APPLICANT BLAKE N. LU ADDRESS 3101 W OWNER JEFF & PAT B ADDRESS 664 N CONTRACTOR BLAKE LOCATION OF PROPERTY	US HWY 90, STE. 102	LA LA SCENIC LAKE E	PHONE AKE CITY PHONE AKE CITY PHONE PHONE	<u>386.758.3540</u>   386.754.5810	000029290           FL         32055           FL         32055
ADDRESS <u>3101</u> W OWNER JEFF & PAT E ADDRESS <u>664</u> NV CONTRACTOR <u>BLAKE</u> OCATION OF PROPERTY CYPE DEVELOPMENT HEATED FLOOR AREA	US HWY 90, STE. 102 BENSON W COUNTRY LAKE DRIVE LUNDE,II. LAKE JEFFERY TO S	LA SCENIC LAKE E	AKE CITY PHONE AKE CITY PHONE		
OWNER JEFF & PAT E ADDRESS <u>664</u> NV CONTRACTOR <u>BLAKE</u> OCATION OF PROPERTY CYPE DEVELOPMENT HEATED FLOOR AREA	BENSON W COUNTRY LAKE DRIVE LUNDE,II. LAKE JEFFERY TO S	LA SCENIC LAKE E	PHONE AKE CITY PHONE	386.754.5810	
ADDRESS <u>664</u> NV CONTRACTOR <u>BLAKE</u> LOCATION OF PROPERTY CYPE DEVELOPMENT HEATED FLOOR AREA	W COUNTRY LAKE DRIVE LUNDE,II. LAKE JEFFERY TO S	SCENIC LAKE D	AKE CITY PHONE	386.754.5810	<u>FL</u> <u>32055</u>
CONTRACTOR BLAKE LOCATION OF PROPERTY CYPE DEVELOPMENT HEATED FLOOR AREA	LUNDE,II.	SCENIC LAKE D	PHONE	386.754.5810	FL 32055
OCATION OF PROPERTY TYPE DEVELOPMENT HEATED FLOOR AREA	LAKE JEFFERY TO S			386.754.5810	
TYPE DEVELOPMENT			DRIVE TI TO COLD		
HEATED FLOOR AREA	PROPERTY IS 1/4 M			NTRY LAKE DR.	,TR
HEATED FLOOR AREA					
	SFD/UTILITY	ESTIMA	ATED COST OF CO	NSTRUCTION	177300.00
OUNDATION CONC	2797.00 T	TOTAL AREA _	3546.00	HEIGHT 29	.60 STORIES 1
	WALLS FRAM	ED ROOF	F PITCH 12'12	FLC	DOR CONC
AND USE & ZONING	RSF-2		MAX	. HEIGHT 35	5
Minimum Set Back Requirmen	ts: STREET-FRONT	25.00	REAR	15.00	SIDE
NO. EX.D.U. 0	FLOOD ZONE X	DEV	VELOPMENT PERM	MIT NO.	
ARCEL ID 22-38-16-0226	57-119 SI	UBDIVISION	COUNTRY LAKE	IN WOODBORO	UGH
OT 119 BLOCK	PHASE 1	UNIT	TOTA	LACRES 0.8	
			- tha	A X	
00001882	Lvert Waiver Contractor's	License Number	real	Applicant/Owner/O	Contractor
	-0165	BLK		Applicant/Owner/G	Y
		LU & Zoning ch	-	proved for Issuance	
	Colore - Station Wellshould Ballin				En Landowski koloni stranowski nazlačanovani Landowski stranovani
COMMENTS: MFE @ 139.5	0 PER PLAT. ELEVATION	CONFIRMATIO	N LETTER @ SLAP	5.	
IOC ON FILE.				Check # or Ca	ush 8170
				Check # or Ca	Sn <u>8170</u>
	FOR BUILDING	& ZONING [	DEPARTMENT	ONLY	(footer/Slab)
Cemporary Power	Founda			Monolithic	
d	ate/app. by	da	te/app. by		date/app. by
Under slab rough-in plumbing		Slab		Sheathing/N	vailing
	date/app. by		date/app. by		date/app.
Framing date/app. by	Insulation	date/anr	a by		
date/app. 0		uate/app		landston landston land	
Rough-in plumbing above slab	and below wood floor	to an a second	0.9707.0	lectrical rough-in	date/app. by
leat & Air Duct	Davi		pp. by	Pool	
	app. by		date/app. by		date/app. by
ermanent power	C.O. Fir				
ump pole	pp. by Utility Pole	date/a M/H tie downs	app. by s. blocking, electricit	v and plumbing	date/app. by
date/app. by	date/app. by	with the downs	, orotanig, electricit		date/app. by
econnection		RVd	ate/app. by	Re-roof	date/app. by
	app. by				
			17 70	SURCHARGE	FEE \$ 17.73
	CERTIFIC	CATION FEE \$	17.73	SORCHAROL	
date/					E FEE \$
date/	ZONING CERT. FEI	E\$ _50.00	FIRE FEE \$ 0.0	00 WASTE	E FEE \$
date/ UILDING PERMIT FEE \$ 4ISC. FEES \$ 0.00	ZONING CERT. FEI	E \$ _50.00 FEE \$	FIRE FEE \$0.0	00 WASTE	
date/ UILDING PERMIT FEE \$ /ISC. FEES \$ 0.00 LOOD DEVELOPMENT FEE NSPECTORS OFFICE	ZONING CERT. FEI	E \$ <u>50.00</u> FEE \$ ERMIT, THERE MA	FIRE FEE \$ CULVERT FEE \$ CLERKS OFFICE	0 WASTE	AL FEE 1000.4

#### IMPROVEMENTS TO YOUR PROPERTY. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR AN ATTORNEY BEFORE RECORDING YOUR NOTICE OF COMMENCEMENT."

EVERY PERMIT ISSUED SHALL BECOME INVALID UNLESS THE WORK AUTHORIZED BY SUCH PERMIT IS COMMENCED WITHIN 180 DAYS AFTER ITS ISSUANCE, OR IF THE WORK AUTHORIZED BY SUCH PERMIT IS SUSPENDED OR ABANDONED FOR A PERIOD OF 180 DAYS AFTER THE TIME THE WORK IS COMMENCED. A VALID PERMIT RECIEVES AN APPROVED INSPECTION EVERY 180 DAYS. WORK SHALL BE CONSIDERED NOT SUSPENDED, ABANDONED OR INVALID WHEN THE PERMIT HAS RECIEVED AN APPROVED INSPECTION WITHIN 180 DAYS OT THE PREVIOUS INSPECTION.

The Issuance of this Permit Does Not Waive Compliance by Permittee with Deed Restrictions.

# **Julius Lee**

RE: 366563 - BLAKE CONST. - BENSON RES.

### Site Information:

#### Project Customer: BLAKE CONST. Project Name: 366563 Model: BENSON RES. Lot/Block: 19 Subdivision: COUNTRY LAKES Address: 664 NW COUNTRY LAKE DR City: COLUMBIA CTY State: FL

Name Address and License # of Structural Engineer of Record, If there is one, for the building. Name: BLAKE N. LUNDE II License #: RR0067618 Address: 2250 SW JAGUAR DR

City: LAKE CITY,

State: FL

## General Truss Engineering Criteria & Design Loads (Individual Truss Design Drawings Show Special Loading Conditions):

Design Code: FBC2007/TPI2002 Wind Code: ASCE 7-05 Wind Speed: 110 mph Roof Load: 32.0 psf

Design Program: MiTek 20/20 7.1 Floor Load: N/A psf

# 29290

1109 Coastal Bay Blvd. Boynton Beach, FL 33435

This package includes 1 individual, dated Truss Design Drawings and 0 Additional Drawings. With my seal affixed to this sheet, I hereby certify that I am the Truss Design Engineer and this index sheet conforms to 61G15-31.003, section 5 of the Florida Board of Professional Engineers Rules. This document processed per section 16G15-23.003 of the Florida Board of Professionals Rules

1 of 1

#### In the event of changes from Builder or E.O.R. additional coversheets and drawings may accompany this coversheet. The latest approval dates supersede and replace the previous drawings. 1.8

NO.	Seal#	Truss Name	Date
1	14785270	T19	6/16/011

The truss drawing(s) referenced above have been prepared by MiTek Industries, Inc. under my direct supervision based on the parameters provided by Builders FirstSource (Lake City).

Truss Design Engineer's Name: Julius Lee

My license renewal date for the state of Florida is February 28, 2013.

NOTE: The seal on these drawings indicate acceptance of professional engineering responsibility solely for the truss components shown. The suitability and use of this component for any particular building is the responsibility of the building designer, per ANSI/TPI-1 Chapter 2.



Julius Lee



1109 Coastal Bay Blvd. Boynton, FL 33435

Job	Truss	Truss Type	Qty	Ply	BLAKE CONST BENSON RES.	
366563	T19	SPECIAL	6		1	14785270
Builders FistSource, Lak	e City, FL 32055				Job Reference (optional) 7.140 s Oct 1 2009 MiTek Industries, Inc. Thu Jun 16 08:29:22 2011 Pa	200.2

12) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.

Truss Design Engineer: Julius Lee, PE: Florida P.E. License No. 34869: Address: 1109 Coastal Bay Blvd. Boynton Beach, FL 33435
 Use Simpson HTU26 to attach Truss to Carrying member

LOAD CASE(S) Standard



Celius hee

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 BEFORE USE. Design valid for use only with Milek connectors. This design is based only upon parameters shown, and is for an individual building component, Applicability of design parameters and proper incorporation of component is responsibility of building designer - not truss designer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to insure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI1 Quality Criteria, DSB-89 and BCS11 Building Component Safety Information available from Truss Plate Institute, 583 D'Onotrio Drive, Madison, WI 53719.

Julius Lee 1109 Coastal Bay Blvd. Boynton, FL 33435



## Land Surveyors and Mappers

 $\mathbf{TES}$ 

BRITT SURVEYING & ASSOCIAT 830 West Duval Street • Lake City, FL 32055 Phone (386) 752-7163 • Fax (386) 752-5573

# 29290

08/29/11

RE: Lot 19 in Country Lake in Woodborough Phase 1

Blake Construction

To Whom It May Concern:

We have been asked to provide an elevation of the finished floor elevation of the residence under construction at this time. The elevation of the finished floor is found to be 140.93 feet NGVD 29 datum. The elevation was based on the plat of record and per the building permit showing an elevation of 139.50 feet. The lowest adjacent grade is 138.64 feet and the highest adjacent grade is 139.01 feet. The centerline of NW Country Lake Drive is 141.1 feet. All elevations shown hereon are NGVD 29 datum.

Sincerely ANE

L. Scott Britt PLS 5757



.

FORM 1100A-08

# FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Community Affairs Residential Performance Method A

Project Name:Benson ResidenceStreet:664 NW Country Lake ICity, State, Zip:Lake City , FL , 32055-Owner:BensonDesign Location:FL, Gainesville	Dr	Builder Name: Blake Construction Permit Office: Columbia County Permit Number: 29290 Jurisdiction: 221000	
a. Slab-On-Grade Edge Insulation R b. N/A R	New (From Plans) Single-family 1 3 No 2797 Area 288.11 ft <sup>2</sup> 23.33 ft <sup>2</sup> ft <sup></sup>	<ol> <li>9. Wall Types         <ul> <li>a. Frame - Wood, Exterior</li> <li>b. Frame - Wood, Adjacent</li> <li>c. N/A</li> <li>d. N/A</li> </ul> </li> <li>10. Ceiling Types         <ul> <li>a. Under Attic (Vented)</li> <li>b. N/A</li> <li>c. N/A</li> </ul> </li> <li>11. Ducts         <ul> <li>a. Sup: Attic Ret: Attic AH: Attic St</li> <li>12. Cooling systems (combined)</li> <li>a. Central Unit</li> </ul> </li> <li>13. Heating systems (combined)         <ul> <li>a. Electric Heat Pump</li> </ul> </li> <li>14. Hot water systems         <ul> <li>a. Propane</li> <li>b. Conservation features None</li> <li>15. Credits</li> </ul> </li> </ol>	Insulation Area R=13.0 1678.30 ft <sup>2</sup> R=13.0 204.00 ft <sup>2</sup> R= ft <sup>2</sup> R= ft <sup>2</sup> Insulation Area R=30.0 2608.00 ft <sup>2</sup> R= ft <sup>2</sup> R= ft <sup>2</sup> up. R= 6, 546 ft <sup>2</sup> Cap: 70 kBtu/hr SEER: 14 Cap: 70 kBtu/hr HSPF: 7.7 Cap: 1 gallons EF: 0.82
Glass/Floor Area: 0.111	Total As-Built Modified Total Baseline	d Loads: 36.23 e Loads: 53.42	PASS
I hereby certify that the plans and specific this calculation are in compliance with the Code. PREPARED BY: DATE: I hereby certify that this building, as design with the Florida Energy Code. OWNER/AGENT: DATE:	e Florida Energy	Review of the plans and specifications covered by this calculation indicates compliance with the Florida Energy Code. Before construction is completed this building will be inspected for compliance with Section 553.908 Florida Statutes.	COD WE TRUST
	UNIT COLIN	Received FILE COPY	

EnergyGauge® USA - FlaRes2008

					PF	ROJECT							
Owne # of U Builde Permi Jurisd Family	Inits: er Name: it Office: liction: y Type: Existing:	Benson Res FLAsBuilt Benson 1 Blake Cons Columbia C 221000 Single-fami New (From	truction county ly	E C T V F C	Bedrooms: Bathrooms: Conditioned Are Total Stories: Vorst Case: Rotate Angle: Cross Ventilatio Vhole House F	2 No 0 on:	7		Adress Lot # SubDiv PlatBoo Street: County City, St	ision: ok:			ry Lake
					CI	LIMATE							
$\checkmark$	Des	ign Location	т	MY Site	IECC Zone	Design 97.5 %	Temp 2.5 %		ign Temp Summer	Heatin Degree I	CT.	esign I bisture	Daily Tem Range
	FL,	Gainesville	FL_GAIN	ESVILLE_RE	GI 2	32	92	75	70	1305.	5	51	Medium
					FI	LOORS							
$\checkmark$	#	Floor Type			meter	R-Valu	le	Area			Tile	Wood	Carpet
	1	Slab-On-Grad	le Edge Insulat	tio 21	8 ft	0		2186 ft <sup>2</sup>			0.3	0.5	0.2
					1	ROOF							
$\checkmark$	#	Туре	Mat	terials	Roof Area	Gable Area	Roof Color	Solar Absor.	Testec	Deck Insul.	Pitch		
	1	Hip	Composit	ion shingles	2734 ft²	0 ft²	Medium	0.96	No	10	36.9 de	g	
						ATTIC							
$\checkmark$	#	Туре		Ventilation	Ver	nt Ratio (1 i	n)	Area	RBS	IRCC			
	1	Full attic		Vented		300	:	2186 ft²	N	N			
					С	EILING							
$\checkmark$	#	Ceiling Type	9		R-Val	lue	A	rea	Frami	ng Frac	Т	russ Ty	pe
	1	Under Attic			30		2186			.11		Wood	
	2	Under Attic	(Vented)		30		422	ft²	0	.11		Wood	
					V	VALLS							
$\checkmark$	#	Ornt	Adjacent To	Wall Type			Cav R-Va	vity alue Are	ea R-	eathing Value	Framing Fraction		Solar Absor.
	1	SW	Exterior	Frame - Wo	bod		1:	3 324	ft²	0.7	0.23		0.75
	2	NW	Exterior	Frame - Wo	bod		1:	3 324	ft²	0.7	0.23		0.75
	3	NW	Exterior	Frame - Wo	bod		1:	3 516	ft²	0.7	0.23		0.75
	4	NE	Exterior	Frame - Wo	bod		1:	3 405	ft²	0.7	0.23		0.75
	5	SE,	Exterior	Frame - Wo	bod		1:			0.7	0.23		0.75
	6	SE	Garage	Frame - Wo	bod		1:	3 204	ft²	0.7	0.23		0.01

						D	OORS						
$\checkmark$	#		Ornt	Door Type				Storn	ns	U	Value	Area	
	1		SW	Insulated				Woo	d	0	0.46	20 ft <sup>2</sup>	
	2		SE	Insulated				Meta	al		0.46	20 ft²	
		Win	idow orier	ntation below is as	entered. Ac		NDOWS		ate angle s	shown in '	'Project" sectio	n above	
$\checkmark$	#	Ornt	Frame	Panes	NFRC		SHGC			Ove	rhang		<b>C</b> i
v	1	SW	Vinyl	Low-E Double	CC	U-Factor		Storms	Area		Separation	Int Shade	Screening
		SW	23.220 <sup>20</sup> .22	5 6522 05	Yes	0.55	0.6	N	23.33 ft <sup>2</sup>	1 ft 4 in	0 ft 4 in	HERS 2006	None
	2 3	17917951) 101107075	Vinyl	Low-E Double	Yes	0.55	0.7	N	34 ft <sup>2</sup>	1 ft 4 in	0 ft 4 in	HERS 2006	None
	4	NW NW	Vinyl	Low-E Double	Yes	0.55	0.7	N	17.11 ft <sup>2</sup>	1 ft 4 in	0 ft 4 in	HERS 2006	None
			Vinyl	1.0024-0	Yes	0.55	0.7	N	4.44 ft <sup>2</sup>	1 ft 4 in	0 ft 4 in	HERS 2006	None
	5	NW	Vinyl	Low-E Double	Yes	0.55	0.7	N	64.22 ft <sup>2</sup>	1 ft 4 in	0 ft 4 in	HERS 2006	None
	6	NW	Vinyl	Low-E Double	Yes	0.55	0.7	N		1 ft 4 in	0 ft 4 in	HERS 2006	None
	7	NW	Wood	Low-E Double	Yes	0.55	0.7	N	21.33 ft <sup>2</sup>	1 ft 4 in	0 ft 4 in	HERS 2006	None
	8	NW	Wood	Low-E Double	Yes	0.55	0.7	N	8.89 ft <sup>2</sup>	1 ft 4 in	0 ft 4 in	HERS 2006	None
	9	NE	Vinyl	Low-E Double	Yes	0.55	0.7	N	37.33 ft <sup>2</sup>	1 ft 4 in	0 ft 4 in	HERS 2006	None
	10	NE	Vinyl	Low-E Double	Yes	0.55	0.7	N	3.89 ft <sup>2</sup>	1 ft 4 in	0 ft 4 in	HERS 2006	Nóne
	11	NE	Vinyl	Low-E Double	Yes	0.55	0.7	N	2.22 ft <sup>2</sup>	1 ft 4 in	0 ft 4 in	HERS 2006	None
	12 13	NE SE	Vinyl Vinyl	Low-E Double	Yes	0.55	0.7	N	24.89 ft <sup>2</sup>	1 ft 4 in	0 ft 4 in	HERS 2006	None
	15	JL.	Villy	LOW-L DOUDIE	Yes	0.55	0.7	N	20 ft <sup>2</sup>	1 ft 0 in	0 ft 4 in	HERS 2006	None
_					11	NFILTRATI	ON & V	ENTING		_			1000
$\checkmark$	Meth	od		SLA	CFM 50	ACH 50	ELA	EqLA			d Ventilation Exhaust CFM		Fan Watts
	Defa	ult		0.00036	2641	6.30	145.0	272.7	0	cfm	0 cfm	0	0
	.1					GA	RAGE						
	#		Floor Are	ea Ce	iling Area	Exposed	Wall Per	imeter	Avg. Wa	all Height	Exposed	Wall Insulation	
	1		521.41 f	t²	207 ft <sup>2</sup>		68.67 ft		9	ft		13	
						COOLIN	IG SYS	TEM					
$\checkmark$	#	Sys	tem Type		Subtype			Efficiency	C	apacity	Air Flow	SHR	Ductless
	1	Cen	tral Unit		Split Syster	n		SEER: 14	35	kBtu/hr	1050 cfn	n 0.75	False
	2	Cen	tral Unit		Split Syster	n		SEER: 14	35	kBtu/hr	1050 cfn	n 0.75	False
						HEATIN	IG SYS	TEM					•
$\checkmark$	#	Sys	tem Type		Subtype			Efficiency	С	apacity	Ductless		
	1	Elec	ctric Heat	Pump	None			HSPF: 7.7	35	kBtu/hr	False		
	2	Elec	tric Heat	Pump	None			HSPF: 7.7	35	kBtu/hr	False		

					HOT W	ATER S	STEM						
$\checkmark$	#	System Type			EF	С	ар	Use	SetPnt		Co	nservatior	1
	1	Propane			0.82	1 ç	gal	60 gal	120 deg			None	
				S	OLAR HO	T WATE	RSYST	EM					
$\checkmark$	FSEC Cert #	Company N	ama		Sustam	Model #	0	ollector Mode	2000 C	ollecto Area	or Stor Volu	-	FEF
	None	None	lame		System	woder #			#	ft²	VOIU	ime	FEF
	None	None								n			
			-			DUCTS							
$\checkmark$	#	Sup Location R	ply -Value Area	Locati	Return on Area	Leaka	де Туре	Air Handler	CFM	25	Percent Leakage	QN	RLF
	1	Attic	6 546 ft <sup>2</sup>	Attic	139.85	Default	Leakage	Attic					
					TEM	PERATU	RES						21
Program	hable The	rmostat: Y			Ceiling Fans	s:							
Cooling Heating Venting	[X] Jai [X] Jai [X] Jai	n [X] Feb n [X] Feb n [X] Feb	[X] Mar [X] Mar [X] Mar	X Apr X Apr X Apr	[X] May [X] May [X] May	X Jun X Jun X Jun	X Jul X Jul X Jul	X Aug X Aug X Aug	X Ser X Ser X Ser	0	X Oct X Oct X Oct	X Nov X Nov X Nov	X Dec X Dec X Dec
Thermosta Schedule		le: HERS 200	06 Reference 1	2 3	3 4	5	6	ours 7	8	9	10	11	12
Cooling (V	VD)	AM PM	78 80	78 7 80 7	8 78 8 78	78 78	78 78	78 78	78 78	80 78	80 78	80 78	80 78
Cooling (V	VEH)	AM PM	78 78	78 7 78 7	8 78 8 78	78 78	78 78	78 78	78 78	78 78	78 78	78 78	78 78
leating (V	VD)	AM PM	66 68	66 6 68 6	6 66 8 68	66 68	68 68	68 68	68 68	68 68	68 68	68 66	68 66
Heating (V	VEH)	AM PM	66 68	66 6 68 6	6 66 8 68	66 68	68 68	68 68	68 68	68 68	68 68	68 66	68 66

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Page 4 of 5

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## FORM 1100A-08

# **Code Compliance Cheklist**

Residential Whole Building Performance Method A - Details

ADDRESS: 664 NW Country Lake Dr Lake City, FL, 32055PERMIT #:

## INFILTRATION REDUCTION COMPLIANCE CHECKLIST

COMPONENTS	SECTION	REQUIREMENTS FOR EACH PRACTICE	CHECK
Exterior Windows & Doors	N1106.AB.1.1	Maximum: .3 cfm/sq.ft. window area; .5 cfm/sq.ft. door area.	V
Exterior & Adjacent Walls	N1106.AB.1.2.1	Caulk, gasket, weatherstrip or seal between: windows/doors & frames, surrounding wall; foundation & wall sole or sill plate; joints between exterior wall panels at corners; utility penetrations; between wall panels & top/bottom plates; between walls and floor. EXCEPTION: Frame walls where a continuous infiltration barrier is installed that extends from, and is sealed to, the foundation to the top plate.	V
Floors	N1106.AB.1.2.2	Penetrations/openings > 1/8" sealed unless backed by truss or joint members. EXCEPTION: Frame floors where a continuous infiltration barrier is installed that is sealed to the perimeter, penetrations and seams.	~
Ceilings	N1106.AB.1.2.3	Between walls & ceilings; penetrations of ceiling plane to top floor; around shafts, chases, soffits, chimneys, cabinets sealed to continuous air barrier; gaps in gyp board & top plate; attic access. EXCEPTION: Frame ceilings where a continuous infiltration barrier is installed that is sealed at the perimeter, at penetrations and seams.	~
Recessed Lighting Fixtures	N1106.AB.1.2.4	Type IC rated with no penetrations, sealed; or Type IC or non-IC rated, installed inside a sealed box with 1/2" clearance & 3" from insulation; or Type IC with < 2.0 cfm from conditioned space, tested.	~
Multi-story Houses	N1106.AB.1.2.5	Air barrier on perimeter of floor cavity between floors.	1
Additional Infiltration reqts	N1106.AB.1.3	Exhaust fans vented to outdoors, dampers; combustion space heaters comply with NFPA, have combustion air.	L.

## OTHER PRESCRIPTIVE MEASURES (must be met or exceeded by all residences.)

COMPONENTS	SECTION	REQUIREMENTS	CHECK
Water Heaters	N1112.AB.3	Comply with efficiency requirements in Table N112.ABC.3. Switch or clearly marked circuit breaker (electric) or cutoff (gas) must be provided. External or built-in heat trap required.	V
Swimming Pools & Spas	N1112.AB.2.3	Spas & heated pools must have covers (except solar heated). Non-commercial pools must have a pump timer. Gas spa & pool heaters must have a minimum thermal efficiency of 78%. Heat pump pool heaters shall have a minimum COP of 4.0.	NA
Shower heads	N1112.AB.2.4	Water flow must be restricted to no more than 2.5 gallons per minute at 80 PSIG.	V
Air Distribution Systems	N1110.AB	All ducts, fittings, mechanical equipment and plenum chambers shall be mechanically attached, sealed, insulated and installed in accordance with the criteria of Section N1110.AB. Ducts in unconditioned attics: R-6 min. insulation.	V
HVAC Controls	N1107.AB.2	Separate readily accessible manual or automatic thermostat for each system.	V
Insulation	N1104.AB.1 N1102.B.1.1	Ceilings-Min. R-19. Common walls-frame R-11 or CBS R-3 both sides. Common ceiling & floors R-11.	~

24 2011	5:00PM	BLAKE#CONSTRUCTION +CO	Feb. 05 2003 1	2:03AM P1
• • ••		SUBCONTANCTOR VERIFICATION FO	NA 1 A 12	758-3540 (20) 754-5810
APPIJCATION PUR	40CA 1103-	HIS FORM MUST DE SUBMITTED PRIOR TO THE ISSU		N(341) 754-5810
in Columbia Co		t will cover all tracles doing work at the peri		rhat we have

In Columbia County one permit with cover an credit provide specific work under the permit, Per Florida Statute 440 and records of the subcontractors who actually did the trade specific work under the permit, Per Florida Statute 440 and Ordinance 89-6, a contractor shall require all subcontractors to provide evidence of workers' compensation or exemption, general flability insurance and a valid Certificate of Competinicy license in Columbia County.

Any changes, the permitted contractor is responsible for the corrected form being submitted to this office prior to the stort of that subcontractor beginning any work. Violations will result in stop work ordine-and/or fines.

					·····			The state of the s
FLECTRICAL	Print Nois	e Mott Bur	15 Elec	The	Signature			
309	License II:	ER 130130	04		0	Phang II: 7-	86-36	S-JORK
MECHANICAL	Print Nam	RADO350	B002	ER	Signaturo	Filiona: II:	154-67	yoon
PLUMBINUG	Print Nor	KF 1/067	Aunbid	·F	SIENALUKE		8-36-6	DON BIT
RODFING	Prim Nam	CCC 13254	n. Roof	ing. SanaJohnse	Signature	Phone #: 35	2-472-0	6007
SHEET METAL	Print Nan License II:				Signaturo	Pliane II:		
FIRE SYSTEM/	Prink Man Weenself:		12		Signature_	Plione H:	alaanna	
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F. S. 440.103 Building permits: Identification of minimum premium policy...Every amplayer shall, as a condition to applying for and receiving a building permit, show proof and certify to the permit issuer that it has secured compensation for its employees under this chapter as provided in ss. 440.10 and 440.38, and shall be presented each time the amployee opplies for a building permit.

# **Columbia County Building Department Culvert Permit**

Culvert Permit No. 000001882

DATE 04	4/05/2011	PARCEL ID #	22-3S-16-02267-119		
APPLICANT	BLAKE N. LUNI	DE,II.	PHONE	386.758.3540	
ADDRESS	3101 W US HW	Y 90, STE 102	LAKE CITY	FL	32055
OWNER J	JEFF & PAT BENSO	N	PHONE		-
ADDRESS _	664 NW COUNT	RY LAKE DRIVE	LAKE CITY	FL	32055
CONTRACT	OR BLAKE LUNE	)Е,II.	PHONE	386.754.5810	
LOCATION	OF PROPERTY	LAKE JEFFERY TO SCENI	C LAKE TL.TO COUNTRY	LAKE DRIVE, TR	AND THE
PROPERTY IS (	ON THE R.			1	
SUBDIVISIO	N/LOT/BLOCK	HASERUNIT COUNTRY	Y LK IN W.B	119	1
SIGNATURE		K			15
		ION REQUIREMENT		) feet lesuing 04	fact of
x	driving surface	Il be 18 inches in diamete Both ends will be mitere d concrete slab.	ed 4 foot with a 4 : 1 slop	e and poured wit	h a 4 inch
90 1.1	a) a majority b) the drivey Turnouts s concrete o	ON NOTE: Turnouts will be of the current and existin vay to be served will be pa hall be concrete or paved r paved driveway, whiche d existing paved or concre	g driveway turnouts are aved or formed with cond a minimum of 12 feet v ver is greater. The width	crete. vide or the width	of the the
	Culvert instal	ation shall conform to the	e approved site plan star	dards.	
	Department of	Transportation Permit ir	stallation approved star	idards.	
	Other				
				-	

# ALL PROPER SAFETY REQUIREMENTS SHOULD BE FOLLOWED DURING THE INSTALATION OF THE CULVERT.

135 NE Hernando Ave., Suite B-21 Lake City, FL 32055 Phone: 386-758-1008 Fax: 386-758-2160

Amount Paid 25.00





1

## **ICC-ES Evaluation Report**

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## ESR-3210

www.icc-es.org | (800) 423-6587 | (562) 699-0543

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION Section: 07 21 00—Thermal Insulation

### **REPORT HOLDER:**

DEMILEC (USA) LLC 2925 GALLERIA DRIVE ARLINGTON, TEXAS 76011 (817) 640-4900 <u>www.demilecusa.com</u> <u>info@demilecusa.com</u>

## EVALUATION SUBJECT:

HEATLOK SOY<sup>®</sup> 200 SPRAY-APPLIED POLYURETHANE FOAM INSULATION

## **1.0 EVALUATION SCOPE**

Compliance with the following codes:

- 2009 International Building Code<sup>®</sup> (IBC)
- 2009 International Residential Code<sup>®</sup> (IRC)
- 2009 International Energy Conservation Code<sup>®</sup> (IECC)
- Other Codes (see Section 8.0)

### **Properties evaluated:**

- Surface-burning characteristics
- Physical properties
- Thermal resistance
- Attic and crawl space installation
- Air permeability
- Water vapor transmission
- Water-resistive barrier
- Fire-resistance-rated construction
- Exterior walls in Types I through IV construction

## 2.0 USES

HEATLOK SOY<sup>®</sup> 200 spray-applied polyurethane foam plastic insulation is used as a nonstructural thermal insulating material in Types I, II, III, IV and V construction under the IBC and in dwellings under the IRC. The insulation is for use in wall cavities, floor/ceiling assemblies, or attics and crawl spaces when installed in accordance with Section 4.4. Under the IRC, the insulation may be used as air-impermeable insulation when installed in accordance with Section 3.4. When installed in

Issued March 1, 2011 This report is subject to renewal in one year.

A Subsidiary of the International Code Council®

accordance with Section 4.5, the insulation may be used as an alternative to the water-resistive barriers required in IBC Section 1404.2 and IRC Section R703.2. The insulation may be used in nonload-bearing, fire-resistancerated walls when construction is in accordance with Section 4.6. The insulation also may be used in exterior walls of Type I, II, III or IV construction when used as described in Section 4.7.

## 3.0 DESCRIPTION

### 3.1 General:

HEATLOK SOY<sup>®</sup> 200 spray-applied foam insulation is rigid, medium-density, polyurethane foam plastic that is installed as a component of floor/ceiling and wall assemblies. The insulation is a two-component, sprayapplied foam plastic with a nominal in-place density of 2.0 pcf (32 kg/m<sup>3</sup>). The insulation is produced in the field by combining a polymeric isocyanate (A100 component) with a polymeric resin (B200 component). The insulation liquid components are supplied in 55-gallon (208 L) drums and/or 250-gallon (946 L) totes and have a shelf life of one year when stored in factory-sealed containers at temperatures between 59°F (15°C) and 77°F (25°C).

### 3.2 Surface-burning Characteristics:

The insulation, at a maximum thickness of 4 inches (102 mm) and a nominal density of 2.0 pcf (32 kg/m<sup>3</sup>), has a flame-spread index of 25 or less and a smoke-developed index of 450 or less when tested in accordance with ASTM E 84. Thicknesses of up to 9<sup>1</sup>/<sub>4</sub> inches (235 mm) for wall cavities and  $11^{1}/_{4}$  inches (286 mm) for ceiling cavities are recognized, based on testing in accordance with NFPA 286, when the insulation is covered with a minimum  $1/_{2}$ -inch-thick (12.7 mm) gypsum board or an equivalent thermal barrier complying with, and installed in accordance with, the applicable code.

## 3.3 Thermal Resistance, R-values:

The insulation has thermal resistance (*R*-value) at a mean temperature of 75°F (24°C) as shown in Table 1.

## 3.4 Vapor Retarder:

The insulation has a vapor permeance of less than 1 perm  $[5.7 \times 10^{-11} \text{ kg/(Pa-s-m^2)}]$ , in accordance with ASTM E 96, when applied at a minimum thickness of 1.2 inches (30.5 mm), and qualifies as Class II vapor retarder under the IRC.

## 3.5 Air Permeability:

The insulation, at a minimum thickness of  $1^{1}/_{2}$  inches (38 mm), is considered air-impermeable insulation in accordance with Section R806.4 of the IRC, based on testing in accordance with ASTM E 283 and ASTM E 2178.

ICC-ES Evaluation Reports are not to be construed as representing aesthetics or any other attributes not specifically addressed, nor are they to be construed as an endorsement of the subject of the report or a recommendation for its use. There is no warranty by ICC Evaluation Service, LLC, express or implied, as to any finding or other matter in this report, or as to any product covered by the report.



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#### 3.6 Intumescent Primer and Coating:

**3.6.1 BlazeLok<sup>™</sup> TB 200 Primer**: BlazeLok<sup>™</sup> TB 200 primer is a one-component, water-based liquid coating manufactured by TPR<sup>2</sup> Corporation. The gray-colored coating has a flame-spread index of 25 or less and a smoke-developed index of 450 or less when tested in accordance with ASTM E 84. The coating is supplied in 5-gallon (19L) pails and/or 55-gallon (208 L) drums and has a shelf life of one year when stored in factory-sealed containers at temperatures between 45°F (7°C) and 90°F (32°C). The coating is applied in one coat with a manufacturer-recommended spray gun to a substrate with a temperature of at least 50°F (10°C). The primer requires 1.5 hours of drying time before application of the coating.

**3.6.2** BlazeLok<sup>™</sup> TB 200 Intumescent Coating: Blazelok<sup>™</sup> TB 200 intumescent coating, manufactured by TPR<sup>2</sup> Corporation, is a one-component, water-based liquid coating that is white in color. Blazelok<sup>™</sup> TB 200 is supplied in 5-gallon (19 L) pails and/or 55-gallon (208 L) drums and has a shelf life of one year when stored in factory-sealed containers at temperatures between 45°F (7°C) and 90°F (32°C). The coating is applied in one coat with a manufacturer recommended spray gun to a substrate with a temperature of at least 50°F (10°C).

#### 4.0 INSTALLATION

### 4.1 General:

HEATLOK SOY<sup>®</sup> 200 spray-applied polyurethane foam insulation must be installed in accordance with the manufacturer's published installation instructions, the applicable code and this report. A copy of the manufacturer's published installation instructions must be available at all times on the jobsite during installation.

#### 4.2 Application:

The insulation is spray-applied on the jobsite using a volumetric positive displacement pump as identified in the Demilec application manual. The insulation must be applied when the ambient temperature is greater than 23°F (-5°C). The insulation must not be used in areas that have a maximum in-service temperature greater than 180°F (82°C). The foam plastic must not be used in electrical outlet or junction boxes or in contact with water, rain or soil. The foam plastic must not be sprayed onto a substrate that is wet, or covered with frost or ice, loose scales, rust, oil, or grease. The insulation must be protected from the weather during and after application. Where insulation is used as an air-impermeable insulation, such as in unvented attic assemblies under IRC Section R806.4, the insulation must be installed at a minimum thickness of 1.5 inches (38 mm). The insulation must be applied in passes not exceeding 2 inches (51 mm) per pass and must be allowed to fully expand and cure for a minimum of 20 minutes prior to the application of the next additional pass.

#### 4.3 Thermal Barrier:

**4.3.1** Application with a Prescriptive Thermal Barrier: HEATLOK SOY<sup>®</sup> 200 insulation must be separated from the interior of the building by an approved thermal barrier of <sup>1</sup>/<sub>2</sub>-inch-thick (12.7 mm) gypsum wallboard or an equivalent 15-minute thermal barrier complying with, and installed in accordance with, IBC Section 2603.4 or IRC Section R316.4, as applicable, except where insulation is in an attic or crawl space as described in Section 4.4. Thicknesses of up to 9<sup>1</sup>/<sub>4</sub> inches (235 mm) for wall cavities and 11<sup>1</sup>/<sub>4</sub> inches (286 mm) for floor/ceiling cavities are recognized, based on room corner fire testing in accordance with NFPA 286. 4.3.2 Application without a Prescriptive Thermal Barrier: The prescriptive 15-minute thermal barrier or ignition barrier may be omitted when installation is in accordance with this section (Section 4.3.2). The insulation, primer and intumescent coating may be sprayapplied to the interior facing of walls, the underside of the roof sheathing or roof rafter, and in crawl spaces, and may be left exposed as an interior finish without a prescribed 15-minute thermal barrier or ignition barrier. The thickness of the foam plastic applied to the underside of roof sheathing must not exceed 111/4 inches (286 mm). The thickness of the spray foam insulation applied to vertical wall surfaces must not exceed 91/4 inches (235 mm). The foam plastic must be covered on all surfaces with BlazeLok™ TB 200 primer applied over the foam plastic at a minimum wet film thickness of 7 mils (4 mils dry or 170 square feet per gallon). BlazeLok™ TB 200 intumescent coating must be applied over the primer at a minimum wet film thickness of 14 mils (8 mils dry or 120 square feet per gallon). The primer and the coating must be applied over insulation in accordance with the the coating manufacturer's instructions and this report. Surfaces to be coated must be dry, clean, and free of dirt, loose debris and other substances that could interfere with adhesion of the coating.

#### 4.4 Attics and Crawl Spaces:

**4.4.1** Application with a Prescriptive Ignition Barrier: When the spray-applied insulation is installed within attics or crawl spaces where entry is made only for service of utilities, an ignition barrier must be installed in accordance with IBC Section 2603.4.1.6 or IRC Section R316.5.3 or R316.5.4, as applicable. The ignition barrier must be consistent with the requirements for the type of construction required by the applicable code, and must be installed in a manner so the foam plastic insulation is not exposed. The insulation as described in this section may be installed in unvented attics in accordance with IRC Section R806.4.

# 4.4.2 Application without a Prescriptive Ignition Barrier:

**4.4.2.1 General:** HEATLOK SOY<sup>®</sup> 200 spray-applied polyurethane foam insulation may be installed in attics and crawl spaces as described in this section without the ignition barriers required by IBC Section 2603.4.1.6 and IRC Sections R316.5.3 and R316.5.4, subject to the following conditions:

- a. Entry to the attic or crawl space is only to service utilities, and no storage is permitted.
- b. There are no interconnected attic or crawl space areas.
- c. Air in the attic or crawl space is not circulated to other parts of the building.
- Under-floor (crawl space) ventilation is provided when required by IBC Section 1203.3 or IRC Section R408.1, as applicable.
- e. Attic ventilation is provided when required by IBC Section 1203.2 or IRC Section R806, except when air-impermeable insulation is permitted in unvented attics in accordance with Section R806.4 of the IRC.
- f. Combustion air is provided in accordance with IMC Section 701.

**4.4.2.1.1** Attics and Crawl Spaces: In attics and crawl spaces, the insulation may be spray-applied to the underside of the roof sheathing and/or rafters, to the underside of wood floors, and to vertical surfaces as described in this section. The thickness of the foam plastic

applied to the underside of the top of the space must not exceed  $11^{1}/_{2}$  inches (292 mm), and the thickness when applied to vertical surfaces must not exceed  $7^{1}/_{2}$  inches (190.5 mm).

**4.4.2.1.2** Use on Attic Floors: The spray-applied foam insulation may be installed at a maximum thickness of  $7^{1}/_{2}$  inches (190.5 mm) between and over the joists in attic floors.

#### 4.5 Water-resistive Barrier:

HEATLOK SOY<sup>®</sup> 200 insulation may be used as the waterresistive barrier prescribed in IBC Section 1404.2 and IRC Section R703.2, when installed on exterior walls as described in this section. The insulation must be sprayapplied to the exterior side of sheathing, masonry or other suitable exterior wall substrates to form a continuous layer of 1<sup>1</sup>/<sub>2</sub> inches (38 mm) minimum thickness. All construction joints and penetrations must be sealed with HEATLOK SOY<sup>®</sup> 200 insulation.

# 4.6 One-hour Nonload-bearing Fire-resistance-rated Wall Assemblies:

HEATLOK SOY<sup>®</sup> 200 insulation may be used as a component of a one-hour fire-resistance-rated, nonload-bearing wall assembly as described in this section (Section 4.6).

**4.6.1 Interior and Exterior Face:** Two layers of  ${}^{5}/_{8}$ -inchthick (16 mm), Type X gypsum board complying with ASTM C 36 or ASTM C 1396 is installed on both the interior and exterior sides of  ${}^{5}/_{8}$ -inch (92 mm), No. 20 gage, galvanized steel studs spaced 24 inches (610 mm) on center. The base layer of the wallboard is secured with No. 6 by  ${}^{1}/_{4}$ -inch-long (32 mm), self-drilling drywall screws 8 inches (203 mm) on center along the perimeter and 12 inches on center (305 mm) in the field of the wallboard. The face layer of the wallboard is secured with No. 6 by  ${}^{1}/_{8}$ -inch-long (48 mm), self-drilling drywall screws 8 inches (203 mm) on center along the perimeter and in the field of the wallboard. Gypsum board joints must be taped and joints and fasteners heads treated with joint compound in accordance with ASTM C 840 or GA-216.

**4.6.2 Stud Cavity:** Nominally  $3^{5}/_{8}$ -inch-thick (92 mm) HEATLOK SOY<sup>®</sup> 200 foam insulation is spray-applied in all stud cavities.

#### 4.7 Exterior Walls of Type I, II, III and IV Construction:

**4.7.1 General:** When used on exterior walls of Type I, II, III, and IV construction, the HEATLOK SOY<sup>®</sup> 200 insulation must comply with Section 2603.5 of the IBC and this section (Section 4.7), and the insulation must be installed at a maximum thickness of 3.4 inches (86.4 mm). The potential heat of Demilec HEATLOK SOY<sup>®</sup> 200 insulation is 1791 Btu/ft<sup>2</sup> (20.3 Mj/m<sup>2</sup>) per inch of thickness when tested in accordance with NFPA 259.

**4.7.2** Interior Face: One layer of  ${}^{5}/_{8}$ -inch-thick (16 mm), Type X gypsum wallboard complying with ASTM C 36 or ASTM C 1396 is installed with the long dimension perpendicular to  $3{}^{5}/_{8}$ -inch-deep (92 mm), No. 20 gage steel studs spaced a maximum of 24 inches (609 mm) on center. The wallboard is attached with No. 6,  $1{}^{1}/_{4}$ -inch-long (31.8 mm), self-tapping screws located 8 inches (203 mm) on center along the perimeter and in the field of the wallboard. Wallboard joints must be taped and treated with joint compound in accordance with ASTM C 840 or GA-216. Fastener heads must also be treated with joint compound in accordance with ASTM C 840 or GA-216.

**4.7.3 Exterior Face:** One layer of  ${}^{5}\!/_{8}$ -inch-thick (16 mm) GP DensGlass<sup>®</sup> sheathing is attached to steel studs using  $1^{1}\!/_{4}$ -inch-long (31.8 mm), self-tapping screws spaced

8 inches (203 mm) on center along the perimeter and in the field of the sheathing. HEATLOK SOY<sup>®</sup> 200 sprayapplied polyurethane foam insulation, at a maximum thickness of 3.4 inches (86.4 mm), is spray-applied onto the exterior of GP DensGlass<sup>®</sup> sheathing. Brick ties,  $3^{1}/_{2}$  inches long (89 mm), must be installed at a nominal 24 inches (609 mm) on center to each vertical steel stud, using two No.14 by 5-inch-long (127 mm) hex head screws. Exterior veneer must be 4-inch-thick (102 mm) standard brick with a nominally 2-inch (51 mm) air gap between brick and the foam plastic insulation.

### 5.0 CONDITIONS OF USE

The HEATLOK SOY<sup>®</sup> 200 spray foam insulation described in this report complies with, or is a suitable alternative to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 The products must be installed in accordance with the manufacturer's published installations instructions, this evaluation report and the applicable code. If there are any conflicts between the manufacturer's published installation instructions and this report, this report governs.
- **5.2** The insulation must be separated from the interior of the building by an approved 15-minute thermal barrier, except when installation is as described in Sections 4.3.2 and 4.4.2. A thermal barrier must be installed between the insulation and the interior space above (crawl space) or below (attic).
- **5.3** The insulation must not exceed the thicknesses noted in Sections 3.2, 4.3, 4.4, 4.6, and 4.7.
- **5.4** The insulation must be protected from exposure to weather during and after application.
- 5.5 The insulation must be applied by contractors certified by Demilec (USA) LLC.
- **5.6** Use of the insulation in areas where the probability of termite infestation is "very heavy" must be in accordance with IBC Section 2603.8 or IRC Section R318.4, as applicable.
- 5.7 When use is on exterior walls of buildings of Types I, II, III, and IV, construction must be as described in Section 4.7.
- **5.8** Jobsite certification and labeling of the insulation must comply with IRC Sections N1101.4 and N1101.4.1 and IECC Sections 102.1.1 and 102.2.11, as applicable.
- 5.9 The insulation components A and B are produced in Arlington, Texas, under a quality control program with inspections by Intertek Testing Services NA (AA-647).

## 6.0 EVIDENCE SUBMITTED

- 6.1 Data in accordance with the ICC-ES Acceptance Criteria for Spray-applied Foam Plastic Insulation (AC377), dated October 2010, including reports of tests in accordance with AC377 Appendix X.
- 6.2 Reports of air leakage testing in accordance with ASTM E 283.
- 6.3 Reports of air permeance tests in accordance with ASTM E 2178
- 6.4 Reports of water vapor transmission test in accordance with ASTM E 96.
- Reports of room corner tests in accordance with NFPA 286.
- 6.6 Reports of tests in accordance with ASTM E 119.

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- 6.7 Reports of fire propagation characteristics tests in accordance with NFPA 285.
- 6.8 Reports of potential heat of foam plastic tests in accordance with NFPA 259.
- 6.9 Data in accordance with the ICC-ES Acceptance Criteria for Foam Plastic Sheathing Panels Used as Water-resistive Barriers (AC71), dated February 2003 (editorially revised June 2008).

### 7.0 IDENTIFICATION

Components of the insulation are identified with the manufacturer's name [Demilec (USA) LLC], address and telephone number; the product name (A100 component or B200 component); use instructions; the density; the flame-spread and smoke-developed indices; the date of manufacture; thermal resistance values; the evaluation report number (ESR-3210); and the name of the inspection agency (Intertek Testing Services NA).

Each Pail of Blazelok<sup>™</sup> TB 200 intumescent coating and primer is identified with the manufacturer's name (TPR<sup>2</sup> Corporation) and address, the product name and use instructions.

#### 8.0 OTHER CODES

#### 8.1 Evaluation Scope:

In addition to the codes referenced in Section 1.0, the products described in this report have also been evaluated for compliance with the following codes:

- 2006 International Building Code<sup>®</sup> (2006 IBC)
- 2006 International Residential Code<sup>®</sup> (2006 IRC)
- 2006 International Energy Conservation Code<sup>®</sup> (2006 IECC)
- 2003 International Building Code<sup>®</sup> (2003 IBC)
- 2003 International Residential Code<sup>®</sup> (2003 IRC)
- 2003 International Energy Conservation Code<sup>®</sup> (2003 IECC)

### 8.2 Uses:

The products comply with the above-mentioned codes as described in Sections 2.0 through 7.0 of this report, with the revisions noted below:

- Application with a Prescriptive Thermal Barrier: See Section 4.3.1, except the approved thermal barrier must be installed in accordance with Section R314.4 of the 2006 IRC or Section R314.1.12 of the 2003 IRC.
- Application with a Prescriptive Ignition Barrier: See Section 4.4.1, except attics must be vented in accordance with Section 1203.2 of the 2006 and 2003 IBC or Section R806 of the 2003 IRC; and crawl space ventilation must be in accordance with Section 1203.3 of the 2006 and 2003 IBC, or Section R408 of the IRC, as applicable. Additionally, an ignition barrier must be installed in accordance with Section R314.5.3 or R314.5.3 of the 2006 IRC or Section R314.2.3 of the 2003 IRC, as applicable.
- Application without a Prescriptive Ignition Barrier: See Section 4.4.2, except attics must be vented in accordance with Section 1203.2 of the 2006 and 2003 IBC, or Section R806 of the IRC; and crawl space ventilation must be in accordance with Section 1203.3 of the 2006 and 2003 IBC, or Section R408 of the IRC, as applicable.
- Protection Against Termites: See Section 5.6, except use of the insulation in areas where the probability of termite infestation is "very heavy" must be in accordance with Section R320.5 of the 2006 IRC or Section R320.4 of the 2003 IRC.
- Jobsite Certification and Labeling: See Section 5.8, except jobsite certification and labeling must comply with Sections 102.1.1 and 102.1.11, as applicable, of the 2006 IECC.

#### TABLE 1-THERMAL RESISTANCE (R-VALUES)

THICKNEDS (inclus)	R-VALUE (°F.ft <sup>2</sup> .h/Btu)
1	7.4
1.2	8.8
1.5	10.9
2	14.3
3.5	23.6
4	26.6
1. 1.	36.5
7.5	49.8
5,25	61.5
9.5	63
10	66.4
11.25	74.8
11.5	76.4

For SI: 1 inch = 25.4 mm;  $1 - 6^{-1} + 1 - 6^{-1} = 0.06 + 110^{\circ} \text{K.m}^2 \text{/W}.$ 

<sup>1</sup>*R*-values are calculated based or facted K dalues at 1- and 4-inch thicknesses.

# Location: 6

## Project Name:\_

As required by Florida Statute 553.842 and Florida Administrative Code 9B-72, please provide the information and the product approval number(s) on the building components listed below if they will be utilized on the construction project for which you are **applying for a building permit on or after April 1, 2004**. We recommend you contact your local product supplier should you not know the product approval number for any of the applicable listed products. More information about statewide product approval can be obtained at www.floridabuilding.org

Category/Subcategory	Manufacturer	Product Description	Approval Number(s)	
A. EXTERIOR DOORS		Steel	AL 8841	
1. Swinging	Therma - Tru	F16	FL 5262.3	
2. Sliding				
3. Sectional	CHT	2250 Serves 18x7'	FL 104714.20	
4. Roll up		Plessures (+18,7) (-20,8)		
5. Automatic				
6. Other				
B. WINDOWS				
1. Single hung	PGT	2100 Series Low-E	FL 10287-R3	
2. Horizontal Slider	-			
3. Casement				
4. Double Hung				
5. Fixed				
6. Awning			The second	
7. Pass –through	and the state of the	ter and a second s		
8. Projected				
9. Mullion				
10. Wind Breaker				
11 Dual Action	Contraction of the second			
12. Other				
C. PANEL WALL			en la companya de la	
and the second	Hardy Plank	la Lin	6 12162	
1. Siding	Maran Mank	lap Siding	FL 13192	
2. Soffits				
3. EIFS				
4. Storefronts				
5. Curtain walls			and the second	
6. Wall louver				
7. Glass block				
8. Membrane				
9. Greenhouse				
10. Other				
D. ROOFING PRODUCTS				
1. Asphalt Shingles	Certainteed	LANDMARK	FL SHHY-RZ	
2. Underlayments				
3. Roofing Fasteners				
4. Non-structural Metal Rf			ter service through the service of the	
5. Built-Up Roofing				
6. Modified Bitumen				
7. Single Ply Roofing Sys				
8. Roofing Tiles				
9. Roofing Insulation				
10. Waterproofing	1			
11. Wood shingles /shakes				
12. Roofing Slate			the second s	
12. Rooming State	L	and the second se		

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The products listed below did not demonstrate product approval at plan review. I understand that at the time of inspection of these products, the following information must be available to the inspector on the jobsite; 1) copy of the product approval, 2) the performance characteristics which the product was tested and certified to comply with, 3) copy of the applicable manufacturers installation requirements.

I understand these products may have to be removed if approval cannot be demonstrated during inspectio

Contractor or Contractor's Authorized Agent Signature

Blake N. Lunde II Print Name

3-9-11 Date

Location

02/02/04 - 2 of 2

Columbia County Building Permit Application 8/70
For Office Use Only Application # 1103-49 Date Received 3/29 11 By Ut Permit # 1802/29290         Zoning Official       Buk Date 04.04.11       Flood Zone       X       Land Use Res. Lo-Dev Zoning RSF-2         FEMA Map #       N/A       Elevation       N/A       MFE/39.5' River       N/A       Plans Examiner       7.C.       Date 4-1-11         Comments
NOC DEH Deed or PA Site Plan State Road Info Well letter 911 Sheet Parent Parcel #
Dev Permit # In Floodway
IMPACT FEES: EMS Fire Corr Sub VF Form
Road/CodeSchool= TOTAL (Suspended) App Fee Paid + 8/69         Septic Permit No.       11-0/65
Name Authorized Person Signing Permit Blake N. Lunde II. Phone 758-3540
Address 3101 W US Huy 90 Ste 102 LC.F. 32055 867-0296
Owners Name Jeff & Pat Benson Phone
Contractors Name Blake Construction Co BLAKE LUNGE, I Phone 754-5810
Address 3101 W US Hwy 90 Stat 102 L.C.F. 32055
Fee Simple Owner Name & Address
Bonding Co. Name & Address
Architect/Engineer Name & Address MARK Disosway Pok 868 L.C., FL 32056
Mortgage Lenders Name & Address First Federal SAUNIES BANK. L.C., A.
Circle the correct power company - FL Power & Light – Clay Elec. – Suwannee Valley Elec. – Progress Energy
Property ID Number 22 - 35 - 16 - 02267 - 119 Estimated Cost of Construction 288, 337
Subdivision Name Country Lake in Wardborough Lot 119 Block Unit Phase
Driving Directions Lake Jefferay to Senic Lake Dr. T-L to
Country Lake Dr. T-R. Property 1/4 mile down on Right.
Number of Existing Dwellings on Property
Construction of Lot Size Total Acreage Lot Size
Do you need a <u>Culvert Permit</u> or <u>Culvert Waiver</u> or <u>Have an Existing Drive</u> Total Building Height <u>29'6"</u>
Actual Distance of Structure from Property Lines - Front Side Side Side H5 Rear
Number of Stories 1/2 Heated Floor Area 2797 Total Floor Area 3546 Roof Pitch 12/12 - 1/12

Application is hereby made to obtain a permit to do work and installations as indicated. I certify that no work or installation has commenced prior to the issuance of a permit and that all work be performed to meet the standards of all laws regulating construction in this jurisdiction. CODE: Florida Building Code 2007 with 2009 Supplements and the 2008 National Electrical Code. Page 1 of 2 (Both Pages must be submitted together.) Revised 1-11

- JW - NPOLEW/ BLALE 9.4.11

## Common County building Ferrint Application

<u>TIME LIMITATIONS OF APPLICATION</u>: An application for a permit for any proposed work shall be deemed to have been abandoned 180 days after the date of filing, unless such application has been pursued in good faith or a permit has been issued; except that the building official is authorized to grant one or more extensions of time for additional periods not exceeding 90 days each. The extension shall be requested in writing and justifiable cause demonstrated.

<u>TIME LIMITATIONS OF PERMITS</u>: Every permit issued shall become invalid unless the work authorized by such permit is commenced within 180 days after its issuance, or if the work authorized by such permit is suspended or abandoned for a period of 180 days after the time work is commenced. A valid permit receives an approved inspection every 180 days. Work shall be considered not suspended, abandoned or invalid when the permit has received an approved inspection within 180 days of the previous approved inspection.

<u>FLORIDA'S CONSTRUCTION LIEN LAW: Protect Yourself and Your Investment:</u> According to Florida Law, those who work on your property or provide materials, and are not paid-in-full, have a right to enforce their claim for payment against your property. This claim is known as a construction lien. If your contractor fails to pay subcontractors or material suppliers or neglects to make other legally required payments, the people who are owed money may look to your property for payment, <u>even if you have paid your contractor in full</u>. This means if a lien is filed against your property, it could be sold against your will to pay for labor, materials or othe services which your contractor may have failed to pay.

<u>NOTICE OF RESPONSIBILITY TO BUILDING PERMITEE:</u> <u>YOU ARE HEREBY NOTIFIED</u> as the recipient of a building permit from Columbia County, Florida, you will be held responsible to the County for any damage to sidewalks and/or road curbs and gutters, concrete features and structures, together with damage to drainage facilities, removal of sod, major changes to lot grades that result in ponding of water, or other damage to roadway and other public infrastructure facilities caused by you or your contractor, subcontractors, agents or representatives in the construction and/or improvement of the building and lot for which this permit is issued. No certificate of occupancy will be issued until all corrective work to these public infrastructures and facilities has been corrected.

WARNING TO OWNER: YOUR FAILURE TO RECORD A NOTICE OF COMMENCMENT MAY RESULT IN YOU PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. A NOTICE OF COMMENCEMENT MUST BE RECORDED AND POSTED ON THE JOB SITE BEFORE THE FIRST INSPECTION. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR ATTORNEY BEFORE RECORDING YOUR NOTICE OF COMMENCEMENT.

OWNERS CERTIFICATION: I CERTIFY THAT ALL THE FOREGOING INFORMATION IS ACCURATE AND THAT ALL WORK WILL BE DONE IN COMPLIANCE WITH ALL APPLICABLE LAWS REGULATING CONSTRUCTION AND ZONING.

<u>NOTICE TO OWNER:</u> There are some properties that may have deed restrictions recorded upon them. These restrictions may limit or prohibit the work applied for in your building permit. You must verify if your property is encumbered by any restrictions or face possible litigation and or fines.

0	$\sim$	(Owners Must Sign All Applications Before Permit Issuance.
Jeffrey D. Berson	Dr. TO	
Figure Bloken	Taluera 1. 5	Levier

**Owhers Signature** 

\*\*OWNER BUILDERS MUST PERSONALLY APPEAR AND SIGN THE BUILDING PERMIT

<u>CONTRACTORS AFFIDAVIT</u>: By my signature I understand and agree that I have informed and provided this written statement to the owner of all the above written responsibilities in Columbia County for obtaining this Building Permit including all application and permit time limitations.

Contractor <sup>s</sup> /Signature (Permitee)	Contractor's License Number CBC Columbia County Competency Card Number 498	
Affirmed under penalty of perjury to by the <u>Contractor</u> an Personally known or Produced Identification	d subscribed before me this $\frac{25}{25}$ day of <u>1</u>	March 20/1
Betty M tederico	SEAL:	
State of Florida Notary Signature (For the Contractor) Page 2 of 2 (B	BETTY M. FEDERICO MY COMMISSION # DD 948505 EXPIRES: December 23, 2013 oth Pages must be Site Wintfeld together .)	Revised 1-11

2011-03-30 09:24

## **PAT LYNCH** LYNCH DRILLING CORP. P. O. BOX 934 **BRANFORD, FL 32008** (386) 935-1076 PHONE (386) 935-1199 FAX

DATE: 3-30-11 CUSTOMER: Jeff & Pat Benson LOCATION: 664 NW Country Lake DR Parcel # 22-035-16-02267-119 Lake City, FL

WE WILL CONSTRUCT A 4' WATER WELL COMPLETE WITH 4" BLACK WATER WELL STEEL CASING, IHP SUBMERSIBLE PUMP (20GPM) WITH 1 1/4 " GALVANIZED DROP PIPE, AND AN 81 GALLON CAPTIVE AIR TANK (21.9 GALLON DRAWDOWN)

WELL WILL BE COMPLETE AT THE WELL SITE. WE DO NOT INCLUDE ELECTRICAL NOR PLUMBING CONNECTIONS FROM THE WELL TO THE HOME AND/OR POWER POLE.

ANY VARIATIONS OF THE ABOVE ARE SUBJECT TO APPROVAL FROM THE CUSTOMER AND/OR CONTRACTOR PRIOR TO COMMENSEMENT OF THE INDIVIDUAL JOB.

THANK YOU

Blake Const fax to: 719-6708

NOT RESPONSIBLE FOR THE QUALITY OF WATER

Inst. Number: 201112004811 Book: 1212 Page: 700 Date: 3/30/2011 Time: 4:56:44 PM Page 1 of 4

1 2 - h		
		41.50
	Return to: Terry McDavid P.O. Box 1328 Lake City, FL 32056 11-38	
	THIS INSTRUMENT WAS PREPARED BY:	
	FIRST FEDERAL BANK OF FLORIDA	
	4705 WEST U.S. HIGHWAY 90	
	P.O. BOX 2029	
	LAKE CITY, FLORIDA 32056	e 1 of 4 B:1212 P.760
	PERMIT NO: TAX FOLIO NO.: 02267-119	
	NOTICE OF COMMENCEMENT	
	STATE OF FLORIDA	
	COUNTY OF COLUMBIA	
	property, and in accordance with Chapter 713, Florida Statutes, the following information is provided in this Notice of Commencement. 1. Description of Property: Lot 19, COUNTRY LAKE IN WOODBOROUGH, PHASE 1, a subdivision according to the plat thereof <u>as recorded in Plat Book 8, Pages 97-99,</u> <u>public records</u> , Columbia County, Florida.	
- 	2. General description of improvement: <u>Construction of Dwelling</u>	
	3. Owner information:	
	a. Name and address: Jeffrey D. Benson and Patricia T. Benson	
	613 Concord Ct. The Villages, FL 32162	
	STATE OF FLORIDA, COUNTY I HEREBY CERTIFY, that the a is a true copy of the original P. Dewind CASON, CLERK OF By: Deputy Cle Date: Mauch	DF COLUMBIA pove and foregoing iled in this office. COURTS Jon Jon Tk 30 JOII

MBIA COUNT

Inst. Number: 201112004811 Book: 1212 Page: 701 Date: 3/30/2011 Time: 4:56:44 PM Page 2 of 4

## b. Interest in property: Fee Simple

c. Name and address of fee simple title holder (if other than Owner): None

4. a. Contractor (name and address):

Blake Construction Company

3101 US Highway 90 W, Suite 102 Lake City, FL 32055

b. Contractor's phone number 386-754-6708

5. Surety:

a. Name and address: None

b. Phone Number

c. Amount of bond:

6. Lender: FIRST FEDERAL BANK OF FLORIDA

4705 WEST U.S. HIGHWAY 90

P.O. BOX 2029

LAKE CITY, FL 32056

(386) 755-0600

7. Persons within the State of Florida designated by Owner upon whom notices or other document may be served as provided by Section 713.13 (1) (a) 7., Florida Statutes: NONE

8. In addition to himself, Owner designates <u>Paula Hacker of First Federal Bank of</u> <u>Florida . 4705 West U.S. Highway 90 / P.O. Box 2029. Lake City. Fl 32056</u> to receive a copy of the Lienor's Notice as provided in Section 713.13 (1) (b), Florida Statues.

9. Expiration date of notice of commencement (the expirationd date is 1 year from the date of recording unless a different date is specified).

Inst. Number: 201112004811 Book: 1212 Page: 702 Date: 3/30/2011 Time: 4:56:44 PM Page 3 of 4

WARNING TO OWNER: ANY PAYMENTS MADE BY THE OWNER AFTER THE EXPIRATION OF THE NOTICE OF COMMENCEMENT ARE CONSIDERED IMPROPER PAYMENTS UNDER CHAPTER 713, PART I, SECTION 713, 13, FLORIDA STATUES AND CAN RESULT IN YOUR PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY, A NOTICE OF COMMENCEMENT MUST BE RECORDED AND POSTED ON THE JOB SITE BEFORE THE FIRST INSPECITON. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR AN ATTORNEY BEFORE COMMENCING WORK OR RECORDING YOUR NOTICE OF COMMENCEMENT.

y D. Benson

Jeffrey D. Benson

Signature of Owner or Owner's Authorized

Officer/Director Partner/ Manager

Signatory's Title/Office

30th day of

(type of authority, e.g. officer, trustee, attorney in fact) for: (name of party on behalf of

whom instrument was executed.

Cliftert Brow

DEETTE F. BROWN MY COMMISSION # EE 015915 EXPIRES: October 22, 2014 Bonded Thru Notary Public Underwriters

Signature of Notary Public - State of Florida

Print,

Inst. Number: 201112004811 Book: 1212 Page: 703 Date: 3/30/2011 Time: 4:56:44 PM Page 4 of 4

Type, or Stamp Commission Name of

ñ . . .

Public Commission Number :

Notary

\_\_\_ Personally Known \_\_\_\_\_

\_ or Produced Indentification

Verification Pursuant to Section 92, 525, Florida Statues

Under penalties of perjury, I de\_clare that I have read the foregoing and that the facts stated in it are true to the best of my knowledge and belief.

ey & Benson

Jeffrey D. Benson

Siganture of Natual Person Signing Above

PREPARED BY AND RETURN TO:

TERRY McDAVID POST OFFICE BOX 1328 LAKE CITY, FL 32056-1328

Property Appraiser's 022/27-17 Identification Number R02252-000 & R02268-004

TM File No: 07-34

## WARRANTY DEED

Doc Stamp-Deed :

Inst:2007003279 Date:02/09/2007 Time:16:25

559.30

\_DC,P.DeWitt Cason,Columbia County B:1110 P:1074

.....

This Warranty Deed, made this  $\mathcal{A}$  day of February, 2007, BETWEEN MS, DM & BL, LLC, a Florida limited liability company, whose post office address is 3101 US Highway 90 West, Suite 101, Lake City, FL 32055, of the County of Columbia, State of Florida, grantor\*, and JEFFREY D. BENSON AND PATRICIA T. BENSON, Husband and Wife whose post office address is 12945 SW 112th Avenue, Miami, FL 33176-4453, grantee\*.

(Whenever used herein the terms "grantor" and "grantee" include all the parties to this instrument and the heirs, legal representatives and assigns of individuals, and the successors and assigns of corporations, trusts and trustees)

Witnesseth: that said grantor, for and in consideration of the sum of Ten Dollars (\$10.00), and other good and valuable considerations to said grantor in hand paid by said grantee, the receipt whereof is hereby acknowledged, has granted, bargained and sold to the said grantee, and grantee's heirs and assigns forever, the following described land, situate, lying and being in Columbia County, Florida, to-wit:

Lot 19, Country Lake In Woodborough, Phase 1, a subdivision according to the plat thereof as recorded in Plat Book 8, Pages 97-99, public records, Columbia County, Florida.

**Together** with all the tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining.

To Have and to Hold, the same in fee simple forever.

And subject to taxes for the current year and later years and all valid easements and restrictions of record, if any, which are not hereby reimposed; and also subject to any claim, right, title or interest arising from any recorded instrument reserving, conveying, leasing, or otherwise alienating any interest in the oil, gas and other minerals. And grantor does warrant the title to said land and will defend the same against the lawful claims of all persons whomsoever, subject only to the exceptions set forth herein. In Witness Whereof, grantor has hereunto set grantor's hand and seal the day and year first above written.

Signed, sealed and delivered in our presence:

MS, DM & BL, LLC

ERZU AUIE

(Typed Nat of First Witness)

(Sign TAREd (Typed Name of Second Witness)

S. mles (SEAL) BY; Deborah S. Myles, Managing Member

STATE OF FLORIDA COUNTY OF COLUMBIA

The foregoing instrument was acknowledged before me this day of February, 2007, by Deborah S. Myles, Managing Member of MS, DM & BL, LLC, a Florida limited liability company, who is/are personally known to me or who has/have produced as identification and who did not take an oath.

My Commission Expires:

Notary Public

Printed, typed, or stamped name:

a second

TERRY MCDAVID MY COMMISSION # DD 500788 EXPIRES: January 16, 2010 Bonded Thru Notary Public Underwriters

Inst:2007003279 Date:02/09/2007 Time:16:25 Doc Stamp-Deed : 559.30 DC,P.Dewitt Cason,Columbia County B:1110 P:1075

Columbia Co Appraiser DB Last Updated: 2/17/		operty				20	)10 Tax Ye
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Owner's Name	BENSON JEF	FREY D & PAT	TRICIA T		NY LONG WARD		
Mailing Address	613 CONCO						ALC O
Site Address	664 NW COL	JNTRY LAKE D	DR				μj
Use Desc. (code)	VACANT (00						3
Tax District	2 (County)	Neighbor	rhood	22216			Stat Latera
Land Area	0.880 ACRES	Market A		22316 06			
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http://g2.columbia\_floridapa.com/GIS/D\_SearchResults.asp







RE: 366563 - BLAKE CONST. - BENSON RES.

Site Information:

Project Customer: BLAKE CONST. Project Name: 366563 Model: BENSON RES. Lot/Block: 19 Subdivision: COUNTRY LAKES Address: 664 NW COUNTRY LAKE DR City: COLUMBIA CTY State: FL

Name Address and License # of Structural Engineer of Record, If there is one, for the building.Name: BLAKE N. LUNDE IIAddress: 2250 SW JAGUAR DR

City: LAKE CITY,

**Julius Lee** 

State: FL

General Truss Engineering Criteria & Design Loads (Individual Truss Design Drawings Show Special Loading Conditions):

Design Code: FBC2007/TPI2002 Wind Code: ASCE 7-05 Wind Speed: 110 mph Roof Load: 32.0 psf

Design Program: MiTek 20/20 7.1 Floor Load: N/A psf

1109 Coastal Bay Blvd. Boynton Beach, FL 33435

This package includes 51 individual, dated Truss Design Drawings and 0 Additional Drawings. With my seal affixed to this sheet, I hereby certify that I am the Truss Design Engineer and this index sheet conforms to 61G15-31.003, section 5 of the Florida Board of Professional Engineers Rules. This document processed per section 16G15-23.003 of the Florida Board of Professionals Rules

In the event of changes from Builder or E.O.R. additional coversheets and drawings may accompany this coversheet. The latest approval dates supersede and replace the previous drawings.

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	14669427	CJ1	3/22/011	18	14669444	PB06	3/22/011
2	14669428	CJ2	3/22/011	19	14669445	PB07	3/22/011
3	14669429	CJ3	3/22/011	20	14669446	PB08	3/22/011
4	14669430	CJ4	3/22/011	21	14669447	PB08G	3/22/011
5	14669431	CJ4A	3/22/011	22	14669448	PB09	3/22/011
6	14669432	CJ5	3/22/011	23	14669449	PB10	3/22/011
7	14669433	EJ2	3/22/011	24	14669450	T02	3/22/011
8	14669434	EJ7	3/22/011	25	14669451	T02G	3/22/011
9	14669435	EJ7A	3/22/011	26	14669452	T03	3/22/011
10	14669436	EJ7B	3/22/011	27	14669453	T04	3/22/011
11	14669437	FG1	3/22/011	28	14669454	T05	3/22/011
12	14669438	HJ11	3/22/011	29	14669455	T06	3/22/011
13	14669439	PB01	3/22/011	30	14669456	T07	3/22/011
14	14669440	PB02	3/22/011	31	14669457	T08	3/22/011
15	14669441	PB03	3/22/011	32	14669458	T09	3/22/011
16	14669442	PB04	3/22/011	33	14669459	T10	3/22/011
17	14669443	PB05	3/22/011	34	14669460	T11	3/22/011

The truss drawing(s) referenced above have been prepared by MiTek Industries, Inc. under my direct supervision based on the parameters provided by Builders FirstSource (Lake City).

Truss Design Engineer's Name: Julius Lee

My license renewal date for the state of Florida is February 28, 2013. **NOTE:** The seal on these drawings indicate acceptance of professional engineering responsibility solely for the truss components shown. The suitability and use of this component for any particular building is the responsibility of the building designer, per ANSI/TPI-1 Chapter 2.

3/22/011 3/22/011 3/22/011 3/22/011 UCENSE No 34869 MO 34869

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1109 Coastal Bay Blvd. Boynton, FL 33435



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1109 Coastal Bay Blvd. Boynton, FL 33435



WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MIT-7473 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.
Applicability of design parameters and proper incorporation of component is responsibility of building designer - not trust designer. Bracing shown
is for lateral support of Individual we members only. Additional temporary bracing to insure stability during constructions is the responsibility of the building designer. For general guidance regarding
tabicity during, quality control, storage, delivery, erection and bracing, consult
MASI/TPI (Quality Criteria, DSB-89 and BCS11 Building Component
Salety Information available from Truss Plate Institute, 583 D'Onofrio Drive. Madison. WI 53719.



1109 Coastal Bay Blvd. Boynton, FL 33435



Job	Truss	Truss Type	Qty	Ply	BLAKE CONST BENSON RES.	
366563	T07	SPECIAL	1	1		14669456
	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1				Job Reference (optional)	
Builders FrstSource, La	ake City, FL 32055			7.	140 s Oct 1 2009 MiTek Industries, Inc. Tue Mar 22 12:00:23 20	11 Page 2

NOTES (15-16)

2

12) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 1601 lb down and 1610 lb up at 7-0-12, 859 lb down and 336 lb up at 9-0-12, 859 lb down and 337 lb up at 11-0-12, and 771 lb down and 331 lb up at 13-0-12, and 699 lb down and 331 lb up at 15-0-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.
In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

15) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.

16) Truss Design Engineer: Julius Lee, PE: Florida P.E. License No. 34869: Address: 1109 Coastal Bay Blvd. Boynton Beach, FL 33435

LOAD CASE(S) Standard

1) Regular: Lumber Increase=1.25, Plate Increase=1.25

Uniform Loads (plf) Vert: 1-4=-54, 4-6=-54, 2-9=-10, 7-8=-10

Concentrated Loads (lb) Vert: 14=-1601(B) 15=-859(B) 16=-859(B) 17=-771(B) 18=-699(B)

> PRO STATE OF FLORIDA GUIN March 22,2011

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 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. Applicability of design parameters and proper incorporation of component is responsibility of building designer - not fruss designer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to insure stability during constructions is the responsibility of the building designer. For general guidance regarding fabrication, quality control. storage, delivery, erection and toracing, consult — **ANSI/TPII Quality Criteria, DSB-89 and &CS11 Building Component Salety Information** available from Truss Plate Institute. 583 D'Onofrio Drive, Madison, WI 53719.

Job	Truss	Truss Type	Qty	Ply	BLAKE CONST BENSON RES.	weene en
366563	T08	SPECIAL	1	1		14669457
					Job Reference (optional)	
Builders FrstSource, Lake City	, FL 32055			7.	140 s Oct 1 2009 MiTek Industries, Inc. Tue Mar 22 12:00:23	2011 Page 2

### (12-14) NOTES

9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 57 lb down and 174 lb up at 9-9-5, 21 lb down and 88 lb up at 11-10-1, 20 lb down and 83 lb up at 13-10-1, 20 lb down and 83 lb up at 15-10-1, 20 lb down and 83 lb up at 17-10-1, and 20 lb down and 83 lb up at 19-10-1, and 20 lb down and 83 lb up at 21-8-0 on top chord, and 607 lb down and 745 lb up at 9-9-5, 131 lb down and 146 lb up at 13-10-1, 131 lb down and 146 lb up at 15-10-1, 131 lb down and 146 lb up at 17-10-1, and 131 lb down and 146 lb up at 21-8-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.
In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

12) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.
13) Truss Design Engineer: Julius Lee, PE: Florida P.E. License No. 34869: Address: 1109 Coastal Bay Blvd. Boynton Beach, FL 33435
14) Use Simpson HTU26 to attach Truss to Carrying member

## LOAD CASE(S) Standard

1) Regular: Lumber Increase=1.25, Plate Increase=1.25 Uniform Loads (plf)

Vert: 1-5=-54, 5-8=-54, 2-15=-10, 14-15=-10, 12-14=-10, 11-12=-10, 9-11=-10

Concentrated Loads (lb)

Vert: 5=-57(F) 16=-21(F) 17=-20(F) 18=-20(F) 19=-20(F) 20=-20(F) 21=-20(F) 22=-607(F) 23=-131(F) 24=-131(F) 25=-131(F) 26=-131(F) 27=-131(F) 26=-131(F) 26

No 34969 PRO STATE OF FLORIDA GUILINI March 22,201 March 22,2011

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 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. Applicability of design paramenters and proper incorporation of component is responsibility of building designer - not truss designer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to insure stability during construction is the responsibility of the building designer. For general guidance regarding fabrication, quality control. storage, delivery, erection and bracing. consult in ANSI/TPII Quality Citeria, DSB-89 and BCS11 Building Component Safety Information available from Truss Plate Institute, 583 D'Onotrio Drive, Madison, WI 53719.



WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MIT-7473 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. Applicability of design parameters and proper incorporation of component is responsibility of building designer - not truss designer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to insure stability during construction is the responsibility of the building designer. For general guidance regarding tabrication, quality control, storage, delivery, erection and bracing, consult in ANSI/TPI Quality Criteria, DSB-89 and BCS11 Building Component Safety Information available from Truss Plate Institute, 583 D'Onotrio Drive, Madison, Wi 53719.

Job	Truss	Truss Type	Qty	Ply	BLAKE CONST BENSON RES.	
366563	T11	SPECIAL	1		1	1466946
					Job Reference (optional)	
Builders FrstSource,	Lake City, FL 32055				7.140 s Oct 1 2009 MiTek Industries. Inc. Tue Mar 22 12:00:25	2011 Page 2

12) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.

13) Truss Design Engineer: Julius Lee, PE: Florida P.E. License No. 34869: Address: 1109 Coastal Bay Blvd. Boynton Beach, FL 33435 14) Use Simpson HTU26 to attach Truss to Carrying member

LOAD CASE(S) Standard

1



WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 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. Applicability of design parameters and proper incorporation of component is responsibility of building designer - not Iruss designer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to insure stability during construction is the responsibility of the building designer. For general guidance regarding fabricability, and the other of individual web members only. Additional temporary bracing to insure stability during construction is the responsibility of the building designer. For general guidance regarding fabricability, quality control, storage, delivery, erection and bracing, consult is **ANSI/PII Quality Citeria, DSB-89 and BCS11 Building Component Safety Information** available from Truss Plate Institute, 583 D'Onofrio Drive. Madison, WI 53719,



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1109 Coastal Bay Blvd. Boynton, FL 33435

b	Truss	Truss Type	Qty	Ply	BLAKE CONST BENSON RES.	146694
6563	T13G	SPECIAL	1	3	Job Reference (optional)	
ilders FrstSource, Lake City, F	L 32055			7.	140 s Oct 1 2009 MiTek Industries, Inc. Tue Mar 22 1	2:00:27 2011 Page 2
Iders FrstSource, Lake City, F ) This manufactured proc building designer per / ) Truss Design Enginee /AD CASE(S) Standarr Regular: Lumber Increa Uniform Loads (plf)	L 32055 duct is designed as an indiv ANSI TPI 1 as referenced by r: Julius Lee, PE: Florida P. d ise=1.25, Plate Increase=1.: F=-200), 3-4=-54, 4-7=-54, )	vidual building component. The sui the building code. E. License No. 34869: Address: 11	tability and use of this	s compon Boynton	Job Reference (optional) 140 s Oct 1 2009 MiTek Industries, Inc. Tue Mar 22 1 ent for any particular building is the respon Beach, FL 33435	
					RO STATE O STATE O No 348	89 XUU

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Design volid for use only with Mitek connectors. This design is based only upon parameters shown, and is for an individual via Beroke USE. Design volid for use only with Mitek connectors. This design is based only upon parameters shown, and is for an individual very a Beroke USE. Applicability of design parameters and proper incorporation of component is responsibility of building designer - not truss designee. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to insure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult — **ANS/IPI1 Quality Criteria, DSB-89 and BCS11 Building Component Safety Information** available from Truss Plate Institute, 583 D'Onotrio Drive, Madison, WI 53719.

Job	Truss	Truss Type	Qty	Ply	BLAKE CONST BENSON RES.	
366563	T14	SPECIAL	1			14669464
	- 7 MAX	Construction of the second			Job Reference (optional)	
Builders FrstSource, L	Lake City, FL 32055				7.140 s Oct 1 2009 MiTek Industries. Inc. Tue Mar 22 12:0	0:28 2011 Page 2

NOTES (12-14)

8) "Semi-rioid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.

9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 20 lb down and 68 lb up at 0-5-12, 20 lb down and 68 lb up at 2-5-12, 20 lb down and 68 lb up at 4-5-12, 20 lb down and 68 lb up at 6-5-12, 20 lb down and 68 lb up at 8-5-12, 20 lb down and 68 lb up at 12-5-12, 20 lb down and 68 lb up at 14-5-12, 20 lb down and 68 lb up at 16-5-12, 20 lb down and 68 lb up at 18-5-12, 20 lb down and 68 lb up at 20-5-12, 20 lb down and 68 lb up at 22-5-12, 20 lb down and 68 lb up at 24-5-12, 20 lb down and 68 lb up at 26-5-12, 20 lb down and 68 lb up at 28-5-12, and 74 lb down and 10 lb up at 32-3-4 on top chord, and 131 lb down and 146 lb up at 0-5-12, 131 lb down and 146 lb up at 2-5-12, 131 lb down and 146 lb up at 0-5-12, 131 lb down and 146 lb 146 lb up at 6-5-12, 131 lb down and 146 lb up at 8-5-12, 131 lb down and 146 lb up at 10-5-12, 131 lb down and 146 lb up at 14-5-12, 131 lb down and 146 lb up at 16-5-12, 131 lb down and 146 lb up at 18-5-12, 131 lb down and 146 lb up at 20-5-12, 131 lb down and 146 lb up at 22-5-12, 131 lb down and 146 lb up at 24-5-12, 131 lb down and 146 lb up at 26-5-12, 131 lb down and 146 lb up at 28-5-12, and 131 lb down and 146 lb up at 30-5-12, and 141 lb down and 140 lb up at 32-3-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

10) Warning: Additional permanent and stability bracing for truss system (not part of this component design) is always required.

11) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

12) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code. 13) Truss Design Engineer: Julius Lee, PE: Florida P.E. License No. 34869: Address: 1109 Coastal Bay Blvd. Boynton Beach, FL 33435

14) Use Simpson HGUS28 to attach Truss to Carrying member

LOAD CASE(S) Standard

1) Regular: Lumber Increase=1.25, Plate Increase=1.25

Uniform Loads (plf)

Vert: 1-6=-54, 13-31=-10, 31-34=-50, 34-36=-10, 36-38=-50, 38-39=-10, 39-42=-50, 42-44=-10, 44-47=-50, 7-47=-10 Concentrated Loads (lb)

Vert: 6=-74(B) 7=-141(B) 12=-131(B) 10=-131(B) 5=-20(B) 9=-131(B) 14=-20(B) 15=-20(B) 16=-20(B) 17=-20(B) 18=-20(B) 19=-20(B) 20=-20(B) 21=-20(B) 22=-20(B) 21=-20(B) 22=-20(B) 23=-20(B) 24=-20(B) 25=-20(B) 26=-20(B) 27=-20(B) 28=-20(B) 29=-131(B) 30=-131(B) 32=-131(B) 33=-131(B) 35=-131(B) 35=-130(B) 35=-130(B) 35=-130(B) 35=-130(B) 35=-130(B) 35=-130(B) 35=-13

No 34869 RD STATE OF *FLORIDA STATE OF STATE O* 

A WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 BEFORE USE Design valid for use only very design parameters and READ NOTES ON THIS AND INCLODED MITCR REPERENCE PAGE MIT-9473 BEPORE USE. Design valid for use only with Mite connectors. This design is based only upon parameters shown, and is for an individual building component. Applicability of design parameters and proper incorporation of component is responsibility of building designer - not truss designes. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to insure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control. storage, delivery, erection and bracing, consult ANS/TPI1 Quality Criteria, DSB-89 and BCS11 Building Component Safety Information avoilable from Truss Plate Institute, SS3 DO Confrib Drive, Madison, WI S3719.



Design valid for use only with Milek connectors. This design is based only upon parameters shown, and is for an individual building component. Applicability of design parameters and proper incorporation of component is responsibility of building designer - not trus designer. Bracing shown is for lateral support of individual weat members only. Additional temporary bracing to issue stability during construction is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI1 Quality Criteria, DS8-89 and 8CS11 Building Component Salety Information available from Truss Plate institute, S83 D'Onotrio Drive. Medison, WI S3719,

Job	Truss	Truss Type	Qty	Ply	BLAKE CONST BENSON RES.	
366563	T17	HIP	2		1	14669467
	5.052				Job Reference (optional)	
Builders FrstSource, Lake City, F	L 32055				7.140 s Oct 1 2009 MiTek Industries, Inc. Tue Mar 22 12:00:29 2011 Pag	je 2

LOAD CASE(S) Standard

No 34989 No 34989 STATE OF FLORIDA March 22,201 March 22,2011

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 BEFORE USE. Design valid for use only with Milek connectors. This design is based only upon parameters shown, and is for an individual building component. Applicability of design parameters and proper incorporation of component is responsibility of building designer - not fruss designer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to insure stability during construction is the responsibility of the building designer. For general guidance regarding fabricability, and the other of the overall structure is the responsibility of the building designer. For general guidance regarding fabricability, quality control, storage, delivery, erection and braccing, consult — ANS/IPTI Quality Citteria, DSB-89 and BCS11 Building Component Safety Information available from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

Job	Truss	Truss Type	Qty	Ply	BLAKE CONST BENSON RES.	
366563	T18	SPECIAL	2	1		14669468
					Job Reference (optional)	
Builders FrstSource.	Lake City, FL 32055			7.	140 s Oct 1 2009 MiTek Industries, Inc. Tue Mar 22 1	2:00:30 2011 Page 2

This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.
Truss Design Engineer: Julius Lee, PE: Florida P.E. License No. 34869: Address: 1109 Coastal Bay Blvd. Boynton Beach, FL 33435

LOAD CASE(S) Standard

No 34469 PRO STATE OF STATE OF FLORIDA March 22,201 March 22,2011

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII:7473 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. Applicability of design parameters and proper incorporation of component is responsibility of building designer - not russ designe. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to insure stability during construction is the responsibility of the building designer. For general guidance regarding fabricability, and design parameters and proper incorporation of component is responsibility of the building designer. For general guidance regarding fabricabin, quality control, storage, delivery, erection and bracing, consult in ANSI/IPI Quality Citeria, DSB-89 and BCS11 Building Component Safety Information available from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

Job	Truss	Truss Type	Qty	Ply	BLAKE CONST BENSON RES.	
366563	T18G	SPECIAL	1			14669469
	1.00030			3	Job Reference (optional)	
Builders FrstSource, Lake C	City, FL 32055			7.	140 s Oct 1 2009 MiTek Industries, Inc. Tue Mar 22 12:00:30 2011 P	Page 2

NOTES (16-17)

12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 2708 lb uplift at joint 1 and 939 lb uplift at joint 9.

13) "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.

14) Design assumes 4x2 (flat orientation) purlins at oc spacing indicated, fastened to truss TC w/ 2-10d nails.

15) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 4613 lb down and 1662 lb up at 9-0-8 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

16) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.

17) Truss Design Engineer: Julius Lee, PE: Florida P.E. License No. 34869: Address: 1109 Coastal Bay Blvd. Boynton Beach, FL 33435

## LOAD CASE(S) Standard

1) Regular: Lumber Increase=1.25, Plate Increase=1.25

Uniform Loads (pff) Vert: 1-3=-254(F=-200), 3-4=-54, 4-7=-54, 7-8=-54, 1-15=-210(F=-200), 13-15=-10, 13-17=-50, 17-18=-10, 10-18=-50, 9-10=-10 Concentrated Loads (lb)

Vert: 15=-4613(F)



WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 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. Applicability of design parameters and proper incorporation of component is responsibility of building designer - not fruss designer. Bracing shown is for lateral support of Individual web members only. Additional temporary bracing to insure stability during construction is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult in ANSI/TPII Quality Criteria, DSB-89 and BCS11 Building Component Safety Information available from Truss Plate Institute, 583 D'Onotrio Drive, Madison, WI 53719.

Job	Truss	Truss Type	Qty	Ply	BLAKE CONST BENSON RES.	to provide the second
366563	T19	SPECIAL	6	1		14669470
			1	× *	Job Reference (optional)	
Builders FrstSource, Lake City, F	L 32055			7.	140 s Oct 1 2009 MiTek Industries, Inc. Tue Mar 22 12:00:31 201	1 Page 2

12) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.

13) Truss Design Engineer: Julius Lee, PE: Florida P.E. License No. 34869: Address: 1109 Coastal Bay Blvd. Boynton Beach, FL 33435

14) Use Simpson HTU26 to attach Truss to Carrying member

LOAD CASE(S) Standard

No 3469 RO STATE OF FLORIDA March 22,201 SIONAL March 22,2011

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1109 Coastal Bay Blvd. Boynton, FL 33435



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Job	Truss	Truss Type	Qty	Ply	BLAKE CONST BENSON RES.
366563	T24	HOWE	1		1466947
			10. 1	2	Job Reference (optional)
Builders FrstSource,	Lake City, FL 32055			7.	140 s Oct 1 2009 MiTek Industries, Inc. Tue Mar 22 12:00:35 2011 Page 2
LOAD CASE(S)	Standard				
1) Regular: Lumi	per Increase=1.25, Plate In	crease=1.25			
Uniform Loads	s (plf)				

Vert: 2-6=-10, 1-4=-54, 4-6=-54

Concentrated Loads (lb) Vert: 6=-1329(B) 7=-1380(B) 10=-2582(B) 11=-1244(B) 12=-1329(B)



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NO. 24869	DIAGONAL BEACE VERTICAL LENGTH DOUBLED FILLN ERACE IS USED. AT EACH INT. JENCE TOTAL LENGTH IS VERTICAL IN TABLE ONNEL	MAX GA 12" O.C.	BLE VERTIO	CAL LENGT 24" O.C.	SPA
	AL BEACE OFTION: AL BEACE OFTION: AL BEACE DIAGONAL IS USED. CONVECT AL BEACE FOR BEAG ( END. MAX WEE LENGTH IS 14: IN TALEX ABOVE. IN TALEX ABOVE. CONNECT DIAGONAL AT	SPF #1/#2 HF STANDARD SP #2 DFL STUD STANDARD	(a) (b)	$\begin{array}{c c} \text{SPF} & \frac{41}{42} \\ \text{HF} & \frac{57100}{57100} \\ \text{SP} & \frac{41}{42} \\ \text{SP} & \frac{41}{42} \\ \text{STANDARD} \\ \frac{57100}{57100} \\ \end{array}$	AJUL 2X4 E VERTICAL SPECIES   CR
	CABLE TRUSS	4 4 4 4 4 4 4			ADE BRACE NO
Equipe Extreme c 11-03 com and c nuceren as, sur- verse Liv, weices sc cmeexvise some sc cmeexvise some	AT UPFER OR DATE of		2 4 5 5 8 8 9 4 5 5 6	5 6 6 6 8 4 5 6 6 8 3 8 3 9 5 6 5 11 5 7 6 1 4 6 7 4 6 4 6 7 4 6 4 6 7 10 4 7 10 5 10 5 11 5 11 5 11 5 11 5 11 5 11 5	A) 1X4 °L' E
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LIDS CONSTANTS	OR MAX	9,4,4, <b>7</b> ,7,9,0,0,1,1,1	6     2"     11     9       8     11     11'2"     8'     11'1"       8     11     11'1"     11'2"       8'7"     11'9"     9'7"     11'9"       9'5"     11'1"     9"       9'5"     11'1"     9"       9'5"     11'1"     9"       9'5"     11'4"     9"       9'5"     11'4"     9"		GROUP B GROUP
JLIUS LEE'S CONS. ENGINEERS P.A. DELRAY EDACH, PL. 35444-2010 STATE OF FLORIDA	CABLE V	13 11 12 11 12 11 11 10 13 11 13 11 13 11 13 11 13 11 13 1 11 4		8. D. 11. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	LINCLU:
MAX.	Hangth.		°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°		GROUP A GROUP B
LD. 60 PSF CING 24.0"	ATLAGE SALV OUVERS WITH TO PLYWOOD OVERHANG. ATLAGE SALV T, BEACE WITH TO POR (1) T, BEACE SPACE IN 16 "DUD ZONTS AND 4" O' IN 16" DUD ZONTS AND 4" O' IN 16" DUD ZONTS AND 4" O' IN 16" DUD ZONTS BE A MUNIMUM MEMBER LENGTH. GABLE VERTICAL PLAT USS THAN 4" O' BUT GREATER THAN 11" 8" ILESS THAN 11" 8"	CABLE TRI LIVE LOAD DEFLECT PROVIDE UFLIT CO CONVENUOUS BEA		BRACING GROUP SPECIES SPECIE-PINE-ME FI-/#2 STATIAN STUD DOUGLAS FIE-LARCH SU STUD S	U, EAPUSURE
REF ASCE7-02-GAB13030 DATE 11/26/03 DWG mater std gable so'e ht -ENG	ATLACE BACH "L" BRACE WITH ING (MALLS AND OVERHAANG. OR 12" PLYWOOD OVERHAANG. * POR (1) T. BRACE SHACE NAILS AT 8" O.C. IN 18" END ZONES AND 4" O.C. BLYNEN ZONES. ** FOR (1) T. BRACES BRACE NAILS AT 8" O.C. IN 18" END ZONES AND 4" O.C. BLYNEN ZONES. T. BRACING MUST BE A MINIMUM OF 80% OF WEB MEMBER LANDER. CABLE VERTICAL ENCIN. CABLE VERTICAL LENCIN ND SELCES USER THAN 4" O". BUT ZX4 USES THAN 4" O". BUT ZX4 USES THAN 11" 6" ZX4 HENTER TO COMMON HEURS DESIGN FOR PRAY, SPAICE, AND HEST, FLATES.	CAPILE TRUSS DETAIL NOTES: LIVE LOAD DEFLECTION CRITERIA IS L/240. PROVIDE UPLIT CONNECTIONS FOR 150 FLF OVER CONTINUOUS BEARING (O FOR TO DEAD LIAD).	GROUP B: (IDK-FIR (IDK-FIR #1 & BIR #1 & BIR 1 00/GLAS FIR-LARCE		CREC
1B13030 50' E 197	₩	S:			

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CONS. E	JULIUS CE JULIUS AND AND THE STATE OF A PARTY AND A ALPINE PIGGYBACK SPECIAL PLATE.				¶ ₽	20' FLAT TOP CHORD MAX SPAN	$A \xrightarrow{A} \xrightarrow{E} \xrightarrow{E} \xrightarrow{E} \xrightarrow{E} \xrightarrow{E} \xrightarrow{E} \xrightarrow{E} E$	E MAX SIZE OF ZX		REFER TO ENGINEER'S SEALED DESIGN FOR REQUIRED PURLIN SPACING. THIS DETAIL IS APPLICABLE FOR THE FOLLOWING WIND CONDITIONS:	ATTACH PURLING TO TOP OF FLAT TOP CHORD. IF PICCYHACK IS SOLID LUMBER OR THE BOTTOM CHORD IS OMITTED, PURLING MAY HE APPLIED HENEATH THE TOP CHORD OF SUPPORTING TRUSS.	PIGAYBACK BOTTOM CHORD MAY BE ONITTED. ATTACH VERTICAL WEBS TO TRUSS TOP CHORD WITH 1.5X3 PLATE.	TOP AND BOTTOM CHORD SPLICES MUST BE STAGGERED SO THAT ONE SPLICE IS NOT DIRECTLY OVER ANOTHER.	REFER TO SEALED DESIGN FOR DASHED FLATES. SPACE PIGGYBACK VERTICALS AT 4' OC MAX.	EE W	PIGGYBACK DETAIL
SPA	LEE'S	Ī		ATTACH TEETH TO THE PIGCYBACK AT THE TIME OF C ATTACH TEETH TO THE PIGCYBACK AT THE TIME OF PABRICATION. ATTACH TO SUPPORTING TRUSS WITH C (4) 0.120" X 1.375" NAILS PER FACE PER PLY. APPLY PIGCYBACK SPECIAL PLATE TO EACH TRUSS FACE AND SPACE 4" OC OR LESS.		TO 10'	WEB LENGTH	ATTACH TRUGOX PLATES WITH (6) 0.120" X 1.375" Equal, PER FACE PER PLY. (4) NAILS IN EACH DE CONNECTED. REFER TO DRAWING 160 TL FOR INFORMATION.	E	ם	C	в	A	TYPE		
55 PSF 1.33 DUR. 50 PSF 1.25 DUR. 47 PSF 1.15 DUR. .CINC 2	MAX LO		00	TH TO TH ATTACI 1.375" N SPECIAL I SPECIAL I	* 010	1x4 "T" E MEMBER. MEMBER. MEMBER. MEMBER.	WEB B	OX PLATE FACE PER D. REFE	4XB (	5X4	1.5X3	4X8	2X4	30,		
F AT F AT F AT F AT F AT R. FAC. R. FAC. 24.0"	REPLACES DRAWINGS MAX LOADING	8 1/4"	° ° °	E PIGGYI H TO SUP IALS PER LATE TO S.	VDAR C		RAC	PLY.	HOTATED	5X6	1.5X4	5X8	2.5X4	34	SPANS	
DATE -ENG	8			THE FIGERACK SPECIAL FLATE THE FIGEYBACK AT THE TACH TO SUPPORTING TRU 5" NAILS PER FACE PER P AL PLATE TO EACH TRUSS LESS.		1X4 "T" BRACE. SAME GRADE, SPECIES AS MEMBER. OR HEITTER. AND 80% LENGTH OF MEMBER. ATTACH WITH 6d NAILS AT 4 " OC ZX4 "T" BRACE. SAME GRADE, SPECIES MEMBER. OR HEITTER, AND 80% LENGTH OF MEMBER. ATTACH WITH 164 NAILS AT 4 " O	REQUIRED BRACING	H) 0.120 H) NAILS 1 AWING 160	OR 3X6 TRULOX AT 4' HOTATED VEHTICALLY	5X5	1.5X4	5X8	2.6X4	8	UP TO	
DATE 09/12/07 DRWGMITEK STD -ENG JL				LATE THE TIME TRUSS WI R PLY. USS FACE		DE, SPECI 10% LENG 10% LENG 10% LENG	ACING	X 1.375" N EACH I FOR	4' DC, LY	5X4	1.5X4	5X9	335	52'		
STD PIGGY	94,017 & 847,045 PIGGYBACK		້ °	OF TH APPLY AD		ACE. SAME GRADE, SPECIES AS WEB R BETTER, AND 80% LENGTH OF WEE ATLACH WITH 6d NAILS AT 4 ° OC. ATLACH WITH 16d NAILS AT 4 ° OC. ATLACH WITH 16d NAILS AT 4 ° OC.		" NAILS, OR MEMBER TO R THULOX								



	ANNIN I		•	1111			(-																		
11/10/00/00/00	HILL CON FILME	STATE OF	NO. 34869 WAANNAM TRUSSE ROUTE EXTEDE CARE IN FABROATTAE, HANDLING, SIMPPING, INSTALLING AND MACHINE REFER TO SET I-DO GUILLING COPENDATION, SHETY PARTICLES PRIOR TO INSECT VERSIONATION, PUBLISSE DI PT II CRESS MACHINE REFER TO SET I-DO GUILLING COPENDATION, VI 397309 AND VICA NOTI TRUS COUNCIL MACHINE AND REFER TO SET I-DO GUILLING COPENDATION, VI 397309 AND VICA NOTI TRUS COUNCIL MACHINE AND REFER TO SET I-DO GUILLING COPENDATION, VI 397309 AND VICA NOTI TRUS COUNCIL MACHINE AND REFER TO SET I-DO GUILLING COPENDATION, VI 397309 AND VICA NOTI TRUS COUNCIL MACHINE AND REFER TO SET I-DO GUILLING COPENDATION, VI 397309 AND VICA NOTI TRUS COUNCIL MACHINE AND REFER TO SET I-DO GUILLING COPENDATION, VI 397309 AND VICA NOTI TRUS COUNCIL MACHINE AND REFER TO SET I-DO GUILLING COPENDATION, VI 397309 AND VICA NOTI TRUS COUNCIL MACHINE AND REFER TO SET I-DO GUILLING COPENDATION, VI 397309 AND VICA NOTI TRUS COUNCIL MACHINE AND REFER TO SET I-DO GUILLING COPENDATION, VI 397309 AND VICA NOTI TRUS COUNCIL MACHINE AND REFER TO SET I-DO GUILLING COPENDATION, VI 397309 AND VICA NOTI TRUS COUNCIL MACHINE AND REFER TO SET I-DO GUILLING COPENDATION AND TRUS COUNCIL MACHINE AND REFER TO SET I-DO GUILLING COPENDATION AND VICA NOTI TRUS COUNCIL MACHINE AND REFER TO SET I-DO GUILLING COPENDATION AND VICA NOTI TRUS COUNCIL MACHINE AND REFER TO SET I-DO GUILLING COPENDATION AND VICA NOTI TRUS COUNCIL MACHINE AND		MILUS LE MIL		By julius lee at 17:58 am, Jun 11, 2008	MINIMUM 3X6 TRULOX PLATE	્ અ	MIL 3 MIL		11				TRULOX PLATE		SUPPORTING TRUSS		EACEED THE IROLOX PLATE WIDTH.	OR SPRUCE-PINE-FIR C	AIL MAY BE USED WITH SO. FIR CHORDS WITH A MINIMUT	MAY BE OMITTED FROM THESE	11 GAUGE (0.120" X 1.375") NAILS REQUIRED PLATE ATTACHMENT. FILL ROWS COMPLETELY SHOWN (A)	TRULC
		HALL HAVE A PROPERLY A	CARE IN FABRICATING, HAN COMPONENT SAFETY INFORM TE 200, NADISON, VI. 33719 N, VI. 337193 FOR SAFETY I			5X6	3X6	TRULOX RI PLATE N. SIZE PI		TRUSS	UPPORTED	L			1	+	MAA		X			M 1.00 DURATION OF	ROWS.		X(
		- HAVE PROPERLY ATTACHED TTACHED RIGID CELLING	ATCON, SHPPDAG, INSTALLING AND ATCON, PUBLISHED BY TPJ (TRUSS 3) AND VICA (VICUI) TRUSS COUNCIL PRACTICES PRIOR TO PERFORMANC			15 990#	9 350#	REQUIRED NAILS PER TRUSS UP OR DOWN				- E	11	$\overline{\langle}$	X	X		1			>		- 22	FOR TRULOX T WHERE B	CONNECT
	No: 34869 STATE OF FLORIDA		DELRAY BRACK, JL 33444-2161	Sn		)#	#	A LOAD DOWN	 			~		7			TRULO	X	SUPP			RMATION NOT	REFER TO ENGINE	TRULOX PLATE IS BETWEEN NAIL RC	TION
	DA			LEE'S	1,154,944 1,152,217 1,152,017	THIS DRAWING REPLACES DRAWINGS 1,158,989		MINIMUM 5X6 TRULOX PLATE	L'ANT	NIN 3" MIN	0.00					00000	TRULOX PLATE		SUPPORTING TRUSS			SHOWN.	LIMPER PLATES AND	LATE IS CENTERED ON THE CHORI NAIL ROWS.	DETAIL
		-ENG JL	DRWG CNTRULOX1103		-	NGS 1,158,989 1,158,989/R		RULOX PLATE		TRUSS						200			BO° MAX	Z	8		ATTHER OTHER	THE CHORDS AND BENT	

 $(g^{(i)}) \rightarrow a$ 

# MULTIPLE-MEMBER CONNECTIONS FOR SIDE-LOADED BEAMS

		Connector On-Center Spacing	Connector Pattern									
Connector Type	Number of Rows		Assembly A $\frac{1}{2^n}$ $\frac{1}{2^n}$ $\frac{1}{2^n}$ $\frac{1}{34^n}$	Assembly B	Assembly C	Assembly D	Assembly E $\frac{1}{2^n}$ $\frac{1}{2^n}$ $\frac{1}{2^n}$ $\frac{1}{3^n/2^n}$	Assembly F <u>1</u> <u>2</u> " <u>1</u> <u>2</u> " <u>1</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u>				
			3½" 2-ply	5½" 3-ply	51/4" 2-ply	7" 3-ply	7" 2-ply					
10d (0.128" x 3")	2	12"	370	280	280	245						
Nail <sup>(1)</sup>	3	12"	555	415	415	370						
		24"	505	380	520	465	860	340				
1/2" A307 Through Bolts <sup>(2)(4)</sup>	2	19.2"	635	475	655	580	1,075	425				
Iniougn bonts		16"	760	570	785	695	1,290	505				
1. A. A. A.	Market Street	24"	680	510	510	455		and the second				
SDS 1/4" x 31/2"(4)	2	19.2"	850	640	640	565						
	Marine State	16"	1,020	765	765	680						
	<b>建筑建筑</b>	24"				455	465	455				
SDS 1/4" x 6"(3)(4)	2	19.2"				565	580	565				
and a longer	a station of	16"				680	695	680				
		24"	480	360	360	320						
USP WS35 (4)	2	19.2"	600	450	450	400						
1.是住 吃口等的	Service of	16"	715	540	540	480						
		24"				350	525	350				
USP WS6 (3)(4)	2	19.2"				440	660	440				
Section 1997	法有法律 医白	16"				525	790	525				
02/#	in and the second	24"	635	475	475	425						
33/8" TrussLok <sup>(4)</sup>	2	19.2"	795	595	595	530						
HUSSLON-		16"	955	715	715	635						
5"	10.55 10.51	24"		500	500	445	480	445				
5" TrussLok <sup>(4)</sup>	2	19.2"		625	625	555	600	555				
HUSSLON."		16"		750	750	665	725	665				
02/8		24"				445	620	445				
6 <sup>3</sup> /4" TrussLok <sup>(4)</sup>	2	19.2"				555	770	555				
ILUSSEUK."	は国際にする	16"				665	925	665				

# Maximum Uniform Load Applied to Either Outside Member (PLF)

 Nailed connection values may be doubled for 6" on-center or tripled for 4" on-center nail spacing.

(2) Washers required. Bolt holes to be %6" maximum.

- (3) 6\* SDS or WS screws can be used with Parallam<sup>®</sup> PSL and Microllam<sup>®</sup> LVL, but are not recommended for TimberStrand<sup>®</sup> LSL.
- (4) 24" on-center bolted and screwed connection values may be doubled for 12" on-center spacing.

# **General Notes**

- Connections are based on NDS<sup>®</sup> 2005 or manufacturer's code report.
- Use specific gravity of 0.5 when designing lateral connections.
- Values listed are for 100% stress level. Increase 15% for snow-loaded roof conditions or 25% for non-snow roof conditions, where code allows.
- Bold Italic cells indicate Connector Pattern must be installed on both sides. Stagger fasteners on opposite side of beam by ½ the required Connector Spacing.
- Verify adequacy of beam in allowable load tables on pages 16–33.
- 7" wide beams should be side-loaded only when loads are applied to both sides of the members (to minimize rotation).
- Minimum end distance for bolts and screws is 6".
- Beams wider than 7" require special consideration by the design professional.

# **Uniform Load Design Example**



First, check the allowable load tables on pages 16-33 to verify that three pieces can carry the total load of 715 plf with proper live load deflection criteria. Maximum load applied to either outside member is 415 plf. For a 3-ply  $134^{*}$  assembly, two rows of 10d (0.128" x 3") nails at 12" on-center is good for only 280 plf. Therefore, use three rows of 10d (0.128" x 3") nails at 12" on-center (good for 415 plf).

## Alternates:

Two rows of 1/2" bolts or SDS 1/4" x 31/2" screws at 19.2" on-center.


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NOTES: NOTES: NOTES: NOTES: NERVIEW FOR MEN AND TEMPORATIONS FOR PERMENT TO BEAM TEMPORATY REACHED PERMENT TO BEAM TEMPORATY REACHED PERMENT TO BE AND TEMPORATY REACHED PERMENT TO BE AND TEMPORATY REACHED NALL ROOF TRUSHER TO BE COMENTIONALLY A LEAVE DESIGNED FOR 2" or, ALL WALLS SOME OF REACHED FOR 2" or, NALL WALLS SOME OF REACHED FOR 2" or, NALL ROOF TRUSH HANGES TO BE COMENTIONALLY PERMENSION OF TRUSH WALES OTHERWISE NOTED. STAT TRUSSES AND YEAR FOR DESING SOME HITAGE INVESS OTHERWISE NOTED. ALL ROOF TRUSH HANGES TO BE SAMSON HITAGE INVESS OTHERWISE NOTED. ALL ROOF TRUSH HANGES TO BE SAMSON HITAGE INVESS OTHERWISE NOTED. ALL ROOF TRUSH HANGES TO BE SAMSON HITAGE INVESS OTHERWISE NOTED. ALL REACHES AND YEAR FOR THE SAME OF TRUSH HAATZINAL FERMINA ANTIONS AND THE SAME OF TRUSH HAATZINAL SOON THE SALE SORGE FOR FAREIGNANG TRUSH AND TO MER HANDER AND THE INFORMATION WITH THE TOP BUILDER. PHONE: HOUSE TO MARE AGAINST OWNES THAT WELL RESULT IN EXTRA OWNES TO MARE AGAINST OWNES THAT WELL RESULT IN EXTRA OWNES TO ANY TRUSHER AND THE INFORMATION WERE THE AND THE INFORMATION OF TRUSHER ADDRESS ON THE WALE FERSION IN ETTER ADDRESS ON THE SALE SONTONE FROME: HOUSE ADDRESS ON THE WALE RESULT IN EXTRA OWNES TO MARE AGAINST OWNES THAT WELL RESULT IN EXTRA OWNES TO MARE AGAINST OWNES THAT WELL RESULT IN EXTRA OWNES TO MARE AGAINST OWNES THAT WELL RESULT IN EXTRA OWNES TO MARE AGAINST OWNES THAT WELL RESULT IN EXTRA OWNES TO MARE AGAINST OWNES THAT WELL RESULT IN EXTRA OWNES TO MARE AGAINST OWNES THAT WELL RESULT IN EXTRA OWNES TO MARE AGAINST OWNES THAT WELL RESULT IN EXTRA OWNES TO MARE AGAINST OWNES THAT WELL RESULT IN EXTRA OWNES TO THE AGAIN TO MARE AGAINST OWNES THAT WELL RESULT IN EXTRA OWNES ADDRESS ON THE AGAINST OWNES THAT WELL RESULT IN EXTRA OWNES ADDRESS ON THE AGAIN TO THE AGAIN TO	PEARING HEIGHT SCHEDULE

# **Residential System Sizing Calculation**

**Benson Res** 

, FL

Summary Project Title:

1103073aBlakeConstructionBensonRes

Class 3 Rating Registration No. 0 Climate: North

				3/29/2011	
Location for weather data: Gaine	sville - Def	aults: Latit	ude(29) Altitude(152 ft.) Temp Rang	e(M)	
Humidity data: Interior RH (50%	) Outdoor	wet bulb (7	77F) Humidity difference(54gr.)	8 N	
Winter design temperature	33	F	Summer design temperature	92	F
Winter setpoint	70	F	Summer setpoint	75	F
Winter temperature difference	37	F	Summer temperature difference	17	F
Total heating load calculation	42360	Btuh	Total cooling load calculation	37835	Btuh
Submitted heating capacity	% of calc	Btuh	Submitted cooling capacity	% of calc	Btuh
Total (Electric Heat Pump)	118.0	50000	Sensible (SHR = 0.75)	120.9	37500
Heat Pump + Auxiliary(0.0kW)	118.0	50000	Latent	183.5	12500
			Total (Electric Heat Pump)	132.2	50000

#### WINTER CALCULATIONS

#### Winter Heating Load (for 2797 sqft) Load component Load Window total 484 sqft 8954 Btuh Wall total 1506 sqft 4947 Btuh Door total 72 sqft 928 Btuh Ceiling total 3389 sqft 6301 Btuh Floor total See detail report 10013 Btuh Infiltration 277 cfm 11216 Btuh Duct loss 0 Btuh Subtotal 42360 Btuh Ventilation cfm 0 Btuh 0 TOTAL HEAT LOSS Btuh 42360



#### SUMMER CALCULATIONS

Summer Cooling Load (f	or 2797 sq	ft)		
Load component			Load	
Window total	484	sqft	14325	Btuh
Wall total	1506	sqft	3142	Btuh
Door total	72	sqft	703	Btuh
Ceiling total	3389	sqft	4768	Btuh
Floor total			189	Btuh
Infiltration	143	cfm	2655	Btuh
Internal gain			5240	Btuh
Duct gain			0	Btuh
Sens. Ventilation	0	cfm	0	Btuh
Total sensible gain			31022	Btuh
Latent gain(ducts)			0	Btuh
Latent gain(infiltration)			5213	Btuh
Latent gain(ventilation)			0	Btuh
Latent gain(internal/occu	pants/othe	r)	1600	Btuh
Total latent gain			6813	Btuh
TOTAL HEAT GAIN			37835	Btuh



For Florida residences only



EnergyGa	uge® System Sizing	
PREPAR	ED BY:	$\sim$
DATE:	3/29/11	EVAN BOMMENT

EnergyGauge® FLR2PB v4.1

### **System Sizing Calculations - Winter**

Residential Load - Whole House Component Details

**Benson Res** 

, FL

Project Title: 1103073aBlakeConstructionBensonRes Class 3 Rating Registration No. 0 Climate: North

Reference City: Gainesville (Defaults) Winter Temperature Difference: 37.0 F This calculation is for Worst Case. The house has been rotated 315 degrees. 3/29/2011

Component Loads for Whole House

Window	Panes/SHGC/Frame/U	Orientation	Area(sqft) X	HTM=	Load
1	2, SHGC=0.5, Metal, 0.50	NW	44.4	18.5	821 Btuh
2	2, SHGC=0.5, Metal, 0.50	NW	21.3	18.5	394 Btuh
3	2, SHGC=0.5, Metal, 0.50	NW	72.0	18.5	1332 Btuh
4	2, SHGC=0.5, Metal, 0.50	SW	13.3	18.5	246 Btuh
5	2, SHGC=0.5, Metal, 0.50	SW	6.0	18.5	111 Btuh
6	2, SHGC=0.5, Metal, 0.50	SW	10.0	18.5	185 Btuh
7	2, SHGC=0.5, Metal, 0.50	NW	16.0	18.5	296 Btuh
8	2, SHGC=0.5, Metal, 0.50	NW	30.0	18.5	555 Btuh
9	2, SHGC=0.5, Metal, 0.50	NW	30.0	18.5	555 Btuh
10	2, SHGC=0.5, Metal, 0.50	NE	60.0	18.5	1110 Btuh
11	2, SHGC=0.5, Metal, 0.50	NE	15.0	18.5	278 Btuh
12	2, SHGC=0.5, Metal, 0.50	NE	3.0	18.5	56 Btuh
13	2, SHGC=0.5, Metal, 0.50	NE	5.0	18.5	92 Btuh
14	2, SHGC=0.5, Metal, 0.50	SE	26.7	18.5	494 Btuh
15	2, SHGC=0.5, Metal, 0.50	SE	11.1	18.5	205 Btuh
16	2, SHGC=0.5, Metal, 0.50	SE	10.0	18.5	185 Btuh
17	2, SHGC=0.5, Metal, 0.50	SE	42.0	18.5	777 Btuh
18	2, SHGC=0.5, Metal, 0.50	SW	20.0	18.5	370 Btuh
19	2, SHGC=0.5, Metal, 0.50	SW	6.0	18.5	111 Btuh
20	2, SHGC=0.5, Metal, 0.50	SE	25.7	18.5	475 Btuh
21	2, SHGC=0.5, Metal, 0.50	SE	4.5	18.5	83 Btuh
22	2, SHGC=0.5, Metal, 0.50	NW	12.0	18.5	222 Btuh
	Window Total		484(sqft)		8954 Btuh
Walls	Туре	R-Value	Area X	HTM=	Load
1	Frame - Wood - Ext(0.09)	13.0	1506	3.3	4947 Btuh
	Wall Total		1506		4947 Btuh
Doors	Туре		Area X	HTM=	Load
1	Insulated - Adjacent		18	12.9	234 Btuh
2	Insulated - Exterior		20	12.9	260 Btuh
3	Insulated - Exterior		7	12.9	87 Btuh
4	Insulated - Exterior		27	12.9	347 Btuh
	Door Total		72		928Btuh
Ceilings	Type/Color/Surface	<b>R-Value</b>	Area X	HTM=	Load
1	Single Assembly/D/Shin)	19.0	3389	1.9	6301 Btuh
	Ceiling Total		3389		6301Btuh
Floors	Туре	<b>R-Value</b>	Size X	HTM=	Load
1	Raised Wood - Adj	19	314.0 sqft	1.9	583 Btuh
2	Slab On Grade	0	216.0 ft(p)	43.7	9431 Btuh
	Floor Total		530		10013 Btuh
		Z	one Envelope Su	btotal:	31143 Btuh

#### **Manual J Winter Calculations**

Residential Load - Component Details (continued)

**Benson Res** 

, FL

Project Title: 1103073aBlakeConstructionBensonRes Class 3 Rating Registration No. 0 Climate: North

3/29/2011

Infiltration	Type Natural	ACH X 0.66	Zone Volume 25173	CFM= 276.9	11216 Btuh
Ductload	Unsealed, R6.0, St	upply(Cond.), Return(C	ond)	(DLM of 0.00)	0 Btuh
Zone #1		Sensible Zone Subtotal		42360 Btuh	

#### WHOLE HOUSE TOTALS

Subtotal Sensible Ventilation Sensible Total Btuh Loss	42360 Btuh 0 Btuh 42360 Btuh

Key: Window types (SHGC - Shading coefficient of glass as SHGC numerical value or as clear or tint) (Frame types - metal, wood or insulated metal)

(U - Window U-Factor or 'DEF' for default)

(HTM - ManualJ Heat Transfer Multiplier)

Key: Floor size (perimeter(p) for slab-on-grade or area for all other floor types )



# **System Sizing Calculations - Winter**

Residential Load - Room by Room Component Details

**Benson Res** 

Project Title: 1103073aBlakeConstructionBensonRes

, FL

r

Class 3 Rating Registration No. 0 Climate: North

Reference City: Gainesville (Defaults) Winter Temperature Difference: 37.0 F This calculation is for Worst Case. The house has been rotated 315 degrees. 3/29/2011

Component	Loads	for Zone	#1: Main
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Window	Panes/SHGC/Frame/U	Orientation	Area(sqft) X	HTM=	Load
1	2, SHGC=0.5, Metal, 0.50	NW	44.4	18.5	821 Btuh
2	2, SHGC=0.5, Metal, 0.50	NW	21.3	18.5	394 Btuh
3	2, SHGC=0.5, Metal, 0.50	NW	72.0	18.5	1332 Btuh
4	2, SHGC=0.5, Metal, 0.50	SW	13.3	18.5	246 Btuh
5	2, SHGC=0.5, Metal, 0.50	SW	6.0	18.5	111 Btuh
6	2, SHGC=0.5, Metal, 0.50	SW	10.0	18.5	185 Btuh
7	2, SHGC=0.5, Metal, 0.50	NW	16.0	18.5	296 Btuh
8	2, SHGC=0.5, Metal, 0.50	NW	30.0	18.5	555 Btuh
9	2, SHGC=0.5, Metal, 0.50	NW	30.0	18.5	555 Btuh
10	2, SHGC=0.5, Metal, 0.50	NE	60.0	18.5	1110 Btuh
11	2, SHGC=0.5, Metal, 0.50	NE	15.0	18.5	278 Btuh
12	2, SHGC=0.5, Metal, 0.50	NE	3.0	18.5	56 Btuh
13	2, SHGC=0.5, Metal, 0.50	NE	5.0	18.5	92 Btuh
14	2, SHGC=0.5, Metal, 0.50	SE	26.7	18.5	494 Btuh
15	2, SHGC=0.5, Metal, 0.50	SE	11.1	18.5	205 Btuh
16	2, SHGC=0.5, Metal, 0.50	SE	10.0	18.5	185 Btuh
17	2, SHGC=0.5, Metal, 0.50	SE	42.0	18.5	777 Btuh
18	2, SHGC=0.5, Metal, 0.50	SW	20.0	18.5	370 Btuh
19	2, SHGC=0.5, Metal, 0.50	SW	6.0	18.5	111 Btuh
20	2, SHGC=0.5, Metal, 0.50	SE	25.7	18.5	475 Btuh
21	2, SHGC=0.5, Metal, 0.50	SE	4.5	18.5	83 Btuh
22	2, SHGC=0.5, Metal, 0.50	NW	12.0	18.5	222 Btuh
73149	Window Total		484(sqft)		8954 Btuh
Walls	Туре	<b>R-Value</b>	Area X	HTM=	Load
1	Frame - Wood - Ext(0.09)	13.0	1506	3.3	4947 Btuh
	Wall Total		1506		4947 Btuh
Doors	Туре		Area X	HTM=	Load
1	Insulated - Adjacent		18	12.9	234 Btuh
2	Insulated - Exterior		20	12.9	260 Btuh
3	Insulated - Exterior		7	12.9	87 Btuh
4	Insulated - Exterior		27	12.9	347 Btuh
	Door Total		72		928Btuh
Ceilings	Type/Color/Surface	<b>R-Value</b>	Area X	HTM=	Load
1	Single Assembly/D/Shin)	19.0	3389	1.9	6301 Btuh
	Ceiling Total		3389		6301Btuh
Floors	Туре	<b>R-Value</b>	Size X	HTM=	Load
1	Raised Wood - Adj	19	314.0 sqft	1.9	583 Btuh
2	Slab On Grade	0	216.0 ft(p)	43.7	9431 Btuh
	Floor Total		530		10013 Btuh
		Z	Cone Envelope Su	ibtotal:	31143 Btuh

