DATE 08/23/2005 Colu	mbia County	Building I	Permit	<b>PERMIT</b>
APPLICANT KENNY TOWNSEND	Permit Expires One Y	ear From the Date		000023524
ADDRESS 545 SE HUGO LA	NF	LAKE CITY	397-3493	FL 32025
OWNER JOHN & SHIRLEY PRIM	Contraction of the contraction o	PHONE	i	10 32023
ADDRESS 143 SE TRISTIN I	2 344 40 00 00 1 3 T 00 00 40 000	LAKE CITY	· ———	FL 32025
CONTRACTOR MIKE HERLONG		PHONE	752-4071	
	T BAYA AVE, L INTO EA			— THE
	LOT ON THE LEFT	ioronde viedzioe, e c	on Indom Di	, 1112
TYPE DEVELOPMENT SFD,UTILIT	ГҮ Е	STIMATED COST OF	CONSTRUCTIO	N 60600.00
HEATED FLOOR AREA 1212.0	00 TOTAL A	REA 1642.00	HEIGHT	18.00 STORIES 1
FOUNDATION CONCRETE	WALLS FRAMED	ROOF PITCH 5/1	2	FLOOR SLAB
LAND USE & ZONING RMF-1		MA	AX. HEIGHT	35
Minimum Set Back Requirments: STR	EET-FRONT 25.0	0 REAR	15.00	SIDE 5.00
NO. EX.D.U. 0 FLOOD ZO	ONE X	DEVELOPMENT PE	RMIT NO.	0
PARCEL ID 34-3S-17-07018-194	SUBDIVISI			
LOT 94 BLOCK PHA			TAL ACRES	= = = = = = = = = = = = = = = = = = = =
BEOCK IIIA	SE UNIT		TAL ACKES _	
FLOOR 1 FOOT ABOVE THE ROAD SDE SETBACK VARIENCE TO 5'			Check # or	Cash 1355
FOR	BUILDING & ZONI	NG DEPARTMEN	T ONLY	
Temporary Power	Foundation		Monolithic	(footer/Slab)
date/app. by		date/app. by	Wonontine	date/app. by
Under slab rough-in plumbing	Slab		Sheathin	g/Nailing
	te/app. by	date/app. by		date/app. by
Framing date/app. by	Rough-in plumbing	above slab and below wo	od floor	
Electrical rough in				date/app. by
date/app. by	Heat & Air Duct	date/app. by	Peri. beam (Lin	date/app. by
Permanent power	C.O. Final	date/app. by	Culvert	date/app. by
date/app. by		date/app. by		date/app. by
M/H tie downs, blocking, electricity and plun	date/ap	p. by	Pool _	date/app. by
Reconnection	Pump pole	Utility P		
date/app. by	Travel Trailer	e/app. by	date/app. 1 Re-roof	by
date/app. by		date/app. by	Ke-1001 _	date/app. by
BUILDING PERMIT FEE \$ 305.00	CERTIFICATION FI	EE \$ 8.21	SURCHARG	GE FEE \$ 8.21
	ING CERT. FEE \$ 50.00			TE FEE \$
) waxaa	# <del>15.2</del>			
FLOOD ZONE DEVELOPMENT FEE \$	CULVERT		TOTAL FE	EE 3/1.42
NSPECTORS OFFICE 7. L		CLERKS OFFICE	CN	
NOTICE: IN ADDITION TO THE REQUIREME PROPERTY THAT MAY BE FOUND IN THE P	NITTO OF THE OFFICE OF THE OWNER,	EXCITED I DESIGNATION OF THE		

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."

This Permit Must Be Prominently Posted on Premises During Construction

PLEASE NOTIFY THE COLUMBIA COUNTY BUILDING DEPARTMENT AT LEAST 24 HOURS IN ADVANCE OF EACH INSPECTION, IN ORDