DATE 08/05/2008

Columbia County Building Permit

This Permit Must Be Prominently Posted on Premises During Construction

PERMIT
000027240

APPLICANT MORRIS BOWLING PHONE 497-3108

ADDRESS 229 SW BLUEGRASS COURT FT. WHITE FL 32038

OWNER MORRIS BOWLING PHONE 497-3108

ADDRESS 229 SW BLUEGRASS COURT FT. WHITE FL 32038

CONTRACTOR MORRIS BOWLING PHONE 497-3108

LOCATION OF PROPERTY 47S, TL ON 27, TR ON FRY ROAD, TR ON CUMBERLAND, TR ON BLUEGRASS, 2ND LOT ON RIGHT.

TYPE DEVELOPMENT SFD,UTILITY ESTIMATED COST OF CONSTRUCTION 110000.00

HEATED FLOOR AREA 1700.00 TOTAL AREA 2200.00 HEIGHT STORIES 1

FOUNDATION CONC WALLS FRAMED ROOF PITCH 6/12 FLOOR SLAB

LAND USE & ZONING A-3 MAX. HEIGHT 20

Minimum Set Back Requirments: STREET-FRONT 30.00 REAR 25.00 SIDE 25.00

NO. EX.D.U. 0 FLOOD ZONE X DEVELOPMENT PERMIT NO.

PARCEL ID 15-7S-16-04226-136 SUBDIVISION SHILOH RIDGE

LOT 36 BLOCK PHASE UNIT TOTAL ACRES 10.00

Culvert Permit No.	Culvert Waiver	Contractor's License Number	Morris D. Bowling	Applicant/Owner/Contractor
EXISTING	08-524	BK	WR	N
Driveway Connection	Septic Tank Number	LU & Zoning checked by	Approved for Issuance	New Resident

COMMENTS: ONE FOOT ABOVE THE ROAD
MH MUST BE REMOVED 45 DAYS AFTER CO ISSUANCE.

Check # or Cash 161

FOR BUILDING & ZONING DEPARTMENT ONLY

(footer/Slab)

Temporary Power _____ date/app. by Foundation _____ date/app. by Monolithic _____ date/app. by

Under slab rough-in plumbing _____ date/app. by Slab _____ date/app. by Sheathing/Nailing _____ date/app. by

Framing _____ date/app. by Rough-in plumbing above slab and below wood floor _____ date/app. by

Electrical rough-in _____ date/app. by Heat & Air Duct _____ date/app. by Peri. beam (Lintel) _____ date/app. by

Permanent power _____ date/app. by C.O. Final _____ date/app. by Culvert _____ date/app. by

M/H tie downs, blocking, electricity and plumbing _____ date/app. by Pool _____ date/app. by

Reconnection _____ date/app. by Pump pole _____ date/app. by Utility Pole _____ date/app. by

M/H Pole _____ date/app. by Travel Trailer _____ date/app. by Re-roof _____ date/app. by

BUILDING PERMIT FEE $ 550.00 CERTIFICATION FEE $ 11.00 SURCHARGE FEE $ 11.00

MISC. FEES $ 0.00 ZONING CERT. FEE $ 50.00 FIRE FEE $ 0.00 WASTE FEE $

FLOOD DEVELOPMENT FEE $ FLOOD ZONE FEE $ 25.00 CULVERT FEE $ **TOTAL FEE** 647.00

INSPECTORS OFFICE Gale Tedder CLERKS OFFICE CH

NOTICE: IN ADDITION TO THE REQUIREMENTS OF THIS PERMIT, THERE MAY BE ADDITIONAL RESTRICTIONS APPLICABLE TO THIS PROPERTY THAT MAY BE FOUND IN THE PUBLIC RECORDS OF THIS COUNTY. AND THERE MAY BE ADDITIONAL PERMITS REQUIRED FROM OTHER GOVERNMENTAL ENTITIES SUCH AS WATER MANAGEMENT DISTRICTS, STATE AGENCIES, OR FEDERAL AGENCIES.

"WARNING TO OWNER: YOUR FAILURE TO RECORD A NOTICE OF COMMENCEMENT MAY RESULT IN YOUR PAYING TWICE FOR 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 TO BE IN ACTIVE PROGESS WHEN THE PERMIT HAS RECIEVED AN APPROVED INSPECTION WITHIN 180 DAYS.

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

161

Columbia County Building Permit Application

For Office Use Only Application # 0806-35 Date Received 6/20 By JW Permit # 27240

Zoning Official BLK Date 7.07.08 Flood Zone X FEMA Map # N/A Zoning A-3

Land Use A-3 Elevation N/A MFE 1st floor easement River N/A Plans Examiner (WR) Date 7/9/08

Comments ~~Affidavit~~ Affidavit Attached. Impact Fee

□ NOC □ EH □ ~~Deed~~ or PA □ Site Plan □ State Road Info □ Parent Parcel #

□ Dev Permit # □ In Floodway □ Letter of Authorization from Contractor

□ Unincorporated area □ Incorporated area □ Town of Fort White □ Town of Fort White Compliance letter

* IMPACT FEE EXEMPT. EXISTING MH to be REMOVED 45 DAYS after CO. ISSUANCE

Name Authorized Person Signing Permit Morris D. Bowling Phone 386-497-3108 Fax

Address 229 S.W. Bluegrass ct. Ft. White FL. 32038

Owners Name SAME Phone

911 Address SAME

Contractors Name SAME Phone

Address

Fee Simple Owner Name & Address

Bonding Co. Name & Address N/A

Architect/Engineer Name & Address William Myers P.O. Box 1513 Lk. City FL 32056

Mortgage Lenders Name & Address N/A

Circle the correct power company – FL Power & Light – (Clay Elec.) – Suwannee Valley Elec. – Progress Energy

Property ID Number 15-7S-16-04226-136 Estimated Cost of Construction 142000

Subdivision Name Shiloh Ridge Lot 36 Block Unit Phase

Driving Directions S. on S.R. 47 to Ft. White. East on S.R. 27 1 mile to Fry Rd. South 2.2 miles on Fry Rd. to Cumberland Rd, West 1/4 mile to Bluegrass, N. to 229 Number of Existing Dwellings on Property * 1

Construction of SFD Total Acreage 10.02 Lot Size

Do you need a - Culvert Permit or Culvert Waiver or (Have an Existing Drive) Total Building Height 20'

Actual Distance of Structure from Property Lines - Front 315' Side 338 Side 324 Rear 343

Number of Stories 1 Heated Floor Area 1700 Total ~~Heated~~ Floor Area 2,200 ~~1700~~ Roof Pitch 12'/6"

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.

JW called - spoke w/ Ms. Bowling 7.17.08

Columbia County Building Permit Application

TIME LIMITATIONS OF APPLICATION : 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.

FLORIDA'S CONSTRUCTION LIEN LAW: Protect Yourself and Your Investment

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, even if you have paid your contractor in full. This means if a lien is filed against your property, it could be sold against your will to pay for labor, materials or other services which your contractor may have failed to pay.

NOTICE OF RESPONSIBILITY TO BUILDING PERMITEE:

YOU ARE HEREBY NOTIFIED 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 hereby certify that all the foregoing information is accurate and all work will be done in compliance with all applicable laws and regulating construction and zoning. I further understand the above written responsibilities in Columbia County for obtaining this Building Permit.

Morris D. Bowling

Owners Signature

CONTRACTORS AFFIDAVIT: 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.

Contractor's Signature (Permitee)

Contractor's License Number_____
Columbia County
Competency Card Number_____

Affirmed under penalty of perjury to by the Contractor and subscribed before me this ____ day of _____ 20___.

Personally known_____ or Produced Identification_____

SEAL:

State of Florida Notary Signature (For the Contractor)

FORM 600A-2004R EnergyGauge® 4.5.2

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Community Affairs

Residential Whole Building Performance Method A

Project Name:	**Bowling Residence**	Builder:	
Address:	**229 SW Bluegrass Court**	Permitting Office:	Columbia
City, State:	**Fort White, FL**	Permit Number:	27240
Owner:		Jurisdiction Number:	221000
Climate Zone:	**North**		

1. New construction or existing	New	12. Cooling systems	
2. Single family or multi-family	Single family	a. Central Unit	Cap: 32.0 kBtu/hr
3. Number of units, if multi-family	1		SEER: 13.00
4. Number of Bedrooms	3	b. N/A	
5. Is this a worst case?	No		
6. Conditioned floor area (ft²)	1700 ft²	c. N/A	
7. Glass type[1] and area: (Label reqd. by 13-104.4.5 if not default)			
a. U-factor:	Description Area	13. Heating systems	
(or Single or Double DEFAULT) 7a.	(Dble Default) 206.8 ft²	a. Electric Heat Pump	Cap: 32.0 kBtu/hr
b. SHGC:			HSPF: 7.70
(or Clear or Tint DEFAULT) 7b.	(Clear) 206.8 ft²	b. N/A	
8. Floor types			
a. Slab-On-Grade Edge Insulation	R=5.0, 168.0(p) ft	c. N/A	
b. N/A			
c. N/A		14. Hot water systems	
9. Wall types		a. Electric Resistance	Cap: 50.0 gallons
a. Log, 6 inch, Exterior	R=5.0, 1117.2 ft²		EF: 0.90
b. N/A		b. N/A	
c. N/A			
d. N/A		c. Conservation credits	
e. N/A		(HR-Heat recovery, Solar DHP-Dedicated heat pump)	
10. Ceiling types		15. HVAC credits	PT,
a. Under Attic	R=30.0, 1800.0 ft²	(CF-Ceiling fan, CV-Cross ventilation, HF-Whole house fan, PT-Programmable Thermostat, MZ-C-Multizone cooling, MZ-H-Multizone heating)	
b. N/A			
c. N/A			
11. Ducts			
a. Sup: Unc. Ret: Unc. AH: Interior	Sup. R=6.0, 45.0 ft		
b. N/A			

Glass/Floor Area: 0.12	Total as-built points: 19713 Total base points: 23036	PASS

I hereby certify that the plans and specifications covered by this calculation are in compliance with the Florida Energy Code.

PREPARED BY: _____

DATE: 3-11-08

I hereby certify that this building, as designed, is in compliance with the Florida Energy Code.

OWNER/AGENT: _____

DATE: _____

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.

BUILDING OFFICIAL: _____

DATE: _____

1 Predominant glass type. For actual glass type and areas, see Summer & Winter Glass output on pages 2&4.

SUMMER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: **229 SW Bluegrass Court, Fort White, FL,** PERMIT #:

BASE				AS-BUILT								
GLASS TYPES .18 X Conditioned Floor Area	X BSPM	= Points		Type/SC	Overhang Ornt	Len	Hgt	Area X	SPM X	SOF	= Points	
.18	1700.0	18.59	5689.0	1.Double, Clear	W	1.5	8.0	30.6	38.52	0.96	1129.0	
				2.Double, Clear	W	1.5	8.0	80.0	38.52	0.96	2952.0	
				3.Double, Clear	N	1.5	8.0	15.3	19.20	0.97	284.0	
				4.Double, Clear	E	9.5	8.0	16.0	42.06	0.47	317.0	
				5.Double, Clear	E	9.5	8.0	30.6	42.06	0.47	606.0	
				6.Double, Clear	S	1.5	8.0	30.6	35.87	0.92	1013.0	
				7.Double, Clear	S	1.5	8.0	3.7	35.87	0.92	120.0	
				As-Built Total:				**206.8**			**6421.0**	
WALL TYPES	Area X	BSPM =	Points	Type			R-Value	Area X	SPM =		Points	
Adjacent	0.0	0.00	0.0	1. Log, 6 inch, Exterior			5.0	1117.2	0.90		1005.5	
Exterior	1117.2	1.70	1899.2									
Base Total:	**1117.2**		**1899.2**	**As-Built Total:**				**1117.2**			**1005.5**	
DOOR TYPES	Area X	BSPM =	Points	Type				Area X	SPM =		Points	
Adjacent	0.0	0.00	0.0	1.Exterior Insulated				20.0	4.10		82.0	
Exterior	20.0	6.10	122.0									
Base Total:	**20.0**		**122.0**	**As-Built Total:**				**20.0**			**82.0**	
CEILING TYPES	Area X	BSPM =	Points	Type			R-Value	Area X	SPM X SCM =		Points	
Under Attic	1700.0	1.73	2941.0	1. Under Attic			30.0	1800.0	1.73 X 1.00		3114.0	
Base Total:	**1700.0**		**2941.0**	**As-Built Total:**				**1800.0**			**3114.0**	
FLOOR TYPES	Area X	BSPM =	Points	Type			R-Value	Area X	SPM =		Points	
Slab	168.0(p)	-37.0	-6216.0	1. Slab-On-Grade Edge Insulation			5.0	168.0(p	-36.20		-6081.6	
Raised	0.0	0.00	0.0									
Base Total:			**-6216.0**	**As-Built Total:**				**168.0**			**-6081.6**	
INFILTRATION	Area X	BSPM =	Points					Area X	SPM =		Points	
	1700.0	10.21	17357.0					1700.0	10.21		17357.0	

SUMMER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: **229 SW Bluegrass Court, Fort White, FL,** PERMIT #:

BASE			AS-BUILT					
Summer Base Points: 21792.2			**Summer As-Built Points:**					**21897.9**
Total Summer Points	X System Multiplier	= Cooling Points	Total Component (System - Points)	X Cap Ratio	X Duct Multiplier (DM x DSM x AHU)	X System Multiplier	X Credit Multiplier	= Cooling Points
			(sys 1: Central Unit 32000btuh ,SEER/EFF(13.0) Ducts:Unc(S),Unc(R),Int(AH),R6.0(INS)					
			21898	1.00	(1.09 x 1.147 x 0.91)	0.260	0.950	6153.6
21792.2	**0.3250**	**7082.5**	**21897.9**	**1.00**	**1.138**	**0.260**	**0.950**	**6153.6**

WINTER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: **229 SW Bluegrass Court, Fort White, FL,** PERMIT #:

BASE				AS-BUILT								
GLASS TYPES .18 X Conditioned Floor Area	X BWPM	= Points		Type/SC	Overhang Ornt	Len	Hgt	Area X	WPM X	WOF	= Points	
.18	1700.0	20.17	6172.0	1.Double, Clear	W	1.5	8.0	30.6	20.73	1.01	641.0	
				2.Double, Clear	W	1.5	8.0	80.0	20.73	1.01	1676.0	
				3.Double, Clear	N	1.5	8.0	15.3	24.58	1.00	376.0	
				4.Double, Clear	E	9.5	8.0	16.0	18.79	1.34	402.0	
				5.Double, Clear	E	9.5	8.0	30.6	18.79	1.34	769.0	
				6.Double, Clear	S	1.5	8.0	30.6	13.30	1.04	423.0	
				7.Double, Clear	S	1.5	8.0	3.7	13.30	1.04	50.0	
				As-Built Total:				**206.8**			**4337.0**	
WALL TYPES	Area X	BWPM =	Points	Type			R-Value	Area X	WPM =		Points	
Adjacent	0.0	0.00	0.0	1. Log, 6 inch, Exterior			5.0	1117.2	2.45		2737.1	
Exterior	1117.2	3.70	4133.6									
Base Total:	**1117.2**		**4133.6**	**As-Built Total:**				**1117.2**			**2737.1**	
DOOR TYPES	Area X	BWPM =	Points	Type				Area X	WPM =		Points	
Adjacent	0.0	0.00	0.0	1.Exterior Insulated				20.0	8.40		168.0	
Exterior	20.0	12.30	246.0									
Base Total:	**20.0**		**246.0**	**As-Built Total:**				**20.0**			**168.0**	
CEILING TYPES	Area X	BWPM =	Points	Type			R-Value	Area X	WPM X WCM =		Points	
Under Attic	1700.0	2.05	3485.0	1. Under Attic			30.0	1800.0	2.05 X 1.00		3690.0	
Base Total:	**1700.0**		**3485.0**	**As-Built Total:**				**1800.0**			**3690.0**	
FLOOR TYPES	Area X	BWPM =	Points	Type			R-Value	Area X	WPM =		Points	
Slab	168.0(p)	8.9	1495.2	1. Slab-On-Grade Edge Insulation			5.0	168.0(p	7.60		1276.8	
Raised	0.0	0.00	0.0									
Base Total:			**1495.2**	**As-Built Total:**				**168.0**			**1276.8**	
INFILTRATION	Area X	BWPM =	Points					Area X	WPM =		Points	
	1700.0	-0.59	-1003.0					1700.0	-0.59		-1003.0	

WINTER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: **229 SW Bluegrass Court, Fort White, FL,** PERMIT #:

BASE			AS-BUILT					
Winter Base Points:		**14528.8**	**Winter As-Built Points:**					**11205.9**
Total Winter Points	X System Multiplier	= Heating Points	Total Component (System - Points)	X Cap Ratio	X Duct Multiplier (DM x DSM x AHU)	X System Multiplier	X Credit Multiplier	= Heating Points
			(sys 1: Electric Heat Pump 32000 btuh ,EFF(7.7) Ducts:Unc(S),Unc(R),Int(AH),R6.0					
14528.8	**0.5540**	**8049.0**	11205.9 **11205.9**	1.000 **1.00**	(1.069 x 1.169 x 0.93) **1.162**	0.443 **0.443**	0.950 **0.950**	5479.1 **5479.1**

WATER HEATING & CODE COMPLIANCE STATUS

Residential Whole Building Performance Method A - Details

ADDRESS: **229 SW Bluegrass Court, Fort White, FL,** PERMIT #:

BASE			AS-BUILT						
WATER HEATING									
Number of Bedrooms	X Multiplier	= Total	Tank Volume	EF	Number of Bedrooms	X Tank Ratio	X Multiplier	X Credit Multiplier	= Total
3	2635.00	7905.0	50.0	0.90	3	1.00	2693.56	1.00	8080.7
			As-Built Total:						**8080.7**

CODE COMPLIANCE STATUS

BASE				AS-BUILT			
Cooling Points	+ Heating Points	+ Hot Water Points	= Total Points	Cooling Points	+ Heating Points	+ Hot Water Points	= Total Points
7082	**8049**	**7905**	**23036**	**6154**	**5479**	**8081**	**19713**

PASS

Code Compliance Checklist

Residential Whole Building Performance Method A - Details

ADDRESS: **229 SW Bluegrass Court, Fort White, FL,** PERMIT #:

6A-21 INFILTRATION REDUCTION COMPLIANCE CHECKLIST

COMPONENTS	SECTION	REQUIREMENTS FOR EACH PRACTICE	CHECK
Exterior Windows & Doors	606.1.ABC.1.1	Maximum:.3 cfm/sq.ft. window area; .5 cfm/sq.ft. door area.	
Exterior & Adjacent Walls	606.1.ABC.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.	
Floors	606.1.ABC.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	606.1.ABC.1.2.3	Between walls & ceilings; penetrations of ceiling plane of 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	606.1.ABC.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 rated with < 2.0 cfm from conditioned space, tested.	
Multi-story Houses	606.1.ABC.1.2.5	Air barrier on perimeter of floor cavity between floors.	
Additional Infiltration reqts	606.1.ABC.1.3	Exhaust fans vented to outdoors, dampers; combustion space heaters comply with NFPA, have combustion air.	

6A-22 OTHER PRESCRIPTIVE MEASURES (must be met or exceeded by all residences.)

COMPONENTS	SECTION	REQUIREMENTS	CHECK
Water Heaters	612.1	Comply with efficiency requirements in Table 612.1.ABC.3.2. Switch or clearly marked cir breaker (electric) or cutoff (gas) must be provided. External or built-in heat trap required.	
Swimming Pools & Spas	612.1	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%.	
Shower heads	612.1	Water flow must be restricted to no more than 2.5 gallons per minute at 80 PSIG.	
Air Distribution Systems	610.1	All ducts, fittings, mechanical equipment and plenum chambers shall be mechanically attached, sealed, insulated, and installed in accordance with the criteria of Section 610. Ducts in unconditioned attics: R-6 min. insulation.	
HVAC Controls	607.1	Separate readily accessible manual or automatic thermostat for each system.	
Insulation	604.1, 602.1	Ceilings-Min. R-19. Common walls-Frame R-11 or CBS R-3 both sides. Common ceiling & floors R-11.	

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE SCORE* = 87.2

The higher the score, the more efficient the home.

, 229 SW Bluegrass Court, Fort White, FL,

1.	New construction or existing	New		12.	Cooling systems	
2.	Single family or multi-family	Single family			a. Central Unit	Cap: 32.0 kBtu/hr
3.	Number of units, if multi-family	1				SEER: 13.00
4.	Number of Bedrooms	3			b. N/A	
5.	Is this a worst case?	No				
6.	Conditioned floor area (ft²)	1700 ft²			c. N/A	
7.	Glass type[1] and area: (Label reqd. by 13-104.4.5 if not default)					
	a. U-factor:	Description Area		13.	Heating systems	
	(or Single or Double DEFAULT)	7a. (Dble Default) 206.8 ft²			a. Electric Heat Pump	Cap: 32.0 kBtu/hr
	b. SHGC:					HSPF: 7.70
	(or Clear or Tint DEFAULT)	7b. (Clear) 206.8 ft²			b. N/A	
8.	Floor types					
	a. Slab-On-Grade Edge Insulation	R=5.0, 168.0(p) ft			c. N/A	
	b. N/A					
	c. N/A			14.	Hot water systems	
9.	Wall types				a. Electric Resistance	Cap: 50.0 gallons
	a. Log, 6 inch, Exterior	R=5.0, 1117.2 ft²				EF: 0.90
	b. N/A				b. N/A	
	c. N/A					
	d. N/A				c. Conservation credits	
	e. N/A				(HR-Heat recovery, Solar	
10.	Ceiling types				DHP-Dedicated heat pump)	
	a. Under Attic	R=30.0, 1800.0 ft²		15.	HVAC credits	PT,
	b. N/A				(CF-Ceiling fan, CV-Cross ventilation,	
	c. N/A				HF-Whole house fan,	
11.	Ducts				PT-Programmable Thermostat,	
	a. Sup: Unc. Ret: Unc. AH: Interior	Sup. R=6.0, 45.0 ft			MZ-C-Multizone cooling,	
	b. N/A				MZ-H-Multizone heating)	

I certify that this home has complied with the Florida Energy Efficiency Code For Building Construction through the above energy saving features which will be installed (or exceeded) in this home before final inspection. Otherwise, a new EPL Display Card will be completed based on installed Code compliant features.

Builder Signature: _____ Date: _____

Address of New Home: _____ City/FL Zip: _____

**NOTE: The home's estimated energy performance score is only available through the FLA/RES computer program. This is not a Building Energy Rating. If your score is 80 or greater (or 86 for a US EPA/DOE EnergyStar™ designation), your home may qualify for energy efficiency mortgage (EEM) incentives if you obtain a Florida Energy Gauge Rating. Contact the Energy Gauge Hotline at 321/638-1492 or see the Energy Gauge web site at www.fsec.ucf.edu for information and a list of certified Raters. For information about Florida's Energy Efficiency Code For Building Construction, contact the Department of Community Affairs at 850/487-1824.*

1 Predominant glass type. For actual glass type and areas, see Summer & Winter Glass output on pages 2&4.

27240

NOTICE OF COMMENCEMENT

Inst:200812015841 Date:3/26/2008 Time:3:47 PM
DC,P.DeWitt Cason,Columbia County Page 1 of 1 B:1157 P:690

Tax Parcel Identification Number 15-75-16-04226-136

THE UNDERSIGNED hereby gives notice that improvements will be made to certain real property, and in accordance with Section 713.13 of the Florida Statutes. the following information is provided in this **NOTICE OF COMMENCEMENT.**

1. Description of property *(legal description):* Lot 36, SHILOH Ridge
   a) Street *(job)* Address: 229 S.W. BLUEGRASS Ct. Ft. White FL. 32038
2. General description of improvements: NEW Home Construction
3. Owner Information
   a) Name and address: Morris & TERESA Bowling 229 S.W. BLUEGRASS Ct. Ft. White FL 32038
   b) Name and address of fee simple titleholder (if other than owner) _____
   c) Interest in property _____
4. Contractor Information
   a) Name and address: OWNER Builder. Morris Bowling
   b) Telephone No : 386-497-3108 Fax No. (Opt.) _____
5. Surety Information
   a) Name and address: N/A
   b) Amount of Bond: _____
   c) Telephone No.: _____ Fax No. (Opt.) _____
6. Lender
   a) Name and address: N/A
   b) Phone No. _____
7. Identity of person within the State of Florida designated by owner upon whom notices or other documents may be served:
   a) Name and address: N/A
   b) Telephone No.: _____ Fax No. (Opt.) _____
8. In addition to himself, owner designates the following person to receive a copy of the Lienor's Notice as provided in Section 713.13(1)(b). Florida Statutes:
   a) Name and address: N/A
   b) Telephone No.: _____ Fax No. (Opt.) _____
9. Expiration date of Notice of Commencement **(the expiration date is one year from the date of recording unless a different date is specified):** _____

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 STATUTES, 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 INSPECTION. IF YOU INTEND TO OBTAIN FINANCING, CONSULT YOUR LENDER OR AN ATTORNEY BEFORE COMMENCING WORK OR RECORDING YOUR NOTICE OF COMMENCEMENT.

STATE OF FLORIDA
COUNTY OF COLUMBIA

10. Morris D. Bowling
Signature of Owner or Owner's Authorized Officer/Director/Partner/Manager

Morris D. Bowling
Print Name

The foregoing instrument was acknowledged before me , a Florida Notary, this 26 day of August, 2008, by: Morris Bowling as Owner **(type of authority, e.g. officer, trustee, attorney fact) for** Morris Bowling **(name of party on behalf of whom instrument was executed).**

Personally Known ____ OR Produced Identification ✓ Type FL DL B452-544-50-376-0

Notary Signature Laurie Hodson Notary Stamp or Seal:

LAURIE HODSON
MY COMMISSION # DD 805657
EXPIRES: July 14, 2012
Bonded Thru Notary Public Underwriters

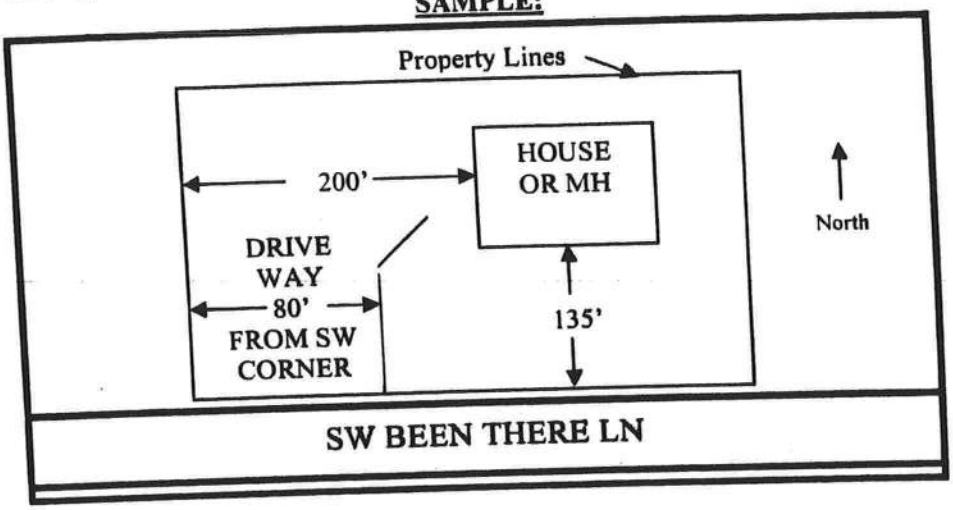
---AND---

11. Verification pursuant to Section 92.525, Florida Statutes. Under penalties of perjury. I declare that I have read the foregoing and that the facts stated in it are true to the best of my knowledge and belief.

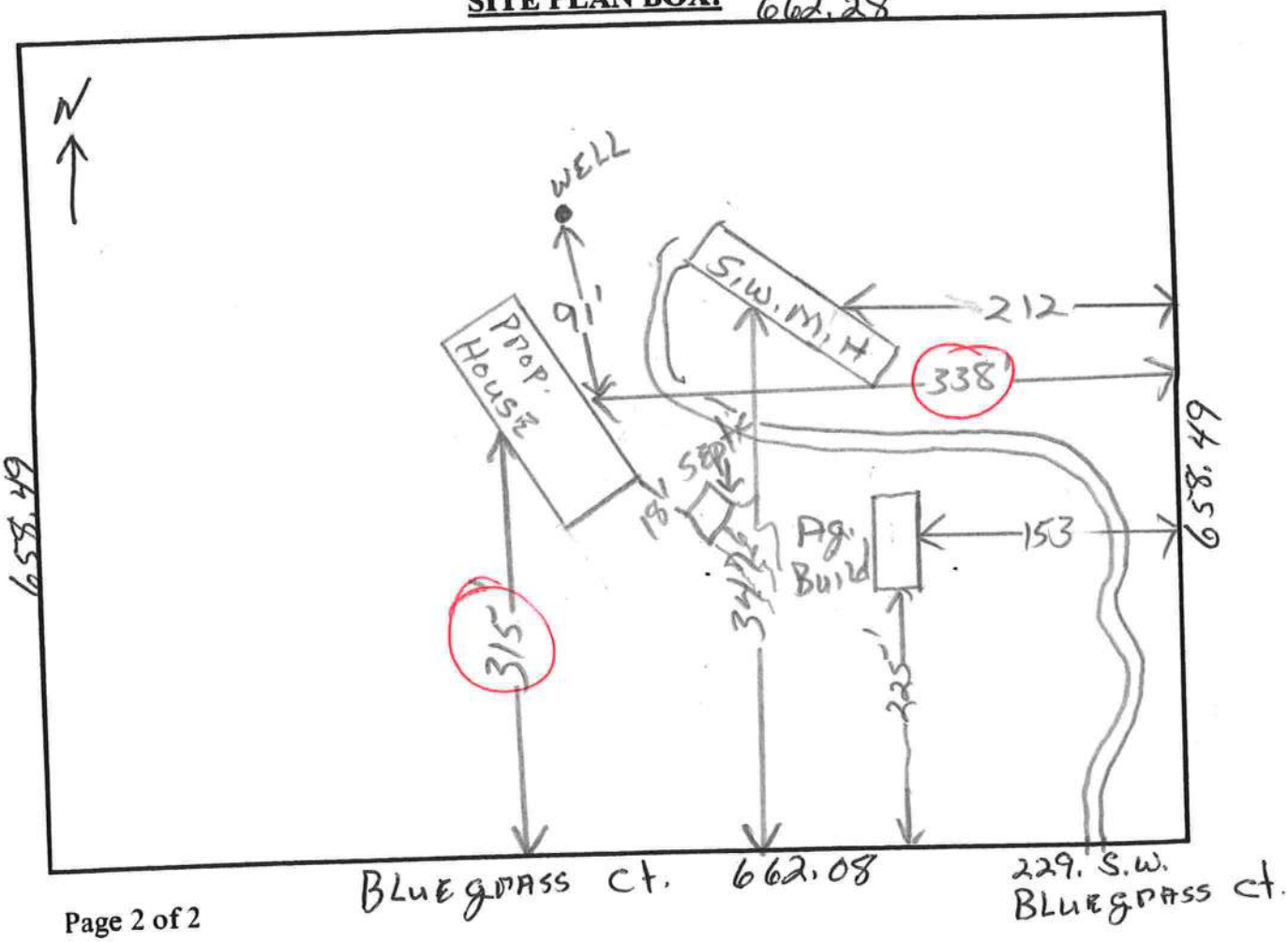
Morris D. Bowling
Signature of Natural Person Signing (in line #10 above)

1. A PLAT, PLAN, OR DRAWING SHOWING THE PROPERTY LINES OF THE PARCEL.
2. LOCATION OF PLANNED RESIDENT OR BUSINESS STRUCTURE ON THE PROPERTY WITH DISTANCES FROM AT LEAST TWO OF THE PROPERTY LINES TO THE STRUCTURE (SEE SAMPLE BELOW).
3. LOCATION OF THE ACCESS POINT (DRIVEWAY, ETC.) ON THE ROADWAY FROM WHICH LOCATION IS TO BE ADDRESSED WITH A DISTANCE FROM A PARALLEL PROPERTY LINE AND OR PROPERTY CORNER (SEE SAMPLE BELOW).
4. TRAVEL OF THE DRIVEWAY FROM THE ACCESS POINT TO THE STRUCTURE (SEE SAMPLE BELOW).

SAMPLE:



SITE PLAN BOX: 662.28



RETURN TO

U. S. Title
642 N.E. Santa Fe Blvd.
High Springs, FL [redacted]
USH-2722

Inst: [redacted] Date:04/27/2004 Time:14:57
Doc Stamp-Deed : 266.00
DC,P.DeWitt Cason,Columbia County B:1013 P:1370

[Space Above This Line for Recording Data]

Parcel I D. No. 15-7S-[redacted]

WARRANTY DEED

This Indenture made this **15th** day of **April, 2004** BETWEEN **GESNER DELVA and ROSE L. DELVA, HUSBAND AND WIFE**, GRANTOR*, whose post office address is P O BOX 640204, MIAMI, FL 33164 and **MORRIS D. BOWLING and TERESA A. BOWLING, HUSBAND AND WIFE**, GRANTEE*, whose post office address is 2507 FAWN RUN, OVLEDO, FL 32765.

WITNESSETH, That said Grantor, for and in consideration of the sum of TEN AND 00/100'S ($10.00) Dollars 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 grantee and grantee's heirs forever the following described land located in the County of COLUMBIA. State of Florida, to wit

SEE ATTACHED EXHIBIT "A"

SUBJECT TO covenants, restrictions and easements of record, if any; however, this reference thereto shall not operate to reimpose same

and the grantor hereby covenants with said grantee that the grantor is lawfully seized of said land in fee simple; that the grantor has good right and lawful authority to sell and convey said land, that the grantor hereby fully warrants the title to said land, and will defend the same against the lawful claims of all persons whomsoever; and that said land is free of all encumbrances, except taxes accruing subsequent to December 31, 2003.

*Singular and plural are interchangeable as context requires.

IN WITNESS WHEREOF, Grantor has hereunto set grantor's hand and seal this day and year first above written.

WITNESSES

Typed Name: Lorritta Sylvester

Typed Name: Rosa C Nieves

GESNER DELVA

ROSE L. DELVA

COUNTY OF DADE
STATE OF FLORIDA
THE FOREGOING INSTRUMENT was acknowledged before me on April 15th, 2004 by GESNER DELVA and ROSE L. DELVA, HUSBAND AND WIFE, who is/are personally known to me or have produced their Driver's Licenses as identification

[Seal]

EDWARD JANOVITZ
MY COMMISSION # [redacted]
EXPIRES: November 28, 2005
1-800-3NOTARY FL Notary Service & Bonding, Inc.

NOTARY PUBLIC, STATE OF AT LARGE
Name:
COMMISSION EXPIRATION:

THIS INSTRUMENT WAS PREPARED BY: JANNETTE S. BOYD, an employee of U.S. TITLE, 642 N.E. SANTA FE BLVD., HIGH SPRINGS, FLORIDA 32643, as a necessary incident to fulfill the requirements of a Title Insurance Binder issued by it. USH-2722.

"EXHIBIT "A"
Legal Description

Inst:2004009578 Date:04/27/2004 Time:14:57
Doc Stamp-Deed : 266.00
DC,P.DeWitt Cason,Columbia County B:1013 P:1971

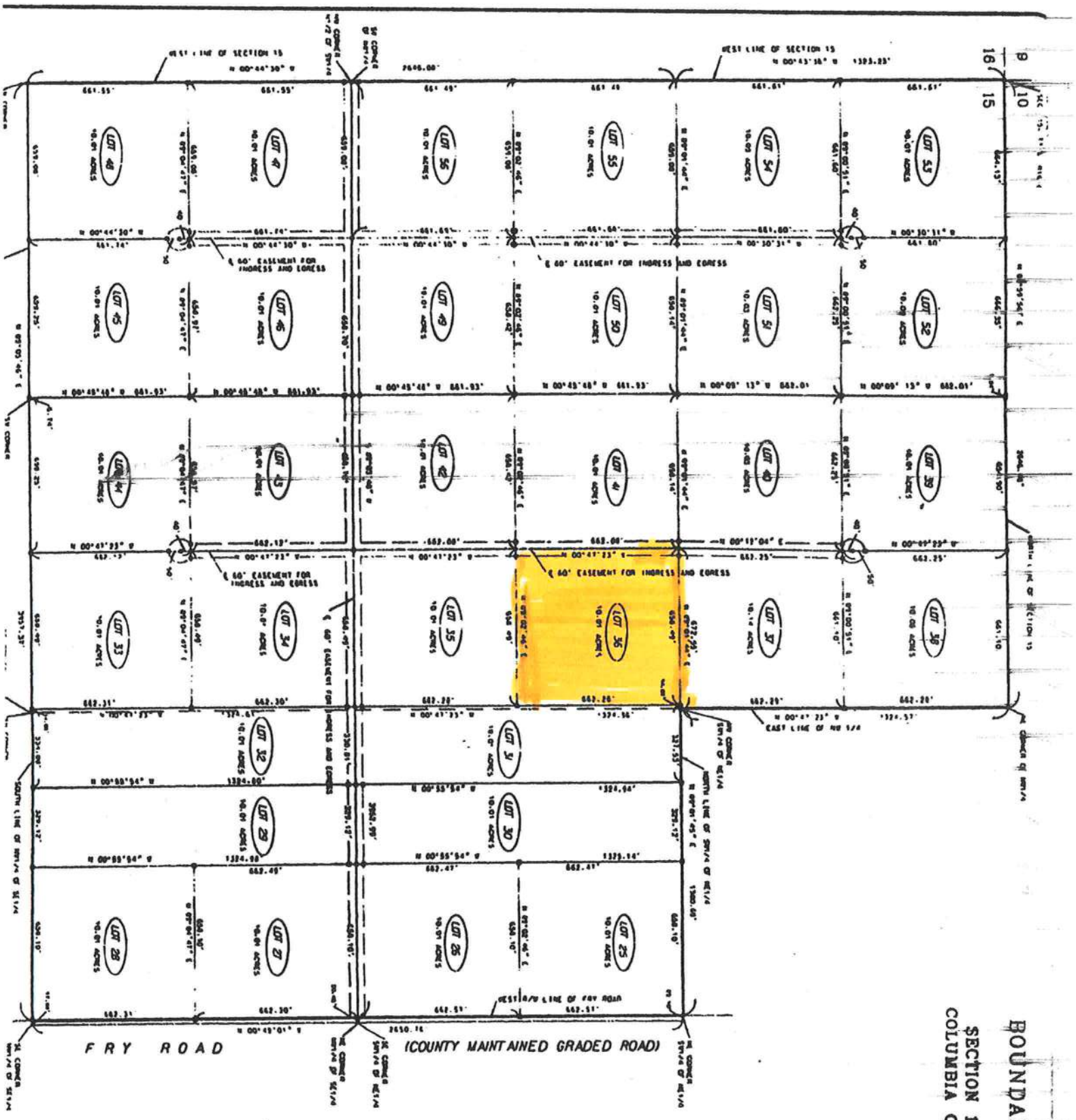
Lot 36, SHILOH RIDGE

Commence at the Northwest corner of the SW ¼ of the NE ¼ of Section 15, Township 7 South, Range 16 East, Columbia County, Florida and run thence South 89° 01' 44" West, 14.06 feet to the Northeast corner of said lot and to the Point of Beginning; thence continue South 89° 01' 44" West, 658.49 feet; thence South 00° 47' 23" East, 662.08 feet; thence North 89° 02' 46" East, 658.49 feet; thence North 00° 47' 23" West, 662.28 feet to the Point of Beginning. The West 30 feet of said lands being subject to an easement for ingress and egress.

TOGETHER WITH AN EASEMENT FOR INGRESS AND EGRESS OVER AND ACROSS THE FOLLOWING DESCRIBED PROPERTY.

60 Foot Road Easement

A strip of land 60 feet in width being 30 feet each side of a centerline described as follows:
Commence at the Southeast corner of the SW ¼ of the NE ¼ of Section 15, Township 6 South, Range 16 East, Columbia County, Florida and run thence South 89° 03' 48" West, 20.45 feet to the West line of Fry Road and to the Point of Beginning; thence continue South 89° 03' 48" West, 1976.52 feet to Reference Point "A"; thence continue South 89° 03' 48" West, 1317.40 feet to Reference Point "B"; thence continue South 89° 03' 48" West, 659.08 feet to the Point of Termination. Also begin a Reference Point "A" and run thence North 00° 47' 23" West, 1324.16 feet; thence North 00° 12' 04" East, 662.25 feet; thence North 00° 47' 23" West, 40.00 feet to the Centerpoint of a Cul-de-sac having a radius of 50 feet to the Point of Termination. Also begin at Reference Point "A" and run thence South 00° 47' 23" East, 702.12 feet to the Centerpoint of a Cul-de-sac having a radius of 50 feet and to the Point of Termination. Also begin at Reference Point "B" and run thence North 00° 44' 30" West, 1323.37 feet; thence North 00° 30' 31" West, 701.80 feet to the Centerpoint of a Cul-de-sac having a radius of 50 feet and to the Point of Termination. Also begin at Reference Point "B" and run thence South 00° 44' 30" East, 701.74 feet to the Centerpoint of a Cul-de-sac having a radius of 50 feet and to the Point of Termination.



BOUNDARY SURVEY
IN
SECTION 15, T7-S, R16-E
COLUMBIA COUNTY, FLORIDA

COLUMBIA COUNTY 9-1-1 ADDRESSING

263 NW Lake City Ave. * P. O. Box 2949 * Lake City, FL 32056-2949
PHONE: (386) 752-8787 * FAX: (386) 758-1365 * Email: ron_croft@columbiacountyfla.com

Addressing Maintenance

To maintain the Countywide addressing Policy you must make application for a 9-1-1 Address at the time you apply for a building permit. The established standards for assigning and posting numbers to all principal buildings, dwellings, businesses and industries are contained in Columbia County Ordinance 2001-9. The addressing system is to enable Emergency Service Agencies to locate you in an emergency, and to assist the United States Postal Service and the public in the timely and efficient provision of services to residents and businesses of Columbia County.

DATE ISSUED: February 28, 2005

ENHANCED 9-1-1 ADDRESS:

229 SW BLUEGRASS CT (FORT WHITE, FL 32038)

Addressed Location 911 Phone Number: NOT AVAIL.

OCCUPANT NAME: NOT AVAIL.

OCCUPANT CURRENT MAILING ADDRESS:

PROPERTY APPRAISER MAP SHEET NUMBER: 55

PROPERTY APPRAISER PARCEL NUMBER: 15-7S-16-04226-136

Other Contact Phone Number (If any):

Building Permit Number (If known):

Remarks: LOT 36 SHILOH RIDGE UNR S/D

Address Issued By: _____
Columbia County 9-1-1 Addressing Department

COLUMBIA COUNTY
9-1-1 ADDRESSING
APPROVED

NOTORIZED DISCLOSURE STATEMENT

FOR OWNER/BUILDER WHEN ACTING AS THER OWN CONTRACTOR AND CLAIMING EXEMPTION OF CONTRACTOR LICENSING REQUIREMENTS IN ACCORDANCE WITH FLORIDA STATUTES, ss. 489.103(7).

State law requires construction to be done by licensed contractors. You have applied for a permit under an exemption to that law. The exemption allows you, as the owner of your property, to act as your own contractor with certain restrictions even though you do not have a license. You must provide direct, onsite supervision of the construction yourself. You may build or improve a one-family or two-family residence or a farm outbuilding. You may also build or improve a commercial building, provided your costs do not exceed $75,000. The building or residence must be for your own use or occupancy. It may not be built or substantially improved for sale or lease. If you sell or lease a building you have built or substantially improved yourself within 1 year after the construction is complete, the law will presume that you built or substantially improved it for sale or lease, which is a violation of this exemption. You may not hire an unlicensed person to act as your contractor or to supervise people working on your building. It is your responsibility to make sure that people employed by you have licenses required by state law and by county or municipal licensing ordinances. You may not delegate the responsibility for supervising work to a licensed contractor who is not licensed to perform the work being done. Any person working on your building who is not licensed must work under your direct supervision and must be employed by you, which means that you must deduct F .I.C.A. and withholding tax and provide workers' compensation for that employee, all as prescribed by law. Your construction must comply with all applicable laws, ordinances, building codes, and zoning regulations.

TYPE OF CONSTRUCTION

(X) Single Family Dwelling
( ) Farm Outbuilding
( ) Two-Family Residence
( ) Other_____

NEW CONSTRUCTION OR IMPROVEMENT

(X) New Construction
( ) Addition, Alteration, Modification or other Improvement

I Morris D. Bowling **, have been advised of the above disclosure statement for exemption from contractor licensing as an owner/builder. I agree to comply with all requirements provided for in Florida Statutes ss.489.103(7) allowing this exception for the construction permitted by Columbia County Building Permit Number** _____

Morris D. Bowling 11/20/08
Owner Builder Signature **Date**

The above signer is personally known to me or produced identification DL · B457-544-50-376-0

LAWANDA Y. RENTZ
MY COMMISSION # DD 710646
EXPIRES: October 29, 2011
Bonded Thru Notary Public Underwriters

Notary Signature Lawanda Y. Rentz **Date** 06-20-08 **(Stamp / Seal)**

FOR BUILDING USE ONLY

I hereby certify that the above listed owner/builder has been notified of the disclosure statement in Florida Statutes ss 489.103(7).

Date 6.20.2008 **Building Official/Representative**

0806-35

OWNER IMPACT FEE OCCUPANCY AFFIDAVIT

STATE OF FLORIDA
COUNTY OF COLUMBIA

BEFORE ME, the undersigned authority, personally appeared Morris D. Bowling ("Owner"), who, after being duly sworn, deposes and says:

1. Except as otherwise stated herein, Affiant has personal knowledge of the facts and matters set forth in this affidavit.

2. Affiant is the owner of the following described real property located in Columbia County, Florida, (herein "the property"):

(a) Parcel No.: 15-7S-16-04226-136
(b) Legal description (may be attached): Shiloh Ridge Lot 36

3. Affiant has or will apply to the Columbia County Building Department for a building permit for the replacement of a building or dwelling unit on the property where no additional square footage or dwelling units will be created and will be located on the same property.

4. Either based upon Affiant's personal knowledge or the attached signed written statement of another person, a certificate of occupancy has been issued for the replacement building or dwelling on the property within seven (7) years of the date the previous building or dwelling unit was previously occupied. The building or dwelling unit was last occupied on Current.

5. This affidavit is given for the purpose of obtaining an exemption pursuant to Article VIII, Section 8.01, Columbia County Comprehensive Impact Fee Ordinance No. 2007-40, adopted October 18, 2007, as may be amended.

Further Affiant sayeth naught.

Morris D. Bowling

Print: Morris D. Bowling

Address: 229 S.W. Bluegrass Ct.
Ft. White FL 32038

SWORN TO AND SUBSCRIBED before me this 20 day of June, 2008, by _____ who is personally known to me or who has produced DL as identification. B452-544-50-376-0

Lawanda Y. Rentz
Notary Public, State of Florida

(NOTARIES SEAL)

My Commission Expires:

LAWANDA Y. RENTZ
MY COMMISSION # DD 710646
EXPIRES: October 29, 2011
Bonded Thru Notary Public Underwriters

CERTIFICATE OF OCCUPANCY

COLUMBIA COUNTY, FLORIDA

Department of Building and Zoning Inspection

This Certificate of Occupancy is issued to the below named permit holder for the building and premises at the below named location, and certifies that the work has been completed in accordance with the Columbia County Building Code.

Parcel Number 15-7S-16-04226-136 **Building permit No.** 000027240

Use Classification SFD,UTILITY **Fire:** 0.00

Permit Holder MORRIS BOWLING **Waste:** 0.00

Owner of Building MORRIS BOWLING **Total:** 0.00

Location: 229 SW BLUEGRASS COURT, FT. WHITE, FL

Date: 07/29/2010

Building Inspector

POST IN A CONSPICUOUS PLACE
(Business Places Only)

Columbia County Property Appraiser

DB Last Updated: 4/15/2008

2008 Proposed Values

Tax Record | Property Card | Interactive GIS Map | Print

Parcel: 15-7S-16-04226-136 HX

Search Result: 1 of 1

Owner & Property Info

Owner's Name	BOWLING MORRIS D & TERESA A		
Site Address	BLUE GRASS		
Mailing Address	229 SW BLUE GRASS CT FT WHITE, FL 32038		
Use Desc. (code)	MOBILE HOM (000200)		
Neighborhood	15716.01	**Tax District**	3
UD Codes	MKTA02	**Market Area**	02
Total Land Area	10.010 ACRES		
Description	COMM NW COR OF SW1/4 OF NE1/4, RUN W 14.06 FT FOR POB, CONT W 658.49 FT, S 662.08 FT, E 658.49 FT, N 662.28 FT TO POB. (AKA LOT 36 SHILOH RIDGE S/D UNREC) ORB 842-1189, WD 1013-1970.		

GIS Aerial

Property & Assessment Values

Mkt Land Value	cnt: (2)	$77,075.00
Ag Land Value	cnt: (0)	$0.00
Building Value	cnt: (1)	$40,508.00
XFOB Value	cnt: (1)	$27,600.00
Total Appraised Value		$145,183.00

Just Value		$145,183.00
Class Value		$0.00
Assessed Value		$130,026.00
Exempt Value	(code: HX)	$25,000.00
Total Taxable Value		$105,026.00

Sales History

Sale Date	Book/Page	Inst. Type	Sale VImp	Sale Qual	Sale RCode	Sale Price
4/15/2004	1013/1970	WD	V	Q		$38,000.00
7/1/1997	842/1189	WD	V	U	02	$110,000.00

Building Characteristics

Bldg Item	Bldg Desc	Year Blt	Ext. Walls	Heated S.F.	Actual S.F.	Bldg Value
1	SFR MANUF (000200)	2005	Vinyl Side (31)	1216	1376	$40,508.00
	Note: All S.F. calculations are based on exterior building dimensions.					

Extra Features & Out Buildings

Code	Desc	Year Blt	Value	Units	Dims	Condition (% Good)
0031	BARN,MT AE	2006	$27,600.00	2300.000	46 x 50 x 0	(.00)

Land Breakdown

Lnd Code	Desc	Units	Adjustments	Eff Rate	Lnd Value
000200	MBL HM (MKT)	10.010 AC	1.00/1.00/1.00/1.00	$7,500.00	$75,075.00
009945	WELL/SEPT (MKT)	1.000 UT - (.000AC)	1.00/1.00/1.00/1.00	$2,000.00	$2,000.00

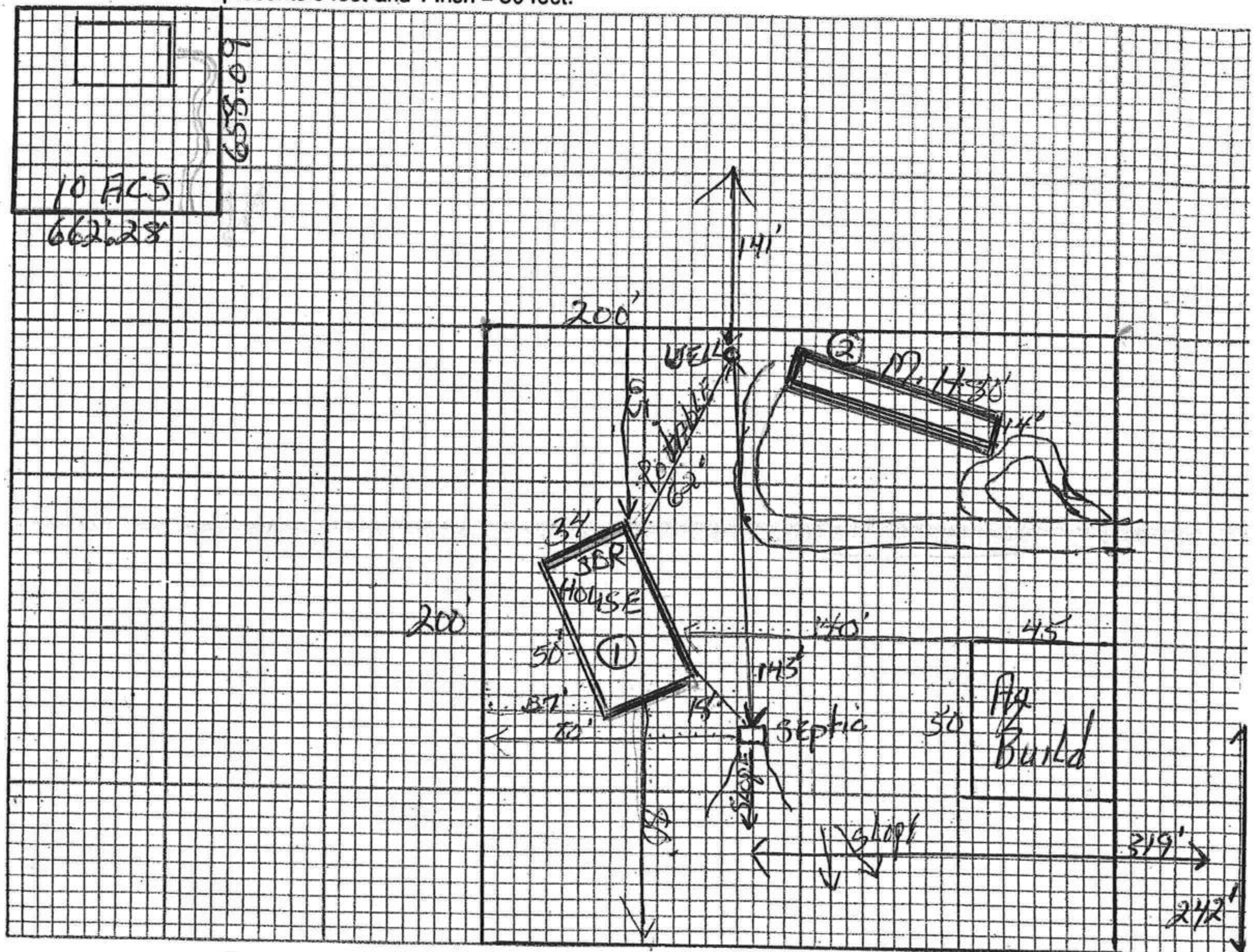
STATE OF FLORIDA
DEPARTMENT OF HEALTH

APPLICATION FOR ONSITE SEWAGE DISPOSAL SYSTEM CONSTRUCTION PERMIT

Permit Application Number 08-0524

PART II - SITE PLAN

Scale: Each block represents 5 feet and 1 inch = 50 feet.



Notes: M.H. ② is being replaced by new House ①

Site Plan submitted by: Morris D. Bowling OWNER
Signature Title

Plan Approved ✓ Not Approved ______ Date 2-25-08

By [signature] Columbia County Health Departm

ALL CHANGES MUST BE APPROVED BY THE COUNTY HEALTH DEPARTMENT

DH 4015, 10/96 (Replaces HRS-H Form 4015 which may be used)

M.D Bowling
HVAC Load Calculations

for

M.D Bowling
299 S.W Bluegrass Court
Fort Whute Fl 32038

Elite Software

RHVAC Residential HVAC Loads

Prepared By:

Chuck Fischer
North Central Florida Air Conditioning
P.O Box 700
High Springs Fl 32655-0700
386-454-4767
Sunday, June 12, 2005

Project Report

General Project Information

Project Title:	M.D Bowling
Designed By:	Chuck Fischer
Project Date:	July 11 2005
Client Name:	M.D Bowling
Client Address:	299 S.W Bluegrass Court
Client City:	Fort Whute Fl 32038
Client Phone:	386-497-3108
Client Comment:	
Company Name:	North Central Florida Air Conditioning
Company Representative:	Chuck Fischer
Company Address:	P.O Box 700
Company City:	High Springs Fl 32655-0700
Company Phone:	386-454-4767
Company Fax:	386-454-4854
Company Comment:	

Design Data

Reference City:		Gainesville, Florida
Daily Temperature Range:		Medium
Latitude:	29	Degrees
Elevation:	152	ft.
Altitude Factor:	0.995	
Elevation Sensible Adj. Factor:	1.000	
Elevation Total Adj. Factor:	1.000	
Elevation Heating Adj. Factor:	1.000	
Elevation Heating Adj. Factor:	1.000	

	Outdoor Dry Bulb	Outdoor Wet Bulb	Indoor Rel.Hum	Indoor Dry Bulb	Grains Difference
Winter:	31	0	50	68	31
Summer:	93	77	50	75	50

Check Figures

Total Building Supply CFM:	1,131	CFM Per Square ft.:	0.665
Square ft. of Room Area:	1,700	Square ft. Per Ton:	635
Volume (ft³) of Cond. Space:	13,608	Air Turnover Rate (per hour):	5.0

Building Loads

Total Heating Required With Outside Air:	28,574 Btuh	28.574	MBH
Total Sensible Gain:	24,751 Btuh	85	%
Total Latent Gain:	4,219 Btuh	15	%
Total Cooling Required With Outside Air:	28,970 Btuh	2.41	Tons (Based On Sensible + Latent)
		2.68	Tons (Based On 77% Sensible Capacity)

Notes

Calculations are based on 8th edition of ACCA Manual J.
All computed results are estimates as building use and weather may vary.
Be sure to select a unit that meets both sensible and latent loads.

Miscellaneous Report

System 1 Main Floor Input Data	Outdoor Dry Bulb	Outdoor Wet Bulb	Indoor Rel.Hum	Indoor Dry Bulb	Grains Difference
Winter:	31	0	50	68	30.84
Summer:	93	77	50	75	50.06

Duct Sizing Inputs

	Main Trunk		Runouts	
Calculate:	Yes		Yes	
Use Schedule:	No		No	
Roughness Factor:	0.00300		0.01000	
Pressure Drop:	0.1000	in.wg./100 ft.	0.1000	in.wg./100 ft.
Minimum Velocity:	650	ft./min	450	ft./min
Maximum Velocity:	900	ft./min	750	ft./min
Minimum Height:	0	in.	0	in.
Maximum Height:	0	in.	0	in.

Outside Air Data

	Winter		Summer	
Infiltration:	0.900	AC/hr	0.400	AC/hr
Volume of Conditioned Space:	X 13608	Cu.ft.	X 13608	Cu.ft.
	12,247	Cu.ft./hr	5,443	Cu.ft./hr
	X 0.0167		X 0.0167	
Total Building Infiltration:	204	CFM	91	CFM
Total Building Ventilation:	0	CFM	0	CFM

---System 1---

Infiltration & Ventilation Sensible Gain Multiplier:	19.69	= (1.10 X 0.995 X 18.00 Summer Temp. Difference)
Infiltration & Ventilation Latent Gain Multiplier:	33.85	= (0.68 X 0.995 X 50.06 Grains Difference)
Infiltration & Ventilation Sensible Loss Multiplier:	40.48	= (1.10 X 0.995 X 37.00 Winter Temp. Difference)

Load Preview Report

Scope	Area	Sens Gain	Lat Gain	Net Gain	Sens Loss	Win CFM	Sum CFM	Sys CFM	Duct Size
Building: 2.41 Net Tons, 2.68 Recommended Tons, 635 ft.²/Ton, 28.57 MBH Heating									
Building	1,700	24,751	4,219	28,970	28,574	373	1,131	1,131	
System 1: 2.41 Net Tons, 2.68 Recommended Tons, 635 ft.²/Ton, 28.57 MBH Heating									
System 1	1,700	24,751	4,219	28,970	28,574	373	1,131	1,131	15x15
Zone 1	1,700	24,751	4,219	28,970	28,574	373	1,131	1,131	
1-Utility Room	104	1,674	383	2,057	2,837	37	77	77	1-5
2-Master Bath	104	1,015	146	1,161	1,243	16	46	46	1-4
3-His W.I.C.	18	235	110	345	682	9	11	11	1-2
4-Her W.I.C.	80	515	0	515	331	4	24	24	1-3
5-Master Bedroom	192	3,564	971	4,535	4,142	54	163	163	1-8
6-Kitchen	190	3,830	467	4,297	2,286	30	175	175	1-8
7-Dining Room	175	2,233	219	2,452	2,428	32	102	102	1-6
8-Living Room	423	4,506	394	4,900	5,840	76	206	206	2-6
9-Front Bedroom	156	3,019	686	3,705	3,691	48	138	138	1-7
10-Bath 2	59	1,040	164	1,204	1,266	17	48	48	1-4
11-Back Bedroom	151	2,992	679	3,671	3,630	47	137	137	1-7
12-Hall	48	125	0	125	198	3	6	6	1-2

Total Building Summary Loads

Component Description	Area Quan	Sen Loss	Lat Gain	Sen Gain	Total Gain
1D-cb-o: Glazing-Double pane, operable window, clear, metal frame with break, ground reflectance = 0.23, outdoor insect screen with 50% coverage, light color blinds at 45° with 25% coverage, external shade screen coefficient of 0.45 and 50% coverage	99.7	2,399	0	1,957	1,957
10B-b: Glazing-French door, double pane clear glass, metal frame with break, ground reflectance = 0.23	68	1,888	0	1,586	1,586
11P: Door-Polyurethane Core	35.4	380	0	298	298
14A-6: Wall-stacked logs, no insulation, no interior finish, no exterior finish, 6 inch average thickness	1142.6	5,031	0	2,217	2,217
16C-30: Roof/Ceiling-Under attic or knee wall, Vented Attic, No Radiant Barrier, White or Light Color Shingles, Any Wood Shake, Light Metal, Tar and Gravel or Membrane, R-30 insulation	1701	2,013	0	2,341	2,341
20P-15: Floor-Over open crawl space or garage, Passive, R-15 blanket insulation, any cover	1701	3,839	0	1,348	1,348
Subtotals for structure:		15,550	0	9,747	9,747
People:	5		1,150	1,500	2,650
Equipment:			0	1,200	1,200
Lighting:	1875			6,394	6,394
Ductwork:		4,762	0	4,124	4,124
Infiltration: Winter CFM: 204, Summer CFM: 91		8,262	3,069	1,786	4,855
Ventilation: Winter CFM: 0, Summer CFM: 0		0	0	0	0
Total Building Load Totals:		28,574	4,219	24,751	28,970

Check Figures

Total Building Supply CFM:	1,131	CFM Per Square ft.:	0.665
Square ft. of Room Area:	1,700	Square ft. Per Ton:	635
Volume (ft³) of Cond. Space:	13,608	Air Turnover Rate (per hour):	5.0

Building Loads

Total Heating Required With Outside Air:	28,574 Btuh	28.574 MBH	
Total Sensible Gain:	24,751 Btuh	85 %	
Total Latent Gain:	4,219 Btuh	15 %	
Total Cooling Required With Outside Air:	28,970 Btuh	2.41	Tons (Based On Sensible + Latent)
		2.68	Tons (Based On 77% Sensible Capacity)

Notes

Calculations are based on 8th edition of ACCA Manual J.
All computed results are estimates as building use and weather may vary.
Be sure to select a unit that meets both sensible and latent loads.

System 1 Main Floor Summary Loads

Component Description	Area Quan	Sen Loss	Lat Gain	Sen Gain	Total Gain
1D-cb-o: Glazing-Double pane, operable window, clear, metal frame with break, ground reflectance = 0.23, outdoor insect screen with 50% coverage, light color blinds at 45° with 25% coverage, external shade screen coefficient of 0.45 and 50% coverage	99.7	2,399	0	1,957	1,957
10B-b: Glazing-French door, double pane clear glass, metal frame with break, ground reflectance = 0.23	68	1,888	0	1,586	1,586
11P: Door-Polyurethane Core	35.4	380	0	298	298
14A-6: Wall-stacked logs, no insulation, no interior finish, no exterior finish, 6 inch average thickness	1142.6	5,031	0	2,217	2,217
16C-30: Roof/Ceiling-Under attic or knee wall, Vented Attic, No Radiant Barrier, White or Light Color Shingles, Any Wood Shake, Light Metal, Tar and Gravel or Membrane, R-30 insulation	1701	2,013	0	2,341	2,341
20P-15: Floor-Over open crawl space or garage, Passive, R-15 blanket insulation, any cover	1701	3,839	0	1,348	1,348
Subtotals for structure:		15,550	0	9,747	9,747
People:	5		1,150	1,500	2,650
Equipment:			0	1,200	1,200
Lighting:	1875			6,394	6,394
Ductwork:		4,762	0	4,124	4,124
Infiltration: Winter CFM: 204, Summer CFM: 91		8,262	3,069	1,786	4,855
Ventilation: Winter CFM: 0, Summer CFM: 0		0	0	0	0
System 1 Main Floor Load Totals:		28,574	4,219	24,751	28,970

Check Figures

Supply CFM:	1,131	CFM Per Square ft.:	0.665
Square ft. of Room Area:	1,700	Square ft. Per Ton:	635
Volume (ft³) of Cond. Space:	13,608	Air Turnover Rate (per hour):	5.0

System Loads

Total Heating Required With Outside Air:	28,574 Btuh	28.574 MBH	
Total Sensible Gain:	24,751 Btuh	85 %	
Total Latent Gain:	4,219 Btuh	15 %	
Total Cooling Required With Outside Air:	28,970 Btuh	2.41	Tons (Based On Sensible + Latent)
		2.68	Tons (Based On 77% Sensible Capacity)

Notes

Calculations are based on 8th edition of ACCA Manual J.
All computed results are estimates as building use and weather may vary.
Be sure to select a unit that meets both sensible and latent loads.

System 1, Zone 1 Summary Loads (Average Load Procedure for Rooms)

Component Description	Area Quan	Sen Loss	Lat Gain	Sen Gain	Total Gain
1D-cb-o: Glazing-Double pane, operable window, clear, metal frame with break, ground reflectance = 0.23, outdoor insect screen with 50% coverage, light color blinds at 45° with 25% coverage, external shade screen coefficient of 0.45 and 50% coverage	99.7	2,399	0	1,957	1,957
10B-b: Glazing-French door, double pane clear glass, metal frame with break, ground reflectance = 0.23	68	1,888	0	1,586	1,586
11P: Door-Polyurethane Core	35.4	380	0	298	298
14A-6: Wall-stacked logs, no insulation, no interior finish, no exterior finish, 6 inch average thickness	1142.6	5,031	0	2,217	2,217
16C-30: Roof/Ceiling-Under attic or knee wall, Vented Attic, No Radiant Barrier, White or Light Color Shingles, Any Wood Shake, Light Metal, Tar and Gravel or Membrane, R-30 insulation	1701	2,013	0	2,341	2,341
20P-15: Floor-Over open crawl space or garage, Passive, R-15 blanket insulation, any cover	1701	3,839	0	1,348	1,348
Subtotals for structure:		15,550	0	9,747	9,747
People:	5		1,150	1,500	2,650
Equipment:			0	1,200	1,200
Lighting:	1875			6,394	6,394
Ductwork:		4,762	0	4,124	4,124
Infiltration: Winter CFM: 204, Summer CFM: 91		8,262	3,069	1,786	4,855
System 1, Zone 1 Load Totals:		28,574	4,219	24,751	28,970

Check Figures

Supply CFM:	1,131	CFM Per Square ft.:	0.665
Square ft. of Room Area:	1,700	Square ft. Per Ton:	635
Volume (ft³) of Cond. Space:	13,608	Air Turnover Rate (per hour):	5.0

Zone Loads

Total Heating Required:	28,574 Btuh	28.574 MBH	
Total Sensible Gain:	24,751 Btuh	85 %	
Total Latent Gain:	4,219 Btuh	15 %	
Total Cooling Required:	28,970 Btuh	2.41	Tons (Based On Sensible + Latent)
		2.68	Tons (Based On 77% Sensible Capacity)

Notes

Calculations are based on 8th edition of ACCA Manual J.
All computed results are estimates as building use and weather may vary.
Be sure to select a unit that meets both sensible and latent loads.

System 1 Room Load Summary

No	Room Name	Area SF	Htg Sens Btuh	Htg Nom CFM	Run Duct Size	Run Duct Vel	Clg Sens Btuh	Clg Lat Btuh	Clg Nom CFM	Air Sys CFM
---Zone 1---										
1	Utility Room	104	2,837	37	1-5	561	1,674	383	77	77
2	Master Bath	104	1,243	16	1-4	532	1,015	146	46	46
3	His W.I.C.	18	682	9	1-2	492	235	110	11	11
4	Her W.I.C.	80	331	4	1-3	479	515	0	24	24
5	Master Bedroom	192	4,142	54	1-8	467	3,564	971	163	163
6	Kitchen	190	2,286	30	1-8	502	3,830	467	175	175
7	Dining Room	175	2,428	32	1-6	520	2,233	219	102	102
8	Living Room	423	5,840	76	2-6	524	4,506	394	206	206
9	Front Bedroom	156	3,691	48	1-7	516	3,019	686	138	138
10	Bath 2	59	1,266	17	1-4	545	1,040	164	48	48
11	Back Bedroom	151	3,630	47	1-7	512	2,992	679	137	137
12	Hall	48	198	3	1-2	262	125	0	6	6
	System 1 total	1,700	28,574	373			24,751	4,219	1,131	1,131

System 1 Main Trunk Size: 15x15 in.
Velocity: 810 ft./min
Loss per 100 ft.: 0.080 in.wg

Cooling System Summary

	Cooling Tons	Sensible/Latent Split	Sensible Btuh	Latent Btuh	Total Btuh
Net Required:	2.41	85% / 15%	24,751	4,219	28,970
Recommended:	2.68	77% / 23%	24,751	7,393	32,144
Actual:	3.42	70% / 30%	28,700	12,300	41,000

Equipment Data

	Heating System	Cooling System
Type:	Air Source Heat Pump	Air Source Heat Pump
Model:	PHD42C02F1	PHD42C02F1
Brand:	Amana	Amana
Efficiency:	7.10 HSPF	13 SEER
Sound:		
Capacity:	41,000	41,000
Sensible Capacity:	n/a	28,700 Btuh
Latent Capacity:	n/a	12,300 Btuh

Residential System Sizing Calculation

Summary

229 SW Bluegrass Court
Fort White, FL

Project Title:
Bowling Residence

Code Only
Professional Version
Climate: North

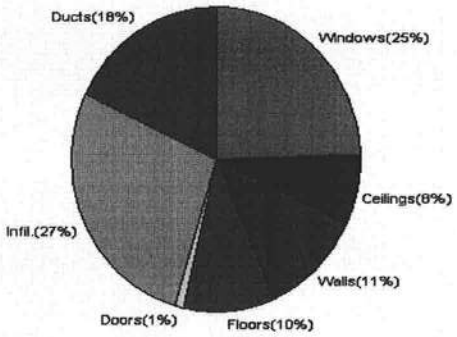
3/12/2008

Location for weather data: Gainesville - Defaults: Latitude(29) Altitude(152 ft.) Temp Range(M) Humidity data: Interior RH (50%) Outdoor wet bulb (77F) Humidity difference(54gr.)					
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	**27098**	**Btuh**	**Total cooling load calculation**	**40328**	**Btuh**
Submitted heating capacity	% of calc	Btuh	Submitted cooling capacity	% of calc	Btuh
Total (Electric Heat Pump)	118.1	32000	Sensible (SHR = 0.75)	74.6	24000
Heat Pump + Auxiliary(0.0kW)	118.1	32000	Latent	97.9	8000
			Total (Electric Heat Pump)	79.3	32000

WINTER CALCULATIONS

Winter Heating Load (for 1700 sqft)

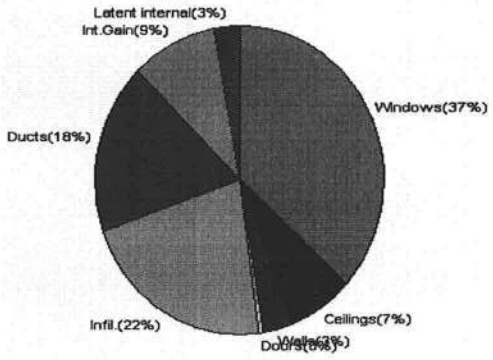
Load component			Load	
Window total	207	sqft	6658	Btuh
Wall total	1117	sqft	3084	Btuh
Door total	20	sqft	259	Btuh
Ceiling total	1800	sqft	2121	Btuh
Floor total	168	sqft	2747	Btuh
Infiltration	181	cfm	7345	Btuh
Duct loss			4884	Btuh
Subtotal			**27098**	**Btuh**
Ventilation	0	cfm	0	Btuh
TOTAL HEAT LOSS			**27098**	**Btuh**



SUMMER CALCULATIONS

Summer Cooling Load (for 1700 sqft)

Load component			Load	
Window total	207	sqft	14803	Btuh
Wall total	1117	sqft	1275	Btuh
Door total	20	sqft	196	Btuh
Ceiling total	1800	sqft	2981	Btuh
Floor total			0	Btuh
Infiltration	159	cfm	2953	Btuh
Internal gain			3780	Btuh
Duct gain			6168	Btuh
Sens. Ventilation	0	cfm	0	Btuh
Total sensible gain			**32156**	**Btuh**
Latent gain(ducts)			1174	Btuh
Latent gain(infiltration)			5799	Btuh
Latent gain(ventilation)			0	Btuh
Latent gain(internal/occupants/other)			1200	Btuh
Total latent gain			**8172**	**Btuh**
TOTAL HEAT GAIN			**40328**	**Btuh**



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EnergyGauge® System Sizing
PREPARED BY: _____
DATE: 3-11-08

System Sizing Calculations - Winter

Residential Load - Whole House Component Details

229 SW Bluegrass Court
Fort White, FL

Project Title:
Bowling Residence

Code Only
Professional Version
Climate: North

Reference City: Gainesville (Defaults) Winter Temperature Difference: 37.0 F

3/12/2008

Component Loads for Whole House

Window	Panes/SHGC/Frame/U	Orientation	Area(sqft) X	HTM=	Load
1	2, Clear, Metal, 0.87	W	30.6	32.2	985 Btuh
2	2, Clear, Metal, 0.87	W	80.0	32.2	2575 Btuh
3	2, Clear, Metal, 0.87	N	15.3	32.2	493 Btuh
4	2, Clear, Metal, 0.87	E	16.0	32.2	516 Btuh
5	2, Clear, Metal, 0.87	E	30.6	32.2	985 Btuh
6	2, Clear, Metal, 0.87	S	30.6	32.2	985 Btuh
7	2, Clear, Metal, 0.87	S	3.7	32.2	117 Btuh
	Window Total		207(sqft)		6658 Btuh
Walls	Type	R-Value	Area X	HTM=	Load
1	Log - 6inch - Ext(0.07)	5.0	1117	2.8	3084 Btuh
	Wall Total		1117		3084 Btuh
Doors	Type		Area X	HTM=	Load
1	Insulated - Exterior		20	12.9	259 Btuh
	Door Total		20		259Btuh
Ceilings	Type/Color/Surface	R-Value	Area X	HTM=	Load
1	Vented Attic/D/Shin	30.0	1800	1.2	2121 Btuh
	Ceiling Total		1800		2121Btuh
Floors	Type	R-Value	Size X	HTM=	Load
1	Slab On Grade	5	168.0 ft(p)	16.4	2747 Btuh
	Floor Total		168		2747 Btuh
			Envelope Subtotal:		14869 Btuh

Infiltration	Type	ACH X	Volume(cuft)	walls(sqft)	CFM=	
	Natural	0.80	13600	1117	181.3	7345 Btuh
Ductload				(DLM of 0.220)		4884 Btuh
All Zones			**Sensible Subtotal All Zones**			**27098 Btuh**

WHOLE HOUSE TOTALS

	Subtotal Sensible	27098 Btuh
	Ventilation Sensible	0 Btuh
	Total Btuh Loss	27098 Btuh

Manual J Winter Calculations

Residential Load - Component Details (continued)

229 SW Bluegrass Court
Fort White, FL

Project Title:
Bowling Residence

Code Only
Professional Version
Climate: North

3/12/2008

EQUIPMENT		
1. Electric Heat Pump	#	32000 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)

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System Sizing Calculations - Winter

Residential Load - Room by Room Component Details

229 SW Bluegrass Court
Fort White, FL

Project Title:
Bowling Residence

Code Only
Professional Version
Climate: North

Reference City: Gainesville (Defaults) Winter Temperature Difference: 37.0 F

3/12/2008

Component Loads for Zone #1: Main

Window	Panes/SHGC/Frame/U	Orientation	Area(sqft) X	HTM=	Load
1	2, Clear, Metal, 0.87	W	30.6	32.2	985 Btuh
2	2, Clear, Metal, 0.87	W	80.0	32.2	2575 Btuh
3	2, Clear, Metal, 0.87	N	15.3	32.2	493 Btuh
4	2, Clear, Metal, 0.87	E	16.0	32.2	516 Btuh
5	2, Clear, Metal, 0.87	E	30.6	32.2	985 Btuh
6	2, Clear, Metal, 0.87	S	30.6	32.2	985 Btuh
7	2, Clear, Metal, 0.87	S	3.7	32.2	117 Btuh
	Window Total		207(sqft)		6658 Btuh
Walls	Type	R-Value	Area X	HTM=	Load
1	Log - 6inch - Ext(0.07)	5.0	1117	2.8	3084 Btuh
	Wall Total		1117		3084 Btuh
Doors	Type		Area X	HTM=	Load
1	Insulated - Exterior		20	12.9	259 Btuh
	Door Total		20		259Btuh
Ceilings	Type/Color/Surface	R-Value	Area X	HTM=	Load
1	Vented Attic/D/Shin	30.0	1800	1.2	2121 Btuh
	Ceiling Total		1800		2121Btuh
Floors	Type	R-Value	Size X	HTM=	Load
1	Slab On Grade	5	168.0 ft(p)	16.4	2747 Btuh
	Floor Total		168		2747 Btuh
			Zone Envelope Subtotal:		14869 Btuh

Infiltration	Type	ACH X	Volume(cuft)	walls(sqft)	CFM=	
	Natural	0.80	13600	1117	181.3	7345 Btuh
Ductload	Average sealed, Supply(R6.0-Attic), Return(R6.0-Attic) (DLM of 0.220)					4884 Btuh
Zone #1			**Sensible Zone Subtotal**			**27098 Btuh**

WHOLE HOUSE TOTALS

	Subtotal Sensible	27098 Btuh
	Ventilation Sensible	0 Btuh
	Total Btuh Loss	27098 Btuh

Manual J Winter Calculations

Residential Load - Component Details (continued)

229 SW Bluegrass Court
Fort White, FL

Project Title:
Bowling Residence

Code Only
Professional Version
Climate: North

3/12/2008

EQUIPMENT		
1. Electric Heat Pump	#	32000 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)

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System Sizing Calculations - Summer

Residential Load - Whole House Component Details

229 SW Bluegrass Court
Fort White, FL

Project Title:
Bowling Residence

Code Only
Professional Version
Climate: North

Reference City: Gainesville (Defaults) Summer Temperature Difference: 17.0 F 3/12/2008

Component Loads for Whole House

	Type*		Overhang		Window Area(sqft)			HTM		Load
Window	Pn/SHGC/U/InSh/ExSh/IS	Ornt	Len	Hgt	Gross	Shaded	Unshaded	Shaded	Unshaded	
1	2, Clear, 0.87, None,N,N	W	1.5ft	8ft.	30.6	0.0	30.6	29	80	2434 Btuh
2	2, Clear, 0.87, None,N,N	W	1.5ft	8ft.	80.0	0.0	80.0	29	80	6361 Btuh
3	2, Clear, 0.87, None,N,N	N	1.5ft	8ft.	15.3	0.0	15.3	29	29	443 Btuh
4	2, Clear, 0.87, None,N,N	E	9.5ft	8ft.	16.0	15.4	0.7	29	80	498 Btuh
5	2, Clear, 0.87, None,N,N	E	9.5ft	8ft.	30.6	29.9	0.7	29	80	923 Btuh
6	2, Clear, 0.87, None,N,N	S	1.5ft	8ft.	30.6	30.6	0.0	29	34	887 Btuh
7	2, Clear, 0.87, None,N,N	S	1.5ft	8ft.	3.7	3.7	0.0	29	34	106 Btuh
	Excursion									3151 Btuh
	Window Total				207 (sqft)					14803 Btuh
Walls	Type		R-Value/U-Value		Area(sqft)			HTM		Load
1	Log - 6inch - Ext		5.0/0.07		1117.2			1.1		1275 Btuh
	Wall Total				1117 (sqft)					1275 Btuh
Doors	Type				Area (sqft)			HTM		Load
1	Insulated - Exterior				20.0			9.8		196 Btuh
	Door Total				20 (sqft)					196 Btuh
Ceilings	Type/Color/Surface		R-Value		Area(sqft)			HTM		Load
1	Vented Attic/DarkShingle		30.0		1800.0			1.7		2981 Btuh
	Ceiling Total				1800 (sqft)					2981 Btuh
Floors	Type		R-Value		Size			HTM		Load
1	Slab On Grade		5.0		168 (ft(p))			0.0		0 Btuh
	Floor Total				168.0 (sqft)					0 Btuh
						Envelope Subtotal:				19256 Btuh
Infiltration	Type		ACH		Volume(cuft)		wall area(sqft)	CFM=		Load
	SensibleNatural		0.70		13600		1117	181.3		2953 Btuh
Internal gain			Occupants		Btuh/occupant			Appliance		Load
			6		X 230		+	2400		3780 Btuh
						Sensible Envelope Load:				25989 Btuh
Duct load						(DGM of 0.237)				6168 Btuh
						Sensible Load All Zones				**32156 Btuh**

Manual J Summer Calculations

Residential Load - Component Details (continued)

229 SW Bluegrass Court
Fort White, FL

Project Title:
Bowling Residence

Code Only
Professional Version
Climate: North

3/12/2008

WHOLE HOUSE TOTALS

Whole House Totals for Cooling	**Sensible Envelope Load All Zones**	**25989 Btuh**
	Sensible Duct Load	6168 Btuh
	Total Sensible Zone Loads	**32156 Btuh**
	Sensible ventilation	0 Btuh
	Blower	0 Btuh
	Total sensible gain	**32156 Btuh**
	Latent infiltration gain (for 54 gr. humidity difference)	5799 Btuh
	Latent ventilation gain	0 Btuh
	Latent duct gain	1174 Btuh
	Latent occupant gain (6 people @ 200 Btuh per person)	1200 Btuh
	Latent other gain	0 Btuh
	Latent total gain	**8172 Btuh**
	TOTAL GAIN	**40328 Btuh**

EQUIPMENT

1. Central Unit	#	32000 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)

Version 8
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System Sizing Calculations - Summer

Residential Load - Room by Room Component Details

229 SW Bluegrass Court
Fort White, FL

Project Title:
Bowling Residence

Code Only
Professional Version
Climate: North

Reference City: Gainesville (Defaults) Summer Temperature Difference: 17.0 F 3/12/2008

Component Loads for Zone #1: Main

	Type*		Overhang		Window Area(sqft)			HTM		Load
Window	Pn/SHGC/U/InSh/ExSh/IS	Ornt	Len	Hgt	Gross	Shaded	Unshaded	Shaded	Unshaded	
1	2, Clear, 0.87, None,N,N	W	1.5ft	8ft.	30.6	0.0	30.6	29	80	2434 Btuh
2	2, Clear, 0.87, None,N,N	W	1.5ft	8ft.	80.0	0.0	80.0	29	80	6361 Btuh
3	2, Clear, 0.87, None,N,N	N	1.5ft	8ft.	15.3	0.0	15.3	29	29	443 Btuh
4	2, Clear, 0.87, None,N,N	E	9.5ft	8ft.	16.0	15.4	0.7	29	80	498 Btuh
5	2, Clear, 0.87, None,N,N	E	9.5ft	8ft.	30.6	29.9	0.7	29	80	923 Btuh
6	2, Clear, 0.87, None,N,N	S	1.5ft	8ft.	30.6	30.6	0.0	29	34	887 Btuh
7	2, Clear, 0.87, None,N,N	S	1.5ft	8ft.	3.7	3.7	0.0	29	34	106 Btuh
	Window Total				207 (sqft)					11653 Btuh

Walls	Type	R-Value/U-Value	Area(sqft)	HTM	Load
1	Log - 6inch - Ext	5.0/0.07	1117.2	1.1	1275 Btuh
	Wall Total		1117 (sqft)		1275 Btuh
Doors	Type		Area (sqft)	HTM	Load
1	Insulated - Exterior		20.0	9.8	196 Btuh
	Door Total		20 (sqft)		196 Btuh
Ceilings	Type/Color/Surface	R-Value	Area(sqft)	HTM	Load
1	Vented Attic/DarkShingle	30.0	1800.0	1.7	2981 Btuh
	Ceiling Total		1800 (sqft)		2981 Btuh
Floors	Type	R-Value	Size	HTM	Load
1	Slab On Grade	5.0	168 (ft(p))	0.0	0 Btuh
	Floor Total		168.0 (sqft)		0 Btuh
			Zone Envelope Subtotal:		16105 Btuh

Infiltration	Type	ACH	Volume(cuft)	wall area(sqft)	CFM=	Load
	SensibleNatural	0.70	13600	1117	158.7	2953 Btuh
Internal gain	Occupants		Btuh/occupant		Appliance	Load
	6	X	230	+	2400	3780 Btuh
				Sensible Envelope Load:		22838 Btuh
Duct load	Average sealed, Supply(R6.0-Attic), Return(R6.0-Attic)				(DGM of 0.237)	5420 Btuh
				Sensible Zone Load		**28258 Btuh**

The following window Excursion will be assigned to the system loads.

Windows	July excursion for System 1	3151 Btuh
	Excursion Subtotal:	3151 Btuh
Duct load		748 Btuh
	Sensible Excursion Load	**3898 Btuh**

Manual J Summer Calculations

Residential Load - Component Details (continued)

229 SW Bluegrass Court
Fort White, FL

Project Title:
Bowling Residence

Code Only
Professional Version
Climate: North

3/12/2008

WHOLE HOUSE TOTALS

Whole House Totals for Cooling	**Sensible Envelope Load All Zones**	**25989 Btuh**
	Sensible Duct Load	6168 Btuh
	Total Sensible Zone Loads	**32156 Btuh**
	Sensible ventilation	0 Btuh
	Blower	0 Btuh
	Total sensible gain	**32156 Btuh**
	Latent infiltration gain (for 54 gr. humidity difference)	5799 Btuh
	Latent ventilation gain	0 Btuh
	Latent duct gain	1174 Btuh
	Latent occupant gain (6 people @ 200 Btuh per person)	1200 Btuh
	Latent other gain	0 Btuh
	Latent total gain	**8172 Btuh**
	TOTAL GAIN	**40328 Btuh**

EQUIPMENT

1. Central Unit	#	32000 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)

Version 8
For Florida residences only

Residential Window Diversity

MidSummer

229 SW Bluegrass Court
Fort White, FL

Project Title:
Bowling Residence

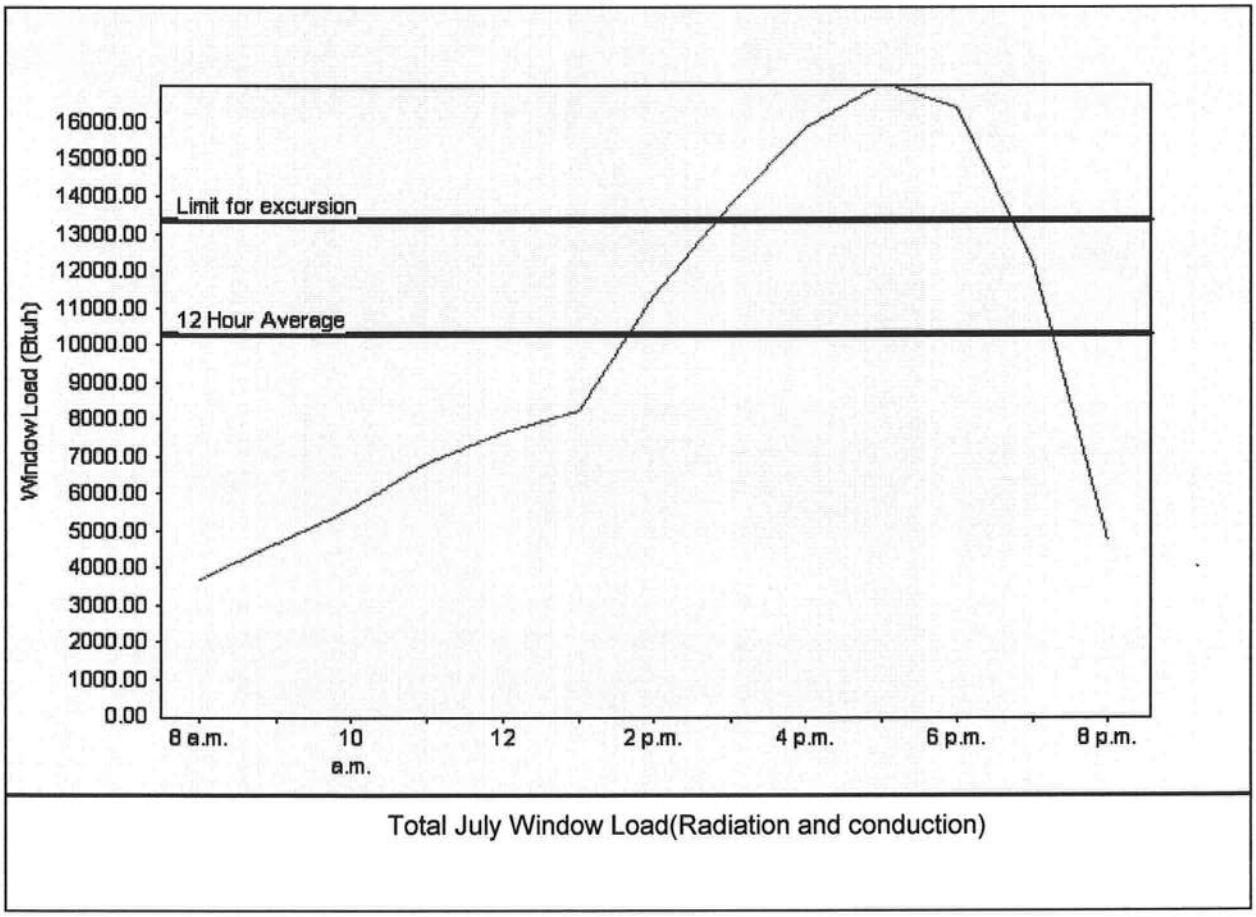
Code Only
Professional Version
Climate: North

3/12/2008

Weather data for: Gainesville - Defaults

Summer design temperature	92 F	Average window load for July	10258 Btu
Summer setpoint	75 F	Peak window load for July	16996 Btu
Summer temperature difference	17 F	Excusion limit(130% of Ave.)	13336 Btu
Latitude	29 North	Window excursion (July)	3660 Btuh

WINDOW Average and Peak Loads



Total July Window Load(Radiation and conduction)

This application has glass areas that produce large heat gains for part of the day. Variable air volume devices are required to overcome spikes in solar gain for one or more rooms. Install a zoned system or provide zone control for problem rooms. Single speed equipment may not be suitable for the application.

EnergyGauge® System Sizing for Florida residences only
PREPARED BY: _____
DATE: _____

WIND98 v3-10

Wind Load Design per ASCE 7-98

Description: Bowling Home- Florida
Analysis by: LDH

User Input Data		
Structure Type	Building	
Basic Wind Speed (V)	142	mph
Structural Category	II	
Exposure	B	
Struc Nat Frequency (n1)	2	Hz
Slope of Roof (Theta)	27	Deg
Type of Roof	Gabled	
Kd (Directonality Factor)	0.85	
Eave Height (Eht)	11.00	ft
Ridge Height (RHt)	19.00	ft
Mean Roof Height (Ht)	15.00	ft
Width Perp. To Wind Dir (B)	50.00	ft
Width Paral. To Wind Dir (L)	44.00	ft
Damping Ratio (beta)	0.01	

Red values should be changed only through "Main Menu"

Calculated Parameters	
Type of Structure	
Height/Least Horizontal Dim	0.34
Flexible Structure	No

Calculated Parameters		
Importance Factor	1	
Hurricane Prone Region (V>100 mph)		
Table C6-4 Values		
Alpha =	7.000	
zg =	1200.000	
At =	0.143	
Bt =	0.840	
Am =	0.250	
Bm =	0.450	
Cc =	0.300	
l =	320.00	ft
Epsilon =	0.333	
Zmin =	30.00	ft

Gust Factor Category I: Rigid Structures - Simplified Method			
Gust1	For rigid structures (Nat Freq > 1 Hz) use 0.85	0.85	
Gust Factor Category II: Rigid Structures - Complete Analysis			
Zm	Zmin	30.00	ft
lzm	Cc * (33/z)^0.167	0.3048	
Lzm	l*(zm/33)^Epsilon	309.99	ft
Q	(1/(1+0.63*((Min(B,L)+Ht)/Lzm)^0.63))^0.5	0.9048	
Gust2	0.925*((1+1.7*lzm*3.4*Q)/(1+1.7*3.4*lzm))	0.8688	
Gust Factor Summary			
G	Since this is not a flexible structure the lessor of Gust1 or Gust2 are used	0.85	

Larry D. Hamlett
#19602
8-25-05

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WIND98 v3-10

Wind Load Design per ASCE 7-98

6.5.12.2.1 Design Wind Pressure - Buildings of All Heights

Elev	Kz	Kzt	qz	Pressure (lb/ft^2)	
				Windward Wall*	
ft			lb/ft^2	+GCpi	-GCpi
19	0.61	1.00	26.98	13.81	22.88
15	0.57	1.00	25.22	12.61	21.69

Table 6-7 Internal Pressure Coefficients for Buildings, Gcpi

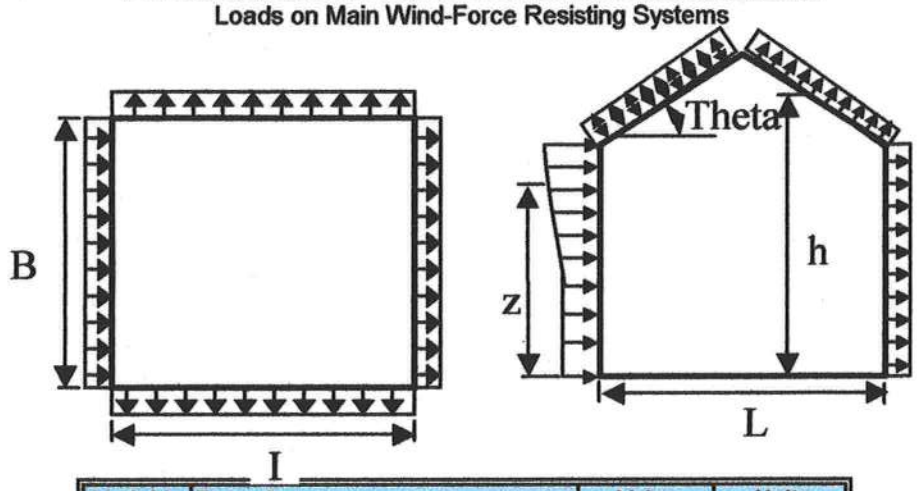
Condition	Gcpi	
	Max +	Max -
Open Buildings	0.00	0.00
Partially Enclosed Buildings	0.55	-0.55
Enclosed Buildings	0.18	-0.18
Enclosed Buildings	**0.18**	**-0.18**

WIND98 v3-10

Wind Load Design per ASCE 7-98

Figure 6-3 - External Pressure Coefficients, Cp

Loads on Main Wind-Force Resisting Systems



Variable	Formula	Value	Units
Kh	2.01*(Ht/zg)^(2/Alpha)	0.57	
Kht	Topographic factor (Fig 6-2)	1.00	
Qh	.00256*(V)^2*I*Kh*Kht*Kd	25.22	psf
Khcc	Comp & Clad: Table 6-5 Case 1	0.70	
Qhcc	.00256*V^2*I*Khcc*Kht*Kd	30.74	psf

Wall Pressure Coefficients, Cp	
Surface	**Cp**
Windward Wall (See Figure 6.5.12.2.1 for Pressures)	0.8

Roof Pressure Coefficients, Cp	
Roof Area (sq. ft.)	2,200
Reduction Factor	0.80

Calculations for Wind Normal to 50 ft Face *Additional Runs may be req'd for other wind directions*	Cp	Pressure (psf) +GCpi	 -GCpi
Leeward Walls (Wind Dir Normal to 50 ft wall)	-0.50	-15.26	-6.18
Side Walls	-0.70	-19.54	-10.47
Roof - Wind Normal to Ridge (Theta>=10) - for Wind Normal to 50 ft face			
Windward - Max Negative	-0.22	-9.29	-0.22
Windward - Max Positive	0.26	1.11	10.19
Leeward Normal to Ridge	-0.60	-17.40	-8.32
Overhang Top (Windward)	-0.22	-4.75	-4.75
Overhang Top (Leeward)	-0.60	-12.86	-12.86
Overhang Bottom (Applicable on Windward only)	0.80	17.15	17.15
Roof - Wind Parallel to Ridge (All Theta) - for Wind Normal to 50 ft face			
Dist from Windward Edge: 0 ft to 7.5 ft	-0.90	-23.83	-14.75
Dist from Windward Edge: 7.5 ft to 15 ft	-0.90	-23.83	-14.75
Dist from Windward Edge: 15 ft to 30 ft	-0.50	-15.26	-6.18
Dist from Windward Edge: > 30 ft	-0.30	-10.97	-1.89

* Horizontal distance from windward edge

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WIND98 v3-10

Wind Load Design per ASCE 7-98

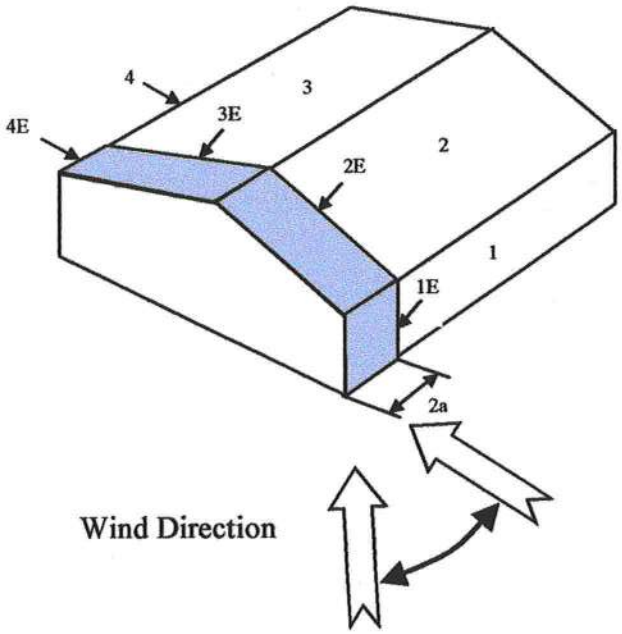
Figure 6-4 - External Pressure Coefficients, GCpf

Loads on Main Wind-Force Resisting Systems w/ Ht <= 60 ft

Kh =	2.01*(Ht/zg)^(2/Alpha)	=	0.70
Kht =	Topographic factor (Fig 6-2)	=	1.00
Qh =	0.00256*(V)^2*ImpFac*Kh*Kht*Kd	=	30.74

Case A						
Surface	GCpf	+GCpi	-GCpi	qh (psf)	Min P (psf)	Max P (psf)
1	0.55	0.18	-0.18	30.74	11.40	22.47
2	-0.06	0.18	-0.18	30.74	-7.38	3.69
3	-0.45	0.18	-0.18	30.74	-19.21	-8.15
4	-0.39	0.18	-0.18	30.74	-17.46	-6.39
5	0.00	0.18	-0.18	30.74	-5.53	5.53
6	0.00	0.18	-0.18	30.74	-5.53	5.53
1E	0.72	0.18	-0.18	30.74	16.69	27.76
2E	-0.13	0.18	-0.18	30.74	-9.59	1.48
3E	-0.58	0.18	-0.18	30.74	-23.30	-12.23
4E	-0.53	0.18	-0.18	30.74	-21.76	-10.70
5E	0.00	0.18	-0.18	30.74	-5.53	5.53
6E	0.00	0.18	-0.18	30.74	-5.53	5.53

* p = qh * (GCpf - GCpi)



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WIND98 v3-10

Wind Load Design per ASCE 7-98

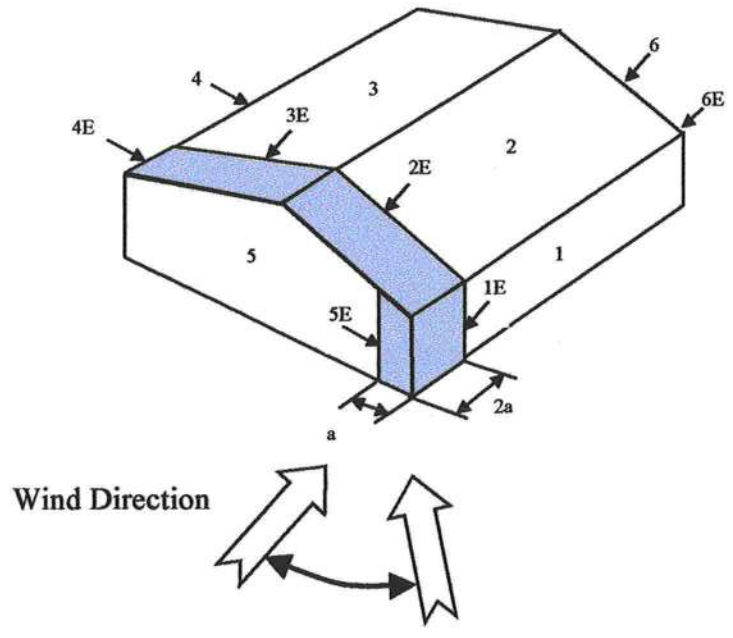
Figure 6-4 - External Pressure Coefficients, GCpf

Loads on Main Wind-Force Resisting Systems w/ Ht <= 60 ft

Kh =	2.01*(Ht/zg)^(2/Alpha)	=	0.70
Kht =	Topographic factor (Fig 6-2)	=	1.00
Qh =	0.00256*(V)^2*ImpFac*Kh*Kht*Kd	=	30.74

Case B						
Surface	GCpf	+GCpi	-GCpi	qh (psf)	Min P (psf)	Max P (psf)
1	-0.45	0.18	-0.18	30.74	-19.37	-8.30
2	-0.69	0.18	-0.18	30.74	-26.74	-15.68
3	-0.37	0.18	-0.18	30.74	-16.91	-5.84
4	-0.45	0.18	-0.18	30.74	-19.37	-8.30
5	0.40	0.18	-0.18	30.74	6.76	17.83
6	-0.29	0.18	-0.18	30.74	-14.45	-3.38
1E	-0.48	0.18	-0.18	30.74	-20.29	-9.22
2E	-1.07	0.18	-0.18	30.74	-38.42	-27.36
3E	-0.53	0.18	-0.18	30.74	-21.83	-10.76
4E	-0.48	0.18	-0.18	30.74	-20.29	-9.22
5E	0.61	0.18	-0.18	30.74	13.22	24.28
6E	-0.43	0.18	-0.18	30.74	-18.75	-7.68

* p = qh * (GCpf - GCpi)

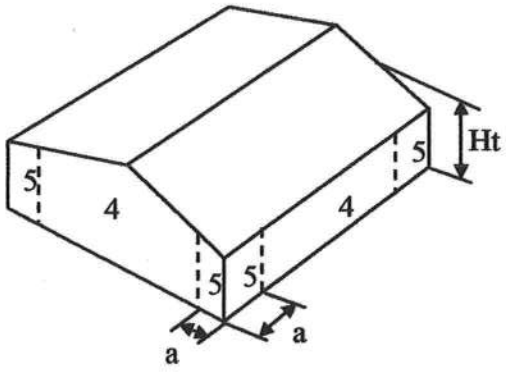


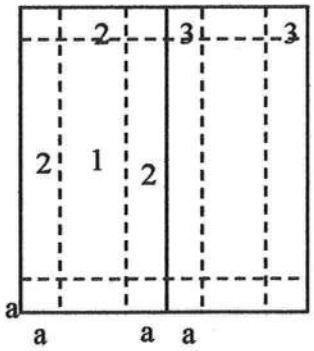
WIND98 v3-10

Wind Load Design per ASCE 7-98

Figure 6-5 - External Pressure Coefficients, GCp

Loads on Components and Cladding for Buildings w/ Ht <= 60 ft





Gabled Roof

10 < Theta <= 45

a = 4.4 ==> 4.40 ft

Component	Width (ft)	Span (ft)	Area (ft^2)	Zone	GCp		Wind Press (lb/ft^2)	
					Max	Min	Max	Min
Middle Roof	13	41.2	536.00	1	0.30	-0.80	14.76	-30.12
Eave	4.4	41.2	181.00	2	0.30	-1.40	14.76	-48.57
Roof corner	4.4	4.4	19.36	3	0.44	-1.90	19.14	-63.91
Side wall	8	41.2	330.00	4	0.73	-0.83	28.03	-31.10
Wall corner	4.4	8	35.20	5	0.90	-1.21	33.31	-42.63
Porch Middle	10	35	350.00	2H	0.30	-2.20	10.00	-67.63
Porch overhang	4.4	4.4	19.36	3H	0.44	-3.36	13.61	-103.15

Note: * Enter Zone 1 through 5, or 1H through 3H for overhangs.

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Non-Itemized QUOTE Estimate

Santa Fe Truss
PO Box 1298
410 SW Poe Springs RD.
High Springs, FL 32655

REQ. QUOTE DATE	/ /	ORDER #	
ORDER DATE	/ /	QUOTE #	BOWLM
DELIVERY DATE	/ /	CUSTOMER ACCT #	BOWLM
DATE OF INVOICE	/ /	CUSTOMER PO #	
ORDERED BY		INVOICE #	
		TERMS	
SUPERINTENDANT	MD	SALES REP	Walk In
JOBSITE PHONE #		SALES AREA	

SOLD TO
BOWLING, MD
,
(386) 497-3108

SHIP TO
,

JOB NAME: LOT # SUBDIV:
MODEL: TAG: JOB CATEGORY:
DELIVERY INSTRUCTIONS:
SPECIAL INSTRUCTIONS:

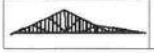
BUILDING DEPARTMENT	OVERHANG INFO		HEEL HEIGHT	00-04-03	REQ. LAYOUTS	REQ. ENGINEERING		BY	DATE
	END CUT	RETURN			NONE	NONE	QUOTE		/ /
	PLUMB		GABLE STUDS	16 IN. OC			LAYOUT	DM	10/13/05
							CUTTING	DM	10/13/05

ROOF TRUSSES

LOADING INFORMATION

TCLL-TCDL-BCLL-BCDL	STRESS INCR.
20.0,10.0,0.0,10.0	1.25

ROOF TRUSS SPACING: 24.0 IN. O.C. (TYP.)

PROFILE	QTY	PITCH		TYPE	BASE	O/A	LUMBER		OVERHANG		CANTILEVER		STUB		
	PLY	TOP	BOT	ID	SPAN	SPAN	TOP	BOT	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	
	13	6.00	0.00	SPECIAL A	44-00-00	44-00-00	2 X 4	2 X 4	01-06-00	01-06-00					
	11	6.00	2.00	SPECIAL A1	44-00-00	44-00-00	2 X 4	2 X 4	01-06-00	01-06-00					
	2	6.00	0.00	SPECIAL AET	44-00-00	44-00-00	2 X 4	2 X 4	01-06-00	01-06-00					

ACCEPTED BY SELLER

BY: _____

TITLE: _____

DATE OF ACCEPTANCE: _____

ACCEPTED BY BUYER

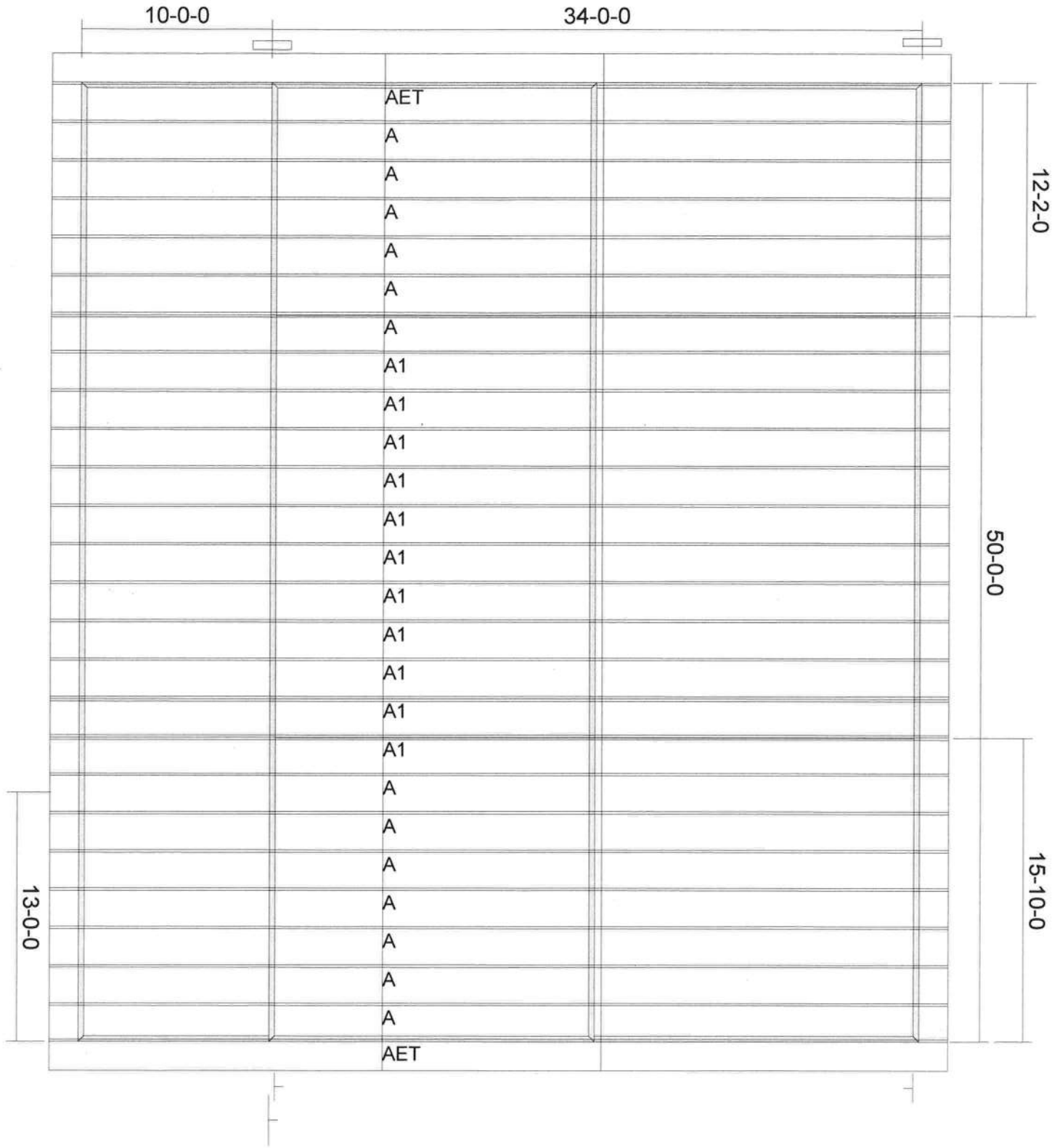
PURCHASER: _____

BY: _____ TITLE: _____

ADDRESS: _____

PHONE: _____ DATE: _____

SUB-TOTAL	$4,900.00
GRAND TOTAL	**$4,900.00**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13-0-0

North Central Florida Air Conditioning, Inc

Heating Air Conditioning & Commercial refrigeration
PH 352 - 367-2945 FAX 386-454-4854
CAC 057846

PROPOSAL

TO: M. D Bowling

ATTN: _____

ADDRESS 299 S.W Bluegrass ct

CITY Ft white ST Fl ZIP: 32038

PHONE 386-497-3108 FAX _____

JOB

13 seer AMANA H.P

We propose to furnish and install a complete 3 1/2 ton(s) _____ Straight cool

X Heat Pump system at above job.

X All necessary ductwork to complete a full and operational Heating and Air Conditioning system. Fiberglass trunkline with flexible runouts.

X All necessary refrigerant piping--- condensate piping – low voltage wiring.

X To provide precast concrete slab for condenser (s).

X To provide unit stand or drain pan for air handling unit.

X To provide bathroom exhaust fan (s) and ducting.

_____ To provide other exhaust fans.

X Others Dryer vent

All labor and workmanship are guaranteed for a period of (1) year from date of installation. Equipment is guaranteed for 10 year (s) for parts only and 10 years on compressor

Terms: DUE UPON COMPLETION

TOTAL DUE $ 6300.00

I have the authority to order the above work and do so order As outlined above. It is agreed that the seller will retain title to Any equipment or materials furnished until final and complete Payment is made and if settlement is not made as agreed, seller Shall have the right to remove same and seller will not be held Harmless for any damages resulting from the removal thereof.

AUTHORIZED: _____ DATE _____

NORTH CENTRAL FLORIDA A/C

BY: Chuck Lewis

good for 90 days From 10/10/05

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Notice of Treatment 42204

Applicator: Florida Pest Control & Chemical Co. (www.flapest .com)
Address: 116 NW 16 AVE
City Ocala Phone 3762601

Site Location: Subdivision
Lot # Block# Permit # 27240
Address 21285 US 441

Product used	Active Ingredient	% Concentration
☑ Premise	Imidacloprid	0.1%
☐ Termidor	Fipronil	0.12%
☐ Bora-Care	Disodium Octaborate Tetrahydrate	23.0%

Type treatment: ☑ Soil ☐ Wood

Area Treated	Square feet	Linear feet	Gallons Applied
Perim		183	37

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 EB.

3/2 Date | Time | Edwin Brown Print Technician's Name

Remarks:

Applicator - White Permit File - Canary Permit Holder - Pink

10/05 ©

ENGINEERING BY
TRENCO
A MiTek Affiliate

RE: BOWLM2 - Bowling Residence

Trenco
818 Soundside Rd
Edenton, NC 27932

Site Information:
Project Customer: Morris Bowling Project Name: Residence
Lot/Block: Subdivision:
Address: 229 SW Bluegrass Ct
City: Ft White State: FL

Name Address and License # of Structural Engineer of Record, If there is one, for the building.
Name: License #:
Address:
City: State:

General Truss Engineering Criteria & Design Loads (Individual Truss Design Drawings Show Special Loading Conditions):
Design Code: FBC2004/TPI2002 Design Program: MiTek 20/20 7.0
Wind Code: ASCE 7-02 Wind Speed: 110 mph Floor Load: N/A psf
Roof Load: 40.0 psf

This package includes 3 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

No.	Seal#	Truss Name	Date
1	E4927242	A	7/3/08
2	E4927243	A1	7/3/08
3	E4927244	AET	7/3/08

Marvin A. Strzyzewski, FL Lic. #43144
Truss Engineering Co.
818 Soundside Road
Edenton, NC 27932
FL COA #7239

The truss drawing(s) referenced above have been prepared by TRENCO under my direct supervision based on the parameters provided by Santa Fe Truss.

Truss Design Engineer's Name: Strzyzewski, Marvin
My license renewal date for the state of is February 28, 2009.

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.

July 3,2008

Strzyzewski, Marvin

Job	Truss	Truss Type	Qty	Ply	Bowling Residence	E4927242
BOWLM2	A	ROOF TRUSS	12	1	Job Reference (optional)	

SANTA FE TRUSS, HIGH SPRINGS, FL. 7.050 s May 22 2008 MiTek Industries, Inc. Thu Jul 03 15:30:23 2008 Page 1

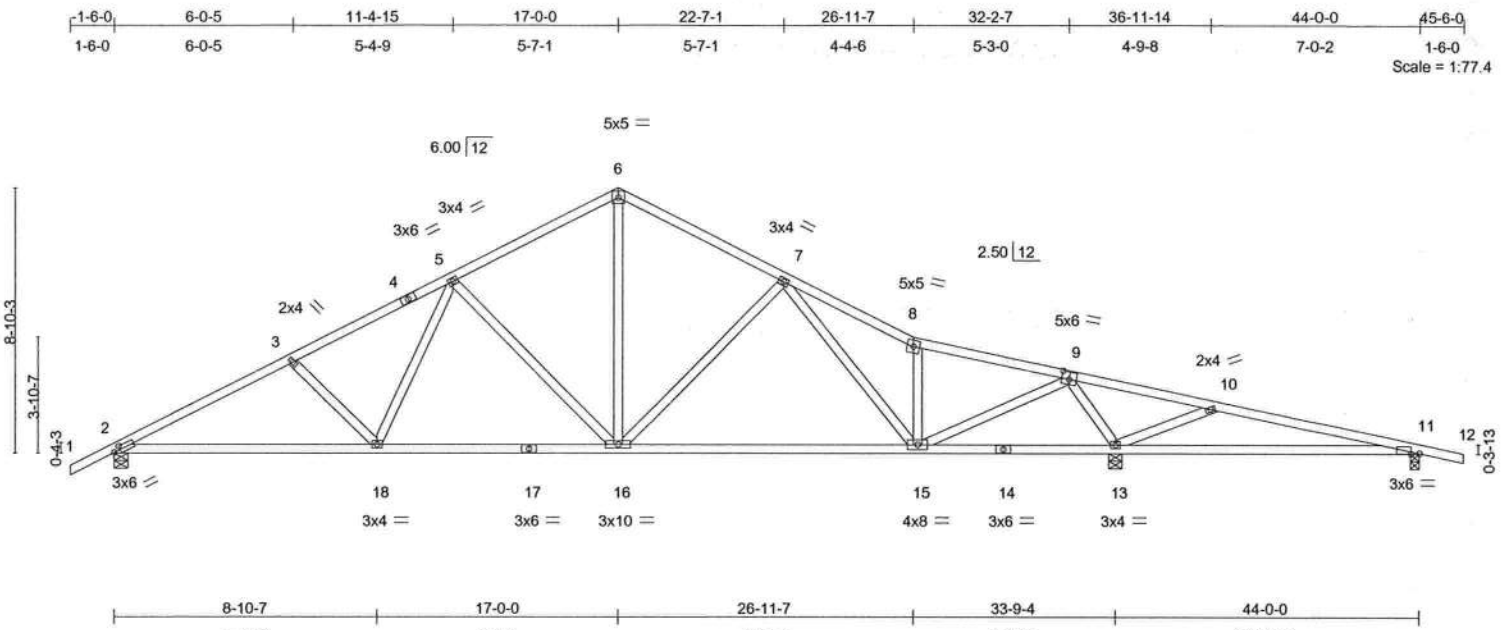

Plate Offsets (X,Y): [2:0-2-10,0-1-8], [9:0-3-0,0-3-0], [11:0-3-5,0-0-2]

LOADING (psf)		SPACING	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plates Increase	1.25	TC	0.58	Vert(LL)	0.29	11-13	>415	240	MT20	244/190
TCDL	10.0	Lumber Increase	1.25	BC	0.71	Vert(TL)	-0.62	15-16	>654	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.67	Horz(TL)	0.07	13	n/a	n/a		
BCDL	10.0	Code FBC2004/TPI2002		(Matrix)							Weight: 224 lb	

LUMBER
TOP CHORD 2 X 4 SYP No.2D
BOT CHORD 2 X 4 SYP No.2D
WEBS 2 X 4 SYP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-0-15 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (lb/size) 2=1365/0-5-8, 13=2095/0-5-8, 11=233/0-3-8
Max Horz 2=133(LC 5)
Max Uplift2=-202(LC 5), 13=-388(LC 6), 11=-227(LC 4)
Max Grav 2=1365(LC 1), 13=2095(LC 1), 11=271(LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/40, 2-3=-2286/234, 3-4=-2039/203, 4-5=-1907/216, 5-6=-1400/183, 6-7=-1398/187, 7-8=-1694/180, 8-9=-1501/103, 9-10=-175/1263, 10-11=0/614, 11-12=0/17
BOT CHORD 2-18=-240/1960, 17-18=-132/1589, 16-17=-132/1589, 15-16=-30/1410, 14-15=-196/117, 13-14=-196/117, 11-13=-553/1
WEBS 3-18=-294/144, 5-18=-18/451, 5-16=-594/175, 6-16=-57/835, 7-16=-369/144, 7-15=0/178, 8-15=-709/159, 9-15=-113/1813, 9-13=-1922/243, 10-13=-711/289

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-02; 110mph (3-second gust); TCDL=5.0psf; BCDL=5.0psf; h=18ft; Cat. II; Exp B; enclosed; MWFRS (low-rise); cantilever left and right exposed ; porch right exposed; Lumber DOL=1.33 plate grip DOL=1.33
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 202 lb uplift at joint 2, 388 lb uplift at joint 13 and 227 lb uplift at joint 11.

LOAD CASE(S) Standard

Marvin A. Strzyzewski, FL Lic. #43144
Truss Engineering Co.
818 Soundside Road
Edenton, NC 27932
FL COA #7239

July 3,2008

Job	Truss	Truss Type	Qty	Ply	Bowling Residence	E4927243
BOWLM2	A1	ROOF TRUSS	12	1	Job Reference (optional)	

SANTA FE TRUSS, HIGH SPRINGS, FL. 7.050 s May 22 2008 MiTek Industries, Inc. Thu Jul 03 15:30:24 2008 Page 1

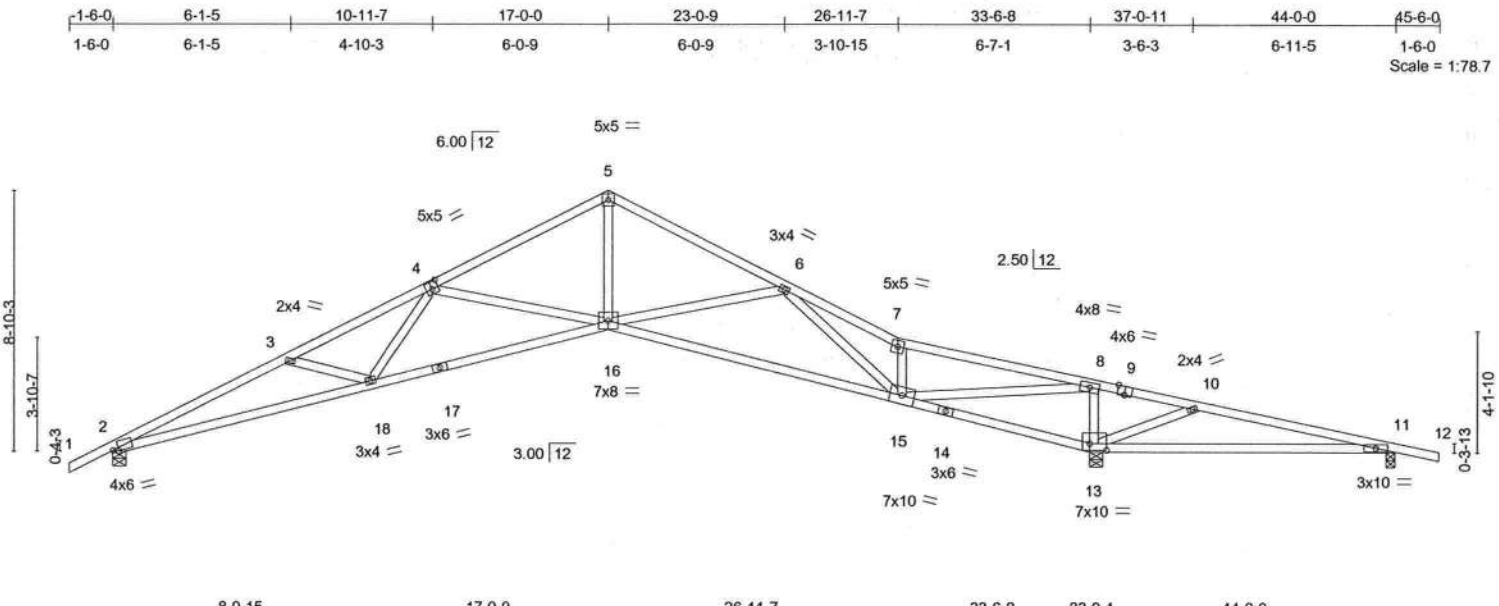

Plate Offsets (X,Y): [2:0-2-5,0-0-13], [4:0-2-8,0-3-0], [9:0-3-0,Edge], [13:0-7-0,0-2-12]

LOADING (psf)		SPACING	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plates Increase	1.25	TC	0.76	Vert(LL)	0.31	11-13	>401	240	MT20	244/190
TCDL	10.0	Lumber Increase	1.25	BC	0.87	Vert(TL)	-0.93	15-16	>428	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.66	Horz(TL)	0.41	13	n/a	n/a		
BCDL	10.0	Code FBC2004/TPI2002		(Matrix)							Weight: 205 lb	

LUMBER
TOP CHORD 2 X 4 SYP No.2D
BOT CHORD 2 X 4 SYP No.2D
WEBS 2 X 4 SYP No.3 *Except*
8-15: 2 X 4 SYP No.2D

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-1-1 oc purlins.
BOT CHORD Rigid ceiling directly applied or 3-7-5 oc bracing.

REACTIONS (lb/size) 13=2453/0-5-8, 11=-30/0-3-8, 2=1269/0-5-8
Max Horz 2=132(LC 5)
Max Uplift13=-390(LC 6), 11=-251(LC 4), 2=-197(LC 5)
Max Grav 13=2453(LC 1), 11=73(LC 8), 2=1269(LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/37, 2-3=-3732/439, 3-4=-3381/340, 4-5=-2256/166, 5-6=-2253/182, 6-7=-1580/160, 7-8=-1381/77, 8-9=-152/2440, 9-10=-158/2400, 10-11=-32/1845, 11-12=0/17
BOT CHORD 2-18=-443/3342, 17-18=-273/2827, 16-17=-255/2855, 15-16=-35/2039, 14-15=-2531/241, 13-14=-2559/227, 11-13=-1756/40
WEBS 3-18=-279/169, 4-18=-5/502, 4-16=-856/253, 5-16=-38/1552, 6-16=-184/215, 6-15=-817/157, 7-15=-724/171, 8-15=-182/3785, 8-13=-1406/167, 10-13=-653/260

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-02; 110mph (3-second gust); TCDL=5.0psf; BCDL=5.0psf; h=18ft; Cat. II; Exp B; enclosed; MWFRS (low-rise); cantilever left and right exposed ; porch right exposed; Lumber DOL=1.33 plate grip DOL=1.33
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 390 lb uplift at joint 13, 251 lb uplift at joint 11 and 197 lb uplift at joint 2.

LOAD CASE(S) Standard

Marvin A. Strzyzewski, FL Lic. #43144
Truss Engineering Co.
818 Soundside Road
Edenton, NC 27932
FL COA #7239

July 3,2008

Job	Truss	Truss Type	Qty	Ply	Bowling Residence	E4927244
BOWLM2	AET	GABLE	2	1	Job Reference (optional)	

SANTA FE TRUSS, HIGH SPRINGS, FL. 7.050 s May 22 2008 MiTek Industries, Inc. Thu Jul 03 15:30:26 2008 Page 1

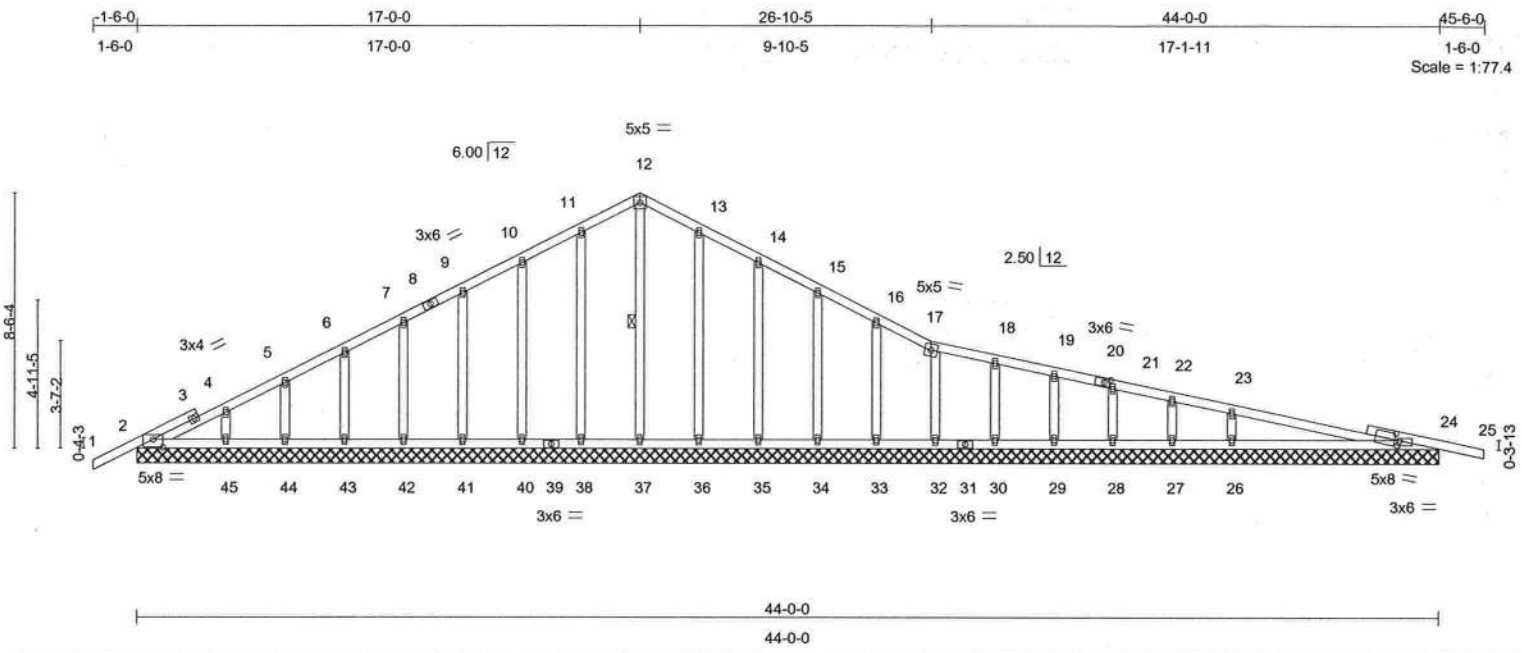

Plate Offsets (X,Y): [2:0-4-0,0-3-1], [20:0-2-6,0-1-8], [24:0-2-0,0-2-8], [24:0-1-0,0-2-0]

LOADING (psf)		SPACING	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plates Increase	1.25	TC	0.39	Vert(LL)	0.03	25	n/r	120	MT20	244/190
TCDL	10.0	Lumber Increase	1.25	BC	0.30	Vert(TL)	0.09	25	n/r	120		
BCLL	0.0	Rep Stress Incr	YES	WB	0.11	Horz(TL)	0.01	24	n/a	n/a		
BCDL	10.0	Code FBC2004/TPI2002		(Matrix)							Weight: 249 lb	

LUMBER
TOP CHORD 2 X 4 SYP No.2D
BOT CHORD 2 X 4 SYP No.2D
OTHERS 2 X 4 SYP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 12-37

REACTIONS (lb/size) 2=224/44-0-0, 45=198/44-0-0, 44=151/44-0-0, 43=162/44-0-0, 42=159/44-0-0, 41=160/44-0-0, 40=160/44-0-0, 38=160/44-0-0, 37=150/44-0-0, 36=160/44-0-0, 35=160/44-0-0, 34=161/44-0-0, 33=154/44-0-0, 32=163/44-0-0, 30=171/44-0-0, 29=142/44-0-0, 28=229/44-0-0, 27=-110/44-0-0, 26=618/44-0-0, 24=328/44-0-0
Max Horz 2=154(LC 5)
Max Uplift 2=-87(LC 5), 45=-44(LC 5), 44=-84(LC 5), 43=-73(LC 5), 42=-76(LC 5), 41=-74(LC 5), 40=-80(LC 5), 38=-63(LC 5), 36=-59(LC 6), 35=-82(LC 6), 34=-74(LC 6), 33=-73(LC 6), 32=-74(LC 6), 30=-65(LC 4), 29=-51(LC 6), 28=-76(LC 4), 27=-110(LC 10), 26=-193(LC 4), 24=-160(LC 4)
Max Grav 2=224(LC 1), 45=198(LC 1), 44=151(LC 9), 43=162(LC 1), 42=159(LC 1), 41=160(LC 9), 40=160(LC 1), 38=164(LC 9), 37=180(LC 6), 36=164(LC 10), 35=160(LC 1), 34=161(LC 10), 33=154(LC 1), 32=163(LC 1), 30=171(LC 10), 29=142(LC 1), 28=229(LC 10), 27=22(LC 4), 26=618(LC 1), 24=328(LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/39, 2-3=-160/53, 3-4=-150/62, 4-5=-115/76, 5-6=-61/101, 6-7=-38/137, 7-8=-38/168, 8-9=-11/173, 9-10=-38/208, 10-11=-38/246, 11-12=-38/274, 12-13=-38/267, 13-14=-38/223, 14-15=-38/169, 15-16=-37/121, 16-17=-36/108, 17-18=-18/76, 18-19=-16/55, 19-20=-19/37, 20-21=-20/33, 21-22=-43/18, 22-23=-46/11, 23-24=-100/36, 24-25=0/17
BOT CHORD 2-45=0/135, 44-45=0/135, 43-44=0/135, 42-43=0/135, 41-42=0/135, 40-41=0/135, 39-40=0/135, 38-39=0/135, 37-38=0/135, 36-37=0/135, 35-36=0/135, 34-35=0/135, 33-34=0/135, 32-33=0/135, 31-32=0/139, 30-31=0/139, 29-30=0/139, 28-29=0/139, 27-28=0/139, 26-27=0/139, 24-26=0/139
WEBS 4-45=-145/76, 5-44=-116/99, 6-43=-121/94, 7-42=-120/96, 9-41=-120/94, 10-40=-120/100, 11-38=-124/83, 12-37=-160/0, 13-36=-124/79, 14-35=-120/102, 15-34=-121/94, 16-33=-114/93, 17-32=-124/94, 18-30=-129/86, 19-29=-108/70, 21-28=-164/99, 22-27=-15/56, 23-26=-429/240

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-02; 110mph (3-second gust); TCDL=5.0psf; BCDL=5.0psf; h=18ft; Cat. II; Exp B; enclosed; MWFRS (low-rise) gable end zone; cantilever left and right exposed ; porch right exposed; Lumber DOL=1.33 plate grip DOL=1.33
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1-2002.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) All plates are 2x4 MT20 unless otherwise indicated.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 2-0-0 oc.

Marvin A. Strzyzewski, FL Lic. #43144
Truss Engineering Co.
818 Soundside Road
Edenton, NC 27932
FL COA #7239

July 3,2008

Continued on page 2

NOTES

8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 87 lb uplift at joint 2, 44 lb uplift at joint 45, 84 lb uplift at joint 44, 73 lb uplift at joint 43, 76 lb uplift at joint 42, 74 lb uplift at joint 41, 80 lb uplift at joint 40, 63 lb uplift at joint 38, 59 lb uplift at joint 36, 82 lb uplift at joint 35, 74 lb uplift at joint 34, 73 lb uplift at joint 33, 74 lb uplift at joint 32, 65 lb uplift at joint 30, 51 lb uplift at joint 29, 76 lb uplift at joint 28, 110 lb uplift at joint 27, 193 lb uplift at joint 26 and 160 lb uplift at joint 24.

LOAD CASE(S) Standard

ENGINEERING BY
TRENCO
A MiTek Affiliate

RE: BOWLM2 - Bowling Residence

Trenco
818 Soundside Rd
Edenton, NC 27932

Site Information:
Project Customer: Morris Bowling Project Name: Residence
Lot/Block: Subdivision:
Address: 229 SW Bluegrass Ct
City: Ft White State: FL

Name Address and License # of Structural Engineer of Record, If there is one, for the building.
Name: License #:
Address:
City: State:

General Truss Engineering Criteria & Design Loads (Individual Truss Design Drawings Show Special Loading Conditions):
Design Code: FBC2004/TPI2002 Design Program: MiTek 20/20 7.0
Wind Code: ASCE 7-02 Wind Speed: 110 mph Floor Load: N/A psf
Roof Load: 40.0 psf

This package includes 3 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

No.	Seal#	Truss Name	Date
1	E4927242	A	7/3/08
2	E4927243	A1	7/3/08
3	E4927244	AET	7/3/08

The truss drawing(s) referenced above have been prepared by TRENCO under my direct supervision based on the parameters provided by Santa Fe Truss.

Truss Design Engineer's Name: Strzyzewski, Marvin
My license renewal date for the state of is February 28, 2009.

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.

Marvin A. Strzyzewski, FL Lic. #43144
Truss Engineering Co.
818 Soundside Road
Edenton, NC 27932
FL COA #7239

July 3,2008

Strzyzewski, Marvin

Job	Truss	Truss Type	Qty	Ply	Bowling Residence	E4927242
BOWLM2	A	ROOF TRUSS	12	1	Job Reference (optional)	

SANTA FE TRUSS, HIGH SPRINGS, FL. 7.050 s May 22 2008 MiTek Industries, Inc. Thu Jul 03 15:30:23 2008 Page 1

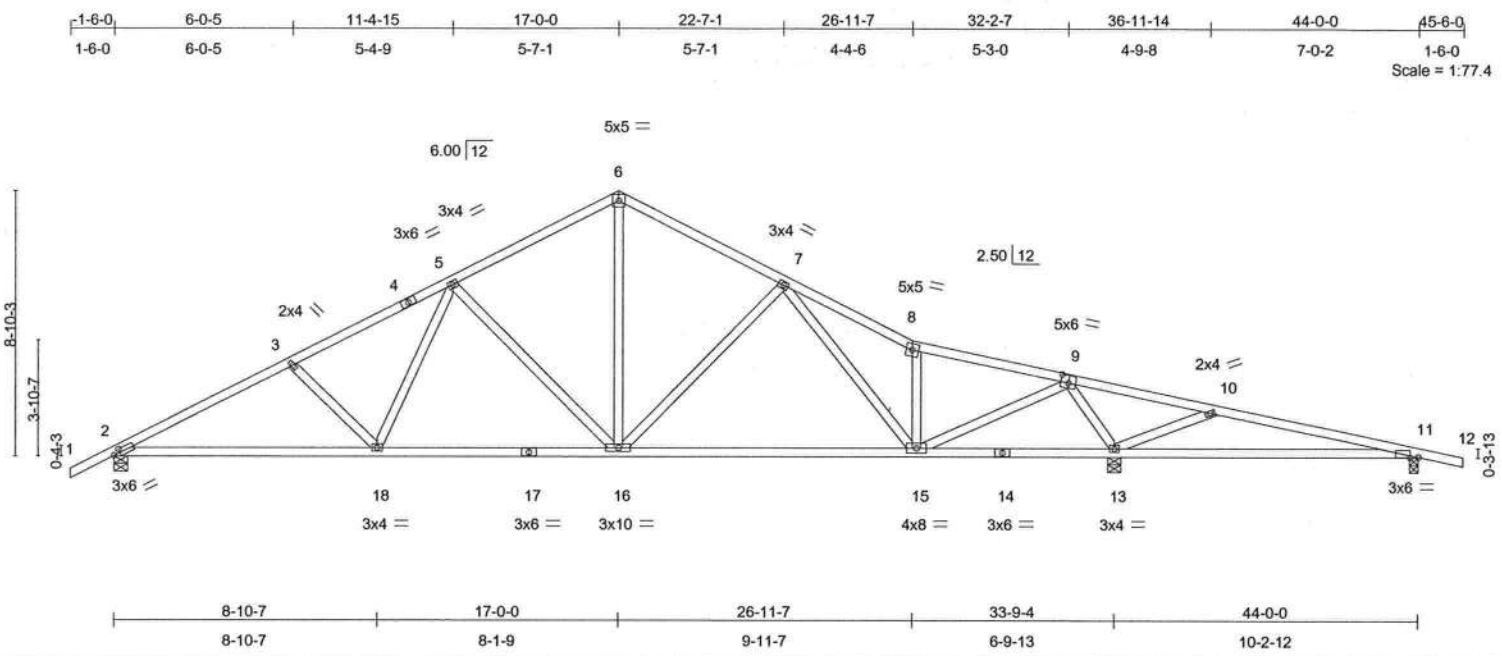

Plate Offsets (X,Y): [2:0-2-10,0-1-8], [9:0-3-0,0-3-0], [11:0-3-5,0-0-2]

LOADING (psf)		SPACING	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plates Increase	1.25	TC	0.58	Vert(LL)	0.29	11-13	>415	240	MT20	244/190
TCDL	10.0	Lumber Increase	1.25	BC	0.71	Vert(TL)	-0.62	15-16	>654	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.67	Horz(TL)	0.07	13	n/a	n/a		
BCDL	10.0	Code FBC2004/TPI2002		(Matrix)							Weight: 224 lb	

LUMBER
TOP CHORD 2 X 4 SYP No.2D
BOT CHORD 2 X 4 SYP No.2D
WEBS 2 X 4 SYP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-0-15 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (lb/size) 2=1365/0-5-8, 13=2095/0-5-8, 11=233/0-3-8
Max Horz 2=133(LC 5)
Max Uplift2=-202(LC 5), 13=-388(LC 6), 11=-227(LC 4)
Max Grav 2=1365(LC 1), 13=2095(LC 1), 11=271(LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/40, 2-3=-2286/234, 3-4=-2039/203, 4-5=-1907/216, 5-6=-1400/183, 6-7=-1398/187, 7-8=-1694/180, 8-9=-1501/103, 9-10=-175/1263, 10-11=0/614, 11-12=0/17
BOT CHORD 2-18=-240/1960, 17-18=-132/1589, 16-17=-132/1589, 15-16=-30/1410, 14-15=-196/117, 13-14=-196/117, 11-13=-553/1
WEBS 3-18=-294/144, 5-18=-18/451, 5-16=-594/175, 6-16=-57/835, 7-16=-369/144, 7-15=0/178, 8-15=-709/159, 9-15=-113/1813, 9-13=-1922/243, 10-13=-711/289

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-02; 110mph (3-second gust); TCDL=5.0psf; BCDL=5.0psf; h=18ft; Cat. II; Exp B; enclosed; MWFRS (low-rise); cantilever left and right exposed ; porch right exposed; Lumber DOL=1.33 plate grip DOL=1.33
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 202 lb uplift at joint 2, 388 lb uplift at joint 13 and 227 lb uplift at joint 11.

LOAD CASE(S) Standard

Marvin A. Strzyzewski, FL Lic. #43144
Truss Engineering Co.
818 Soundside Road
Edenton, NC 27932
FL COA #7239

July 3,2008

Job	Truss	Truss Type	Qty	Ply	Bowling Residence	E4927243
BOWLM2	A1	ROOF TRUSS	12	1	Job Reference (optional)	

SANTA FE TRUSS, HIGH SPRINGS, FL. 7.050 s May 22 2008 MiTek Industries, Inc. Thu Jul 03 15:30:24 2008 Page 1

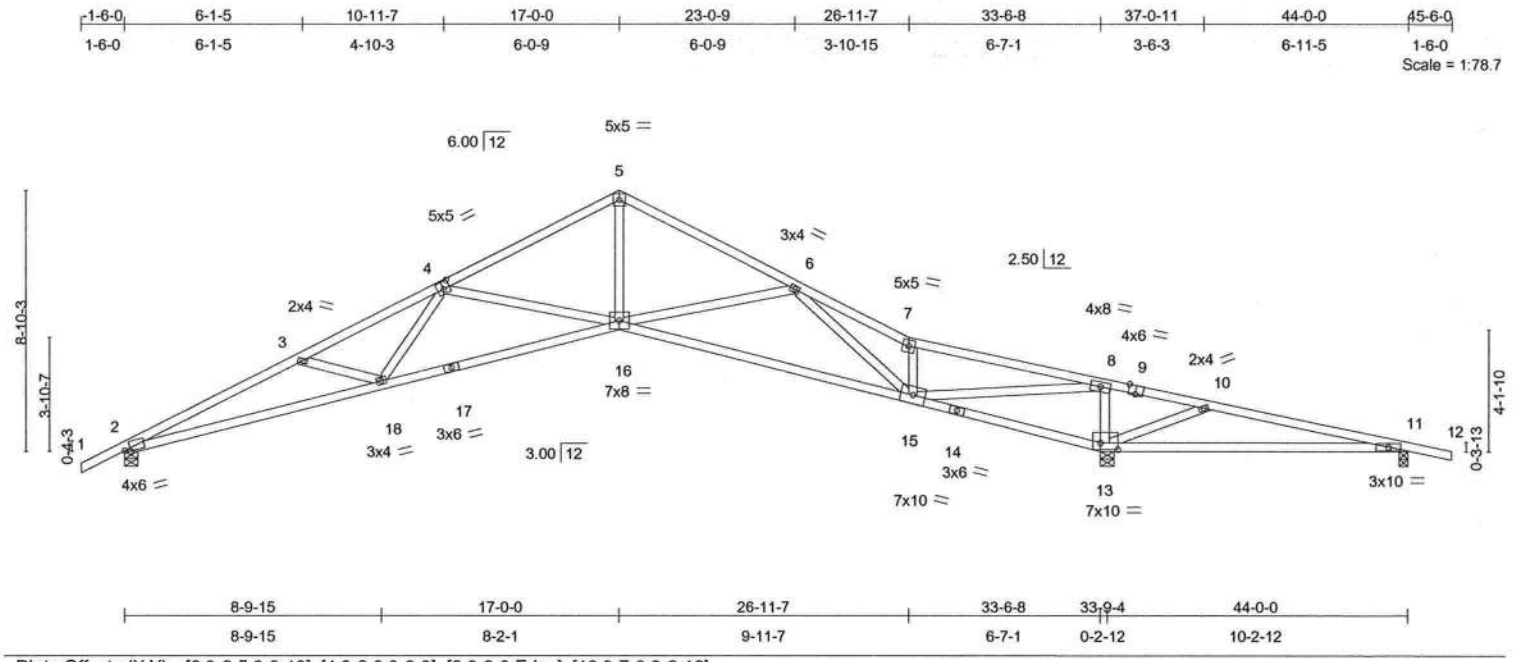

Plate Offsets (X,Y): [2:0-2-5,0-0-13], [4:0-2-8,0-3-0], [9:0-3-0,Edge], [13:0-7-0,0-2-12]

LOADING (psf)		SPACING	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plates Increase	1.25	TC	0.76	Vert(LL)	0.31	11-13	>401	240	MT20	244/190
TCDL	10.0	Lumber Increase	1.25	BC	0.87	Vert(TL)	-0.93	15-16	>428	180		
BCLL	0.0	Rep Stress Incr	YES	WB	0.66	Horz(TL)	0.41	13	n/a	n/a		
BCDL	10.0	Code FBC2004/TPI2002		(Matrix)							Weight: 205 lb	

LUMBER
TOP CHORD 2 X 4 SYP No.2D
BOT CHORD 2 X 4 SYP No.2D
WEBS 2 X 4 SYP No.3 *Except*
8-15: 2 X 4 SYP No.2D

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-1-1 oc purlins.
BOT CHORD Rigid ceiling directly applied or 3-7-5 oc bracing.

REACTIONS (lb/size) 13=2453/0-5-8, 11=-30/0-3-8, 2=1269/0-5-8
Max Horz 2=132(LC 5)
Max Uplift13=-390(LC 6), 11=-251(LC 4), 2=-197(LC 5)
Max Grav 13=2453(LC 1), 11=73(LC 8), 2=1269(LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/37, 2-3=-3732/439, 3-4=-3381/340, 4-5=-2256/166, 5-6=-2253/182, 6-7=-1580/160, 7-8=-1381/77, 8-9=-152/2440, 9-10=-158/2400, 10-11=-32/1845, 11-12=0/17
BOT CHORD 2-18=-443/3342, 17-18=-273/2827, 16-17=-255/2855, 15-16=-35/2039, 14-15=-2531/241, 13-14=-2559/227, 11-13=-1756/40
WEBS 3-18=-279/169, 4-18=-5/502, 4-16=-856/253, 5-16=-38/1552, 6-16=-184/215, 6-15=-817/157, 7-15=-724/171, 8-15=-182/3785, 8-13=-1406/167, 10-13=-653/260

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-02; 110mph (3-second gust); TCDL=5.0psf; BCDL=5.0psf; h=18ft; Cat. II; Exp B; enclosed; MWFRS (low-rise); cantilever left and right exposed ; porch right exposed; Lumber DOL=1.33 plate grip DOL=1.33
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 390 lb uplift at joint 13, 251 lb uplift at joint 11 and 197 lb uplift at joint 2.

LOAD CASE(S) Standard

Marvin A. Strzyzewski, FL Lic. #43144
Truss Engineering Co.
818 Soundside Road
Edenton, NC 27932
FL COA #7239

July 3,2008

Job	Truss	Truss Type	Qty	Ply	Bowling Residence	E4927244
BOWLM2	AET	GABLE	2	1	Job Reference (optional)	

SANTA FE TRUSS, HIGH SPRINGS, FL. 7.050 s May 22 2008 MiTek Industries, Inc. Thu Jul 03 15:30:26 2008 Page 1

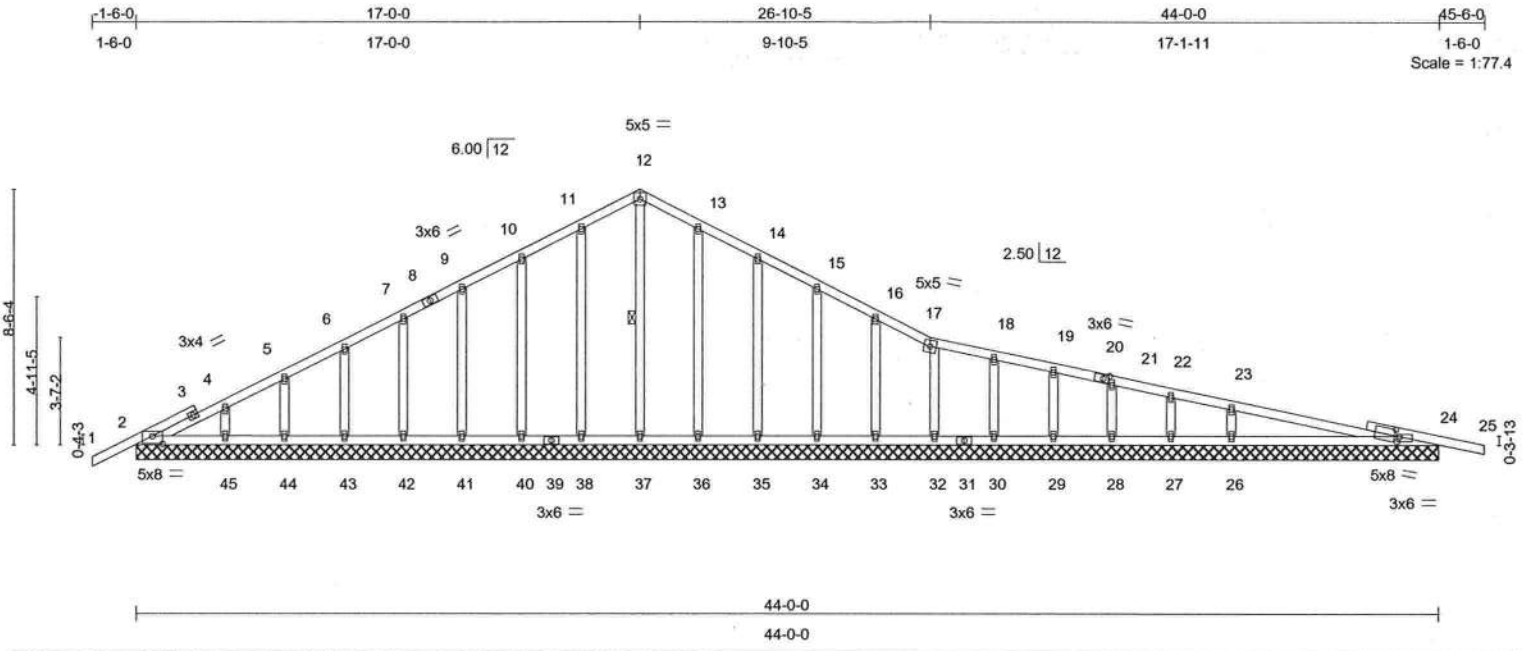

Plate Offsets (X,Y): [2:0-4-0,0-3-1], [20:0-2-6,0-1-8], [24:0-2-0,0-2-8], [24:0-1-0,0-2-0]

LOADING (psf)		SPACING	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plates Increase	1.25	TC	0.39	Vert(LL)	0.03	25	n/r	120	MT20	244/190
TCDL	10.0	Lumber Increase	1.25	BC	0.30	Vert(TL)	0.09	25	n/r	120		
BCLL	0.0	Rep Stress Incr	YES	WB	0.11	Horz(TL)	0.01	24	n/a	n/a		
BCDL	10.0	Code FBC2004/TPI2002		(Matrix)							Weight: 249 lb	

LUMBER
TOP CHORD 2 X 4 SYP No.2D
BOT CHORD 2 X 4 SYP No.2D
OTHERS 2 X 4 SYP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 12-37

REACTIONS (lb/size) 2=224/44-0-0, 45=198/44-0-0, 44=151/44-0-0, 43=162/44-0-0, 42=159/44-0-0, 41=160/44-0-0, 40=160/44-0-0, 38=160/44-0-0, 37=150/44-0-0, 36=160/44-0-0, 35=160/44-0-0, 34=161/44-0-0, 33=154/44-0-0, 32=163/44-0-0, 30=171/44-0-0, 29=142/44-0-0, 28=229/44-0-0, 27=-110/44-0-0, 26=618/44-0-0, 24=328/44-0-0
Max Horz 2=154(LC 5)
Max Uplift 2=-87(LC 5), 45=-44(LC 5), 44=-84(LC 5), 43=-73(LC 5), 42=-76(LC 5), 41=-74(LC 5), 40=-80(LC 5), 38=-63(LC 5), 36=-59(LC 6), 35=-82(LC 6), 34=-74(LC 6), 33=-73(LC 6), 32=-74(LC 6), 30=-65(LC 4), 29=-51(LC 6), 28=-76(LC 4), 27=-110(LC 10), 26=-193(LC 4), 24=-160(LC 4)
Max Grav 2=224(LC 1), 45=198(LC 1), 44=151(LC 9), 43=162(LC 1), 42=159(LC 1), 41=160(LC 9), 40=160(LC 1), 38=164(LC 9), 37=180(LC 6), 36=164(LC 10), 35=160(LC 1), 34=161(LC 10), 33=154(LC 1), 32=163(LC 1), 30=171(LC 10), 29=142(LC 1), 28=229(LC 10), 27=22(LC 4), 26=618(LC 1), 24=328(LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/39, 2-3=-160/53, 3-4=-150/62, 4-5=-115/76, 5-6=-61/101, 6-7=-38/137, 7-8=-38/168, 8-9=-11/173, 9-10=-38/208, 10-11=-38/246, 11-12=-38/274, 12-13=-38/267, 13-14=-38/223, 14-15=-38/169, 15-16=-37/121, 16-17=-36/108, 17-18=-18/76, 18-19=-16/55, 19-20=-19/37, 20-21=-20/33, 21-22=-43/18, 22-23=-46/11, 23-24=-100/36, 24-25=0/17
BOT CHORD 2-45=0/135, 44-45=0/135, 43-44=0/135, 42-43=0/135, 41-42=0/135, 40-41=0/135, 39-40=0/135, 38-39=0/135, 37-38=0/135, 36-37=0/135, 35-36=0/135, 34-35=0/135, 33-34=0/135, 32-33=0/135, 31-32=0/139, 30-31=0/139, 29-30=0/139, 28-29=0/139, 27-28=0/139, 26-27=0/139, 24-26=0/139
WEBS 4-45=-145/76, 5-44=-116/99, 6-43=-121/94, 7-42=-120/96, 9-41=-120/94, 10-40=-120/100, 11-38=-124/83, 12-37=-160/0, 13-36=-124/79, 14-35=-120/102, 15-34=-121/94, 16-33=-114/93, 17-32=-124/94, 18-30=-129/86, 19-29=-108/70, 21-28=-164/99, 22-27=-15/56, 23-26=-429/240

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-02; 110mph (3-second gust); TCDL=5.0psf; BCDL=5.0psf; h=18ft; Cat. II; Exp B; enclosed; MWFRS (low-rise) gable end zone; cantilever left and right exposed ; porch right exposed; Lumber DOL=1.33 plate grip DOL=1.33
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1-2002.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) All plates are 2x4 MT20 unless otherwise indicated.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 2-0-0 oc.

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Continued on page 2

NOTES

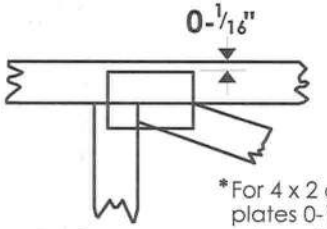
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 87 lb uplift at joint 2, 44 lb uplift at joint 45, 84 lb uplift at joint 44, 73 lb uplift at joint 43, 76 lb uplift at joint 42, 74 lb uplift at joint 41, 80 lb uplift at joint 40, 63 lb uplift at joint 38, 59 lb uplift at joint 36, 82 lb uplift at joint 35, 74 lb uplift at joint 34, 73 lb uplift at joint 33, 74 lb uplift at joint 32, 65 lb uplift at joint 30, 51 lb uplift at joint 29, 76 lb uplift at joint 28, 110 lb uplift at joint 27, 193 lb uplift at joint 26 and 160 lb uplift at joint 24.

LOAD CASE(S) Standard

Symbols

PLATE LOCATION AND ORIENTATION

Center plate on joint unless x, y offsets are indicated. Dimensions are in ft-in-sixteenths. Apply plates to both sides of truss and fully embed teeth.



*For 4 x 2 orientation, locate plates 0-1/16" from outside edge of truss.

*This symbol indicates the required direction of slots in connector plates.

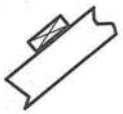
***Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

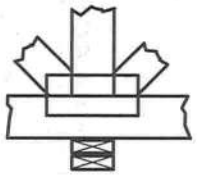
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



Indicated by symbol shown and/or by text in the bracing section of the output. Use T, I or Eliminator bracing if indicated.

BEARING

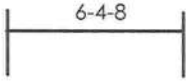


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur.

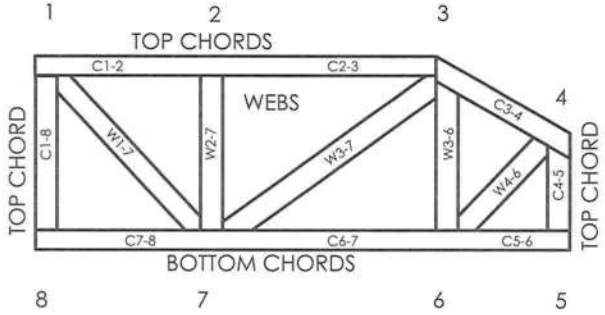
Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
BCSI1: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



dimensions shown in ft-in-sixteenths (Drawings not to scale)



JOINTS ARE GENERALLY NUMBERED/LETTERED CLOCKWISE AROUND THE TRUSS STARTING AT THE JOINT FARTHEST TO THE LEFT.

CHORDS AND WEBS ARE IDENTIFIED BY END JOINT NUMBERS/LETTERS.

PRODUCT CODE APPROVALS

ICC-ES Reports:

ESR-1311, ESR-1352, ER-5243, 9604B
9730, 95-43, 96-31, 9667A
NER-487, NER-561
95110, 84-32, 96-67, ER-3907, 9432A

MiTek®
POWER TO PERFORM.™
ENGINEERING BY TRENCO
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MiTek Engineering Reference Sheet: MII-7473

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI1.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative T, I, or Eliminator bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TPI 1 Quality Criteria.