### **Manual J Winter Calculations**

Residential Load - Component Details (continued) Project Title: Clas

Benson Res

, FL

1103073aBlakeConstructionBensonRes

Class 3 Rating Registration No. 0 Climate: North

3/29/2011

Zone #1		Sensible Zone Subtotal		42360 Btuh	
Ductload	Unsealed, R6.0, Su	ed, R6.0, Supply(Cond.), Return(Cond)		(DLM of 0.00)	0 Btuh
Infiltration	Type Natural	ACH X 0.66	Zone Volume 25173	CFM= 276.9	11216 Btuh

#### WHOLE HOUSE TOTALS

Subtotal Sensible	42360 Btuh
Ventilation Sensible	0 Btuh
Total Btuh Loss	42360 Btuh

Key: Window types (SHGC - Shading coefficient of glass as SHGC numerical value or as clear or tint) (Frame types - metal, wood or insulated metal)

(U - Window U-Factor or 'DEF' for default)

(HTM - ManualJ Heat Transfer Multiplier)

Key: Floor size (perimeter(p) for slab-on-grade or area for all other floor types )



# **System Sizing Calculations - Summer**

Residential Load - Whole House Component Details

**Benson Res** 

Project Title: 1103073aBlakeConstructionBensonRes

, FL

onRes

Class 3 Rating Registration No. 0 Climate: North

Reference City: Gainesville (Defaults) Summer Temperature Difference: 17.0 F This calculation is for Worst Case. The house has been rotated 315 degrees. 3/29/2011

**Component Loads for Whole House** 

	Type*		Over	hang	Wine	dow Area	a(sqft)	H	ITM	Load	
Window	Pn/SHGC/U/InSh/ExSh/IS	Ornt	Len	Hgt	Gross	Shaded	Unshaded	Shaded	Unshaded		
1	2, SHGC=0.5, 0.50, None,N,N	NW	1.5ft	9ft.	44.4	0.0	44.4	19	19	847	Btul
2	2, SHGC=0.5, 0.50, None,N,N	NW	1.5ft	2ft.	21.3	0.0	21.3	19	19	406	Btul
3	2, SHGC=0.5, 0.50, None,N,N	NW	1.5ft	7ft.	72.0	0.0	72.0	19	19	1373	Btul
4	2, SHGC=0.5, 0.50, None,N,N	SW	1.5ft	8ft.	13.3	0.0	13.3	19	57	755	Btu
5	2, SHGC=0.5, 0.50, None,N,N	SW	1.5ft	2ft.	6.0	3.7	2.3	19	57	200	Btu
6	2, SHGC=0.5, 0.50, None,N,N	SW	1.5ft	7ft.	10.0	0.0	10.0	19	57	568	Btu
7	2, SHGC=0.5, 0.50, None,N,N	NW	Oft.	Oft.	16.0	0.0	16.0	19	19	305	Btu
8	2, SHGC=0.5, 0.50, None,N,N	NW	1.5ft	7ft.	30.0	0.0	30.0	19	19	572	Btu
9	2, SHGC=0.5, 0.50, None,N,N	NW	Oft.	Oft.	30.0	0.0	30.0	19	19	572	Btu
10	2, SHGC=0.5, 0.50, None,N,N	NE	1.5ft	7ft.	60.0	0.0	60.0	19	57	3408	Btu
11	2, SHGC=0.5, 0.50, None,N,N	NE	1.5ft	7ft.	15.0	0.0	15.0	19	57	852	Btu
12	2, SHGC=0.5, 0.50, None,N,N	NE	1.5ft	3ft.	3.0	0.0	3.0	19	57	170	Btu
13	2, SHGC=0.5, 0.50, None,N,N	NE	1.5ft	3ft.	5.0	0.0	5.0	19	57	284	Btu
14	2, SHGC=0.5, 0.50, None,N,N	SE	7.16	7ft.	26.7	26.7	0.0	19	23	509	Btu
15	2, SHGC=0.5, 0.50, None,N,N	SE	7ft.	9ft.	11.1	11.1	0.0	19	23	212	Btu
16	2, SHGC=0.5, 0.50, None,N,N	SE	7ft.	3ft.	10.0	10.0	0.0	19	23	191	Btu
17	2, SHGC=0.5, 0.50, None,N,N	SE	1.5ft	7ft.	42.0	42.0	0.0	19	23	801	Btu
18	2, SHGC=0.5, 0.50, None,N,N	SW	1.5ft	7ft.	20.0	0.0	20.0	19	57	1136	Btu
19	2, SHGC=0.5, 0.50, None,N,N	SW	1.5ft	5ft.	6.0	0.0	6.0	19	57	341	Btu
20	2, SHGC=0.5, 0.50, None,N,N	SE	1.5ft	5ft.	25.7	25.7	0.0	19	23	490	Btu
21	2, SHGC=0.5, 0.50, None,N,N	SE	Oft.	Oft.	4.5	0.0	4.5	19	23	102	Btu
22	2, SHGC=0.5, 0.50, None,N,N	NW	Oft.	Oft.	12.0	0.0	12.0	19	19	229	Btu
VA/-11-	Window Total		DV	1 /1	484 (		( ())		1.177.1.4	14325	Btu
Walls	Туре		R-Va		-Value		(sqft)		HTM	Load	
1	Frame - Wood - Ext			13.0/	0.09	150			2.1	3142	
	Wall Total					1506 (sqft)				3142	Btu
Doors	Туре					Area	(sqft)		HTM	Load	
1	Insulated - Adjacent					18	.1		9.8	177	Btu
2	Insulated - Exterior					20	.1		9.8	197	Btu
3	Insulated - Exterior					6.	7		9.8	66	Btu
4	Insulated - Exterior					26	.8		9.8	263	Btu
	Door Total					7	2 (sqft)			703	Btul
eilings	Type/Color/Surface		R-Va	alue		Area			HTM	Load	
1	Single Assembly/DarkShingle			19.0		338			1.4	4768	Btu
	Ceiling Total			10.0			9 (sqft)			4768	
Floors	Туре		R-Va	alue		Siz			HTM	Load	210
1	Raised Wood - Adi			19.0					0.6	189	Btul
2	Slab On Grade			0.0			4 (sqft)		0.0		Btul
2				0.0			6 (ft(p))		0.0		
	Floor Total					530.	0 (sqft)			189	Btul
						Zo	one Enve	elope Su	ibtotal:	23127	Btul

Residential Load - Component Details (continued) Project Title: Class 1103073aBlakeConstructionBensonRes Reg Class 3 Rating Registration No. 0

Benson Res

, FL

Climate: North 3/29/2011

	Sensible Zone Load 31022 Btuh							Btuh
Duct load	Unsealed, R6.0, Sup	oly(Conditioned), Return	n(Condi	tioned)		DGM = 0.00	0.0	Btuh
gain		8	X	230	+	3400	5240	Btuh
Internal		Occupants	Btu	uh/occup	ant	Appliance	Load	
	SensibleNatural	0.34		25173		142.6	2655	Btuh
Infiltration	Type	ACH	Volume(cuft)			CFM=	Load	

Residential Load - Component Details (continued)

Benson Res

, FL

Project Title: 1103073aBlakeConstructionBensonRes Class 3 Rating Registration No. 0 Climate: North

3/29/2011

#### WHOLE HOUSE TOTALS

	Sensible Envelope Load All Zones	31022	Btuh
	Sensible Duct Load	0	Btuh
	Total Sensible Zone Loads	31022	Btuh
	Sensible ventilation		Btuh
	Blower	0	Btuh
Whole House	Total sensible gain	31022	Btuh
<b>Totals for Cooling</b>	Latent infiltration gain (for 54 gr. humidity difference)	5213	Btuh
	Latent ventilation gain	0	Btuh
2	Latent duct gain	0	Btuh
	Latent occupant gain (8 people @ 200 Btuh per person)	1600	Btuh
	Latent other gain	0	Btuh
	Latent total gain	6813	Btuh
	TOTAL GAIN	37835	Btuh

\*Key: Window types (Pn - Number of panes of glass)

(SHGC - Shading coefficient of glass as SHGC numerical value or as clear or tint) (U - Window U-Factor or 'DEF' for default) (InSh - Interior shading device: none(N), Blinds(B), Draperies(D) or Roller Shades(R)) (ExSh - Exterior shading device: none(N) or numerical value) (BS - Insect screen: none(N), Full(F) or Half(H)) (Ornt - compass orientation)



### **System Sizing Calculations - Summer**

Residential Load - Room by Room Component Details

**Benson Res** 

Project Title: 1103073aBlakeConstructionBensonRes

, FL

les

Class 3 Rating Registration No. 0 Climate: North

Reference City: Gainesville (Defaults) Summer Temperature Difference: 17.0 F This calculation is for Worst Case. The house has been rotated 315 degrees.

3/29/2011

Component Loads for Zone #1: Main

	Type*		Over	hang	Win	dow Area	a(sqft)	H	ITM	Load	
Window	Pn/SHGC/U/InSh/ExSh/IS	Ornt	Len	Hqt	Gross	Shaded	Unshaded	Shaded	Unshaded		
1	2, SHGC=0.5, 0.50, None,N,N	NW	1.5ft	9ft.	44.4	0.0	44.4	19	19	847	Btul
2	2, SHGC=0.5, 0.50, None,N,N	NW	1.5ft	2ft.	21.3	0.0	21.3	19	19	406	Btul
3	2, SHGC=0.5, 0.50, None,N,N	NW	1.5ft	7ft.	72.0	0.0	72.0	19	19	1373	Btul
4	2, SHGC=0.5, 0.50, None,N,N	SW	1.5ft	8ft.	13.3	0.0	13.3	19	57	755	Btul
5	2, SHGC=0.5, 0.50, None,N,N	SW	1.5ft	2ft.	6.0	3.7	2.3	19	57	200	Btul
6	2, SHGC=0.5, 0.50, None,N,N	SW	1.5ft	7ft.	10.0	0.0	10.0	19	57	568	Btul
7	2, SHGC=0.5, 0.50, None,N,N	NW	Oft.	Oft.	16.0	0.0	16.0	19	19	305	Btul
8	2, SHGC=0.5, 0.50, None,N,N	NW	1.5ft	7ft.	30.0	0.0	30.0	19	19	572	Btu
9	2, SHGC=0.5, 0.50, None,N,N	NW	Oft.	Oft.	30.0	0.0	30.0	19	19	572	Btu
10	2, SHGC=0.5, 0.50, None,N,N	NE	1.5ft	7ft.	60.0	0.0	60.0	19	57	3408	Btu
11	2, SHGC=0.5, 0.50, None,N,N	NE	1.5ft	7ft.	15.0	0.0	15.0	19	57	852	Btu
12	2, SHGC=0.5, 0.50, None,N,N	NE	1.5ft	3ft.	3.0	0.0	3.0	19	57	170	Btul
13	2, SHGC=0.5, 0.50, None,N,N	NE	1.5ft	3ft.	5.0	0.0	5.0	19	57	284	Btul
14	2, SHGC=0.5, 0.50, None,N,N	SE	7.16	7ft.	26.7	26.7	0.0	19	23	509	Btu
15	2, SHGC=0.5, 0.50, None,N,N	SE	7ft.	9ft.	11.1	11.1	0.0	19	23	212	Btu
16	2, SHGC=0.5, 0.50, None,N,N	SE	7ft.	3ft.	10.0	10.0	0.0	19	23	191	Btu
17	2, SHGC=0.5, 0.50, None,N,N	SE	1.5ft	7ft.	42.0	42.0	0.0	19	23	801	Btu
18	2, SHGC=0.5, 0.50, None,N,N	SW	1.5ft	7ft.	20.0	0.0	20.0	19	57	1136	Btu
19	2, SHGC=0.5, 0.50, None,N,N	SW	1.5ft	5ft.	6.0	0.0	6.0	19	57	341	Btu
20	2, SHGC=0.5, 0.50, None,N,N	SE	1.5ft	5ft.	25.7	25.7	0.0	19	23	490	Btu
21	2, SHGC=0.5, 0.50, None,N,N	SE	Oft.	Oft.	4.5	0.0	4.5	19	23	102	Btu
22	2, SHGC=0.5, 0.50, None,N,N	NW	Oft.	Oft.	12.0	0.0	12.0	19	19	229	Btu
	Window Total				484 (	sqft)				14325	Btu
Walls	Туре		R-Va	alue/U	-Value	Area	(sqft)		HTM	Load	
1	Frame - Wood - Ext			13.0/	0.09	150	6.3		2.1	3142	Btu
	Wall Total		2.5.5 BU BU BU BU		1506 (sqft)				3142 Btu		
Doors	Туре					Area			HTM	Load	
1	Insulated - Adjacent					18			9.8	177	Btu
2	Insulated - Exterior					20			9.8	197	Btu
3	Insulated - Exterior					6.7 9.8			And the second sec	66	Btul
4	Insulated - Exterior						26.8 9.8				Btul
	Door Total						2 (sqft)			703	
Ceilings	Type/Color/Surface		R-Va	alue		Area(sqft)			HTM	Load	-
1	Single Assembly/DarkShingle			19.0		3389.0			1.4	4768	Btu
	Ceiling Total					338	9 (sqft)			4768	
Floors	Туре		R-Va	lue		Si			HTM	Load	
1	Raised Wood - Adj			19.0		31	4 (sqft)		0.6	189	Btul
2	Slab On Grade			0.0			6 (ft(p))		0.0		Btul
	Floor Total			0.0			0 (sqft)		0.0	189	
						550.	o (sqit)			109	Diul
						Zo	one Enve	elope Su	btotal:	23127	Btuł

Residential Load - Component Details (continued)

Benson Res

, FL

1103073aBlakeConstructionBensonRes

Class 3 Rating Registration No. 0 Climate: North

3/29/2011

Туре	ACH	V		uft)	CFM=	Load	
SensibleNatural	0.34		25173		142.6	2655	Btuh
	Occupants	Btu	uh/occup	ant	Appliance	Load	
	8	Х	230	+	3400	5240	Btuh
Unsealed, R6.0,	Supply(Conditioned), Return	n(Condi	tioned)		DGM = 0.00	0.0	Btuh
Sensible Zone Load							Btuh
	SensibleNatural	SensibleNatural 0.34 Occupants 8	SensibleNatural 0.34 Occupants Btu 8 X	SensibleNatural     0.34     25173       Occupants     Btuh/occup       8     X     230       Unsealed, R6.0, Supply(Conditioned), Return(Conditioned)     Notes	SensibleNatural 0.34 25173   Occupants Btuh/occupant   8 X 230   Unsealed, R6.0, Supply(Conditioned), Return(Conditioned)	SensibleNatural0.3425173142.6OccupantsBtuh/occupantAppliance8X230+3400Unsealed, R6.0, Supply(Conditioned), Return(Conditioned)DGM = 0.00	SensibleNatural0.3425173142.62655OccupantsBtuh/occupantApplianceLoad8X230+34005240Unsealed, R6.0, Supply(Conditioned), Return(Conditioned)DGM = 0.000.0

Residential Load - Component Details (continued)

**Benson Res** 

, FL

Project Title: 1103073aBlakeConstructionBensonRes Class 3 Rating Registration No. 0 Climate: North

3/29/2011

#### WHOLE HOUSE TOTALS

	Sensible Envelope Load All Zones	31022	Btuh
	Sensible Duct Load	0	Btuh
	Total Sensible Zone Loads	31022	Btuh
	Sensible ventilation		Btuh
	Blower		Btuh
Whole House	Total sensible gain	31022	Btuh
Totals for Cooling	Latent infiltration gain (for 54 gr. humidity difference)	5213	Btuh
	Latent ventilation gain	0	Btuh
	Latent duct gain	0	Btuh
	Latent occupant gain (8 people @ 200 Btuh per person)	1600	Btuh
	Latent other gain	0	Btuh
	Latent total gain	6813	Btuh
	TOTAL GAIN	37835	Btuh

\*Key: Window types (Pn - Number of panes of glass) (SHGC - Shading coefficient of glass as SHGC numerical value or as clear or tint) (U - Window U-Factor or 'DEF' for default) (InSh - Interior shading device: none(N), Blinds(B), Draperies(D) or Roller Shades(R)) (ExSh - Exterior shading device: none(N) or numerical value) (BS - Insect screen: none(N), Full(F) or Half(H)) (Ornt - compass orientation)



# **Residential Window Diversity**

MidSummer

Project Title: 1103073aBlakeConstructionBensonRes Class 3 Rating Registration No. 0 Climate: North

3/29/2011

Weather data for: Gainesville - Defaults						
Summer design temperature	92	F	Average window load for July	13264 Btu		
Summer setpoint	75	F	Peak window load for July	15595 Btu		
Summer temperature difference	17	F	Excusion limit(130% of Ave.)	17244 Btu		
Latitude	29	North	Window excursion (July)	None		

#### WINDOW Average and Peak Loads



The midsummer window load for this house does not exceed the window load excursion limit. This house has adequate midsummer window diversity.

EnergyGauge® System Sizing for Florida residences only	
PREPARED BY:	1.001
DATE: 3/29/11 EVAN DEAMGLEY	MANUAL

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Benson Res

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Notice of Treatment
Applicator:   Florida Pest Control & Chemical Co. (www.flapest.com)     Address:
Site Location: Subdivision     Lot #Block#Permit # 29290     Address
Product usedActive Ingredient% ConcentrationPremiseImidacloprid0.1%
Termidor Fipronil 0.12%
Bora-Care   Disodium Octaborate Tetrahydrate   23.0%     Type treatment:   Soil   Wood
Area Treated Square feet Linear feet Gallons Applied   DWEUMC 2568 230 200
As per Florida Building Code 104.2.6 – If soil chemical barrier method for termite prevention is used, final exterior treatment shall be completed prior to final building approval.
If this notice is for the final exterior treatment, initial this line
Remarks:
Applicator - White Permit File - Canary Permit Holder - Pink