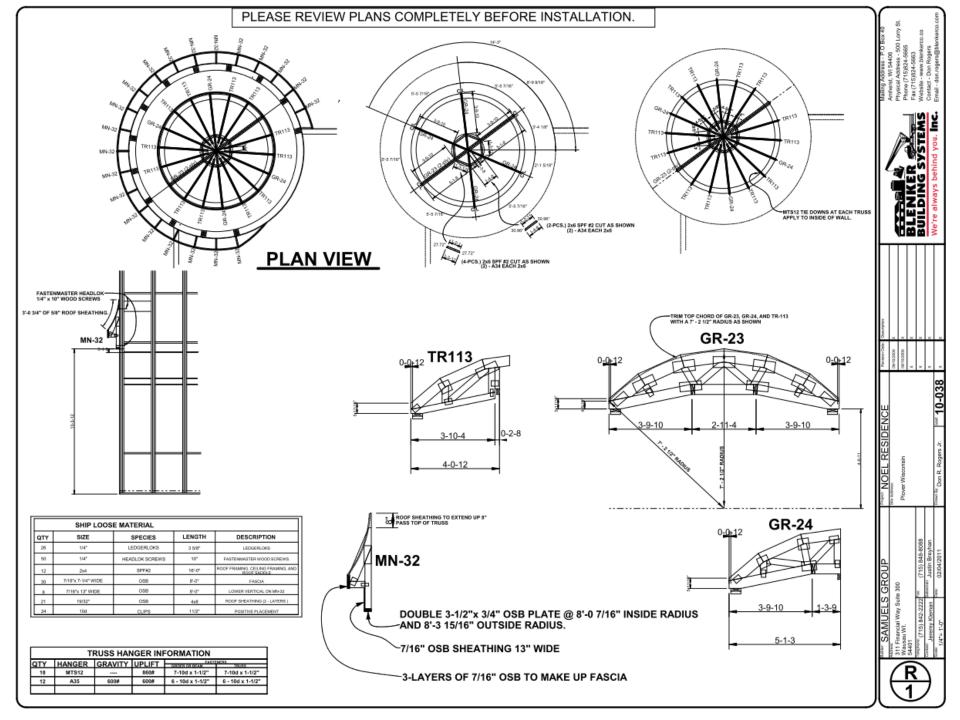
2 = 0.82, 3 = 0.90, 4 = 0.60, 5 = 0.74, 6 = 0.60, 7 = 0.90, 8 = 0.82, 10 = 0.84, 11 = 0.72, 12 = 0.61, 13 = 0.69, 14 = 0.61, 15 = 0.72 and 16 = 0.84

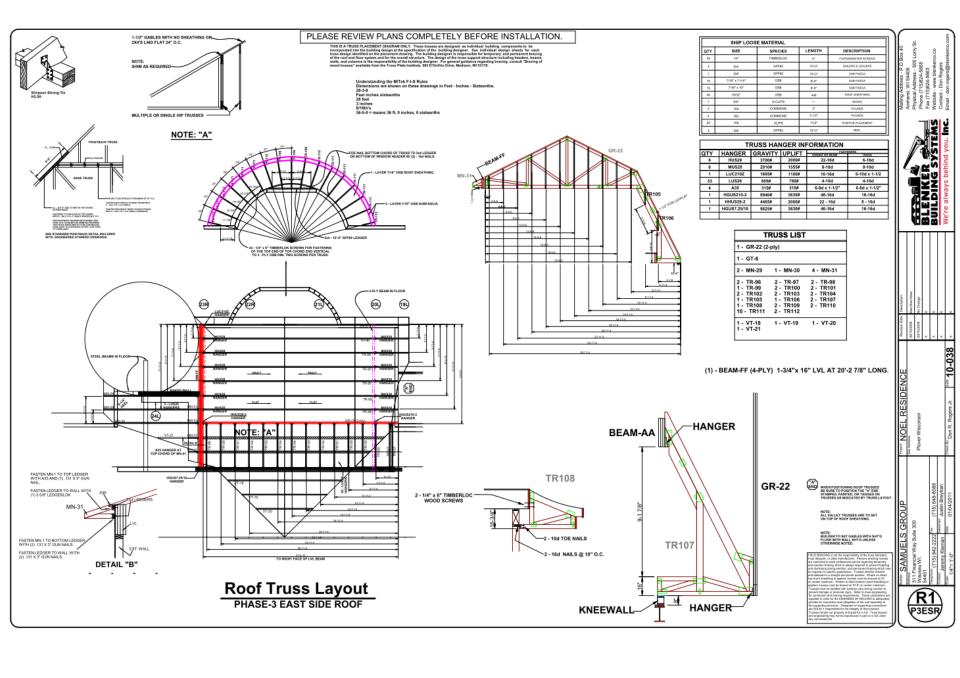
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NOTES

- Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-05; 90mph (3-second gust); TCDL=6.0psf; BCDL=6.0psf; h=20ft; Cat. II; Exp B; enclosed; MWFRS (low-rise) gable end zone and C-C Exterior(2) -1-4-8 to 2-7-8, Interior(1) 2-7-8 to 15-11-8, Exterior(2) 15-11-8 to 19-11-8, Interior(1) 23-11-8 to 37-3-8 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
- TCLL: ASCE 7-05; Pr=40.0 psf (roof live load: Lumber DOL=1.15 Plate DOL=1.15); Pg=40.0 psf (ground snow); Ps=30.8 psf (roof snow: Lumber DOL=1.15 Plate DOL=1.15); Category II; Exp B; Partially Exp.; Ct=1.1
- Roof design snow load has been reduced to account for slope.
- Unbalanced snow loads have been considered for this design.
- 6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 30.8 psf on overhangs non-concurrent with other live loads.
- 7) This truss has been designed for basic load combinations, which include cases with reductions for multiple concurrent live loads,
- 8) All plates are MT20 plates unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 10) Bearing at joint(s) 16, 10 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 127 lb uplift at joint 16 and 127 lb uplift at joint 10.
- "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.

LOAD CASE(S) Standard







Controlled Construction Precision saws & equipment

SEP 6 201





Controlled Construction Defined processes, systems, & controls





Delivery



Delivery





6:30 AM









10:30 AM

2nd Floor Wall Panels

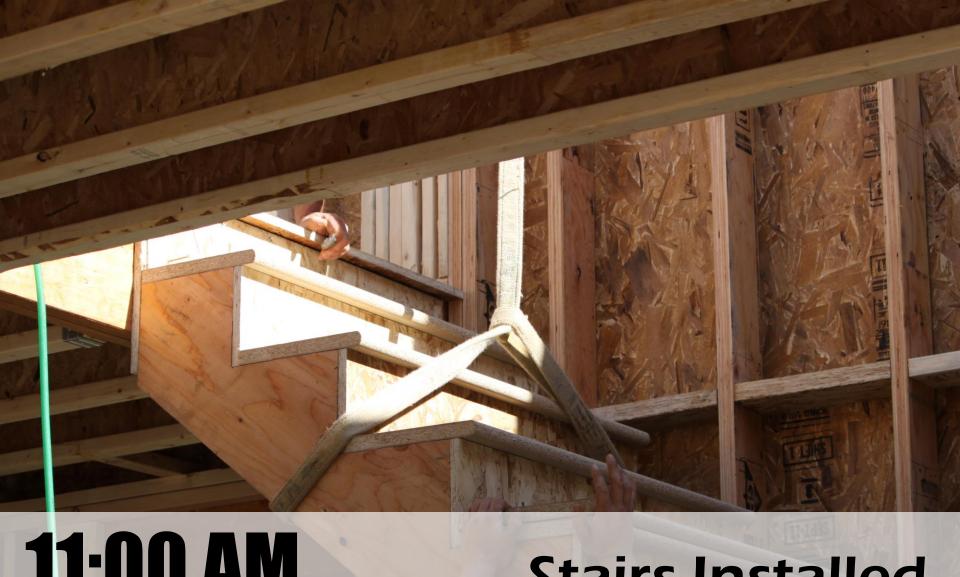












11:00 AM

Stairs Installed



TENKER SYSTEMS
INC.
715-824-5665

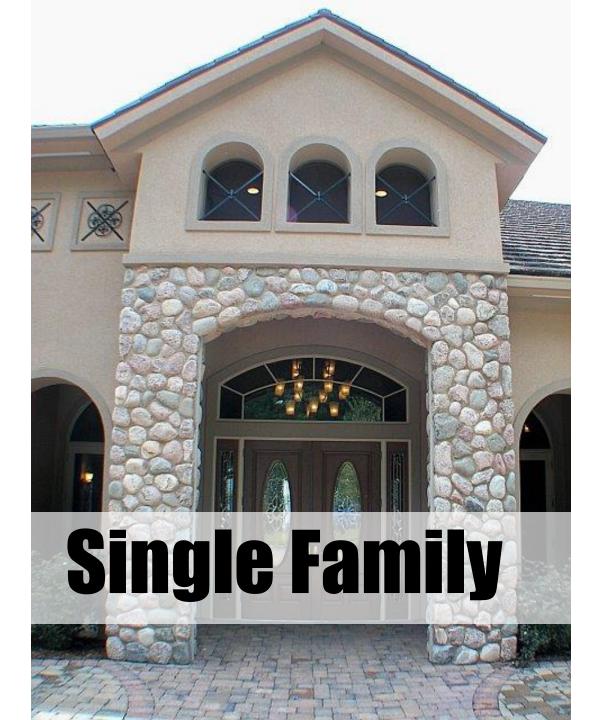
T15-824-5665



Exterior Finish Materials Unloaded











Single Family









Multifamily









Commercial



Commercial







The Building System Advantage

# units	66
# of buildings	2
Rent/unit	\$1,000
Lease @ open	50%
Project Manager costs/year	\$100,000
Landfill costs / unit	\$40
Total project cost	\$3,250,000
Interest Rate	4.25%
Weeks saved	5
Interest Saved	\$13,281
Additional Rental Income	\$41,250
Supervision Saved	\$9,615
Landfill costs saved	\$2,640
GC's Overhead Saved	\$13,542

Total Saved vs. "On-Site Built"

\$80,328 per building \$160,657 Total







Complexity-is not an issue





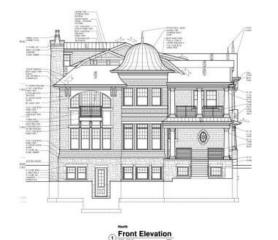


Complexity - Is NOT an issue



Complexity - Is NOT an issue





















Complexity - Is NOT an issue

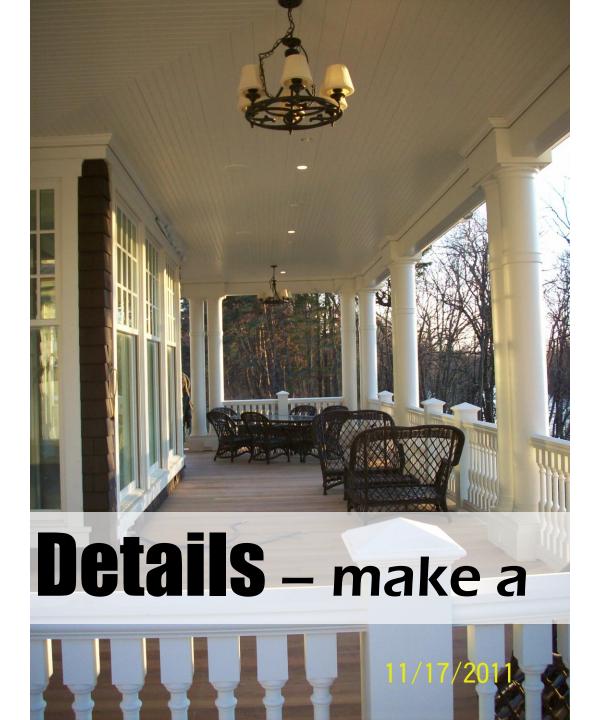




Details...



Details - make





Details – make a house





Details – make a house a HOME

Quality

Speed

Dependability

Accuracy

Jason Blenker

jason.blenker@blenkerco.com @jasonblenker Linkedin.com/in/JasonBlenker



Blenker Building Systems, Inc.

500 Lorry St. Amherst, WI 715-824-5665 www.blenkerco.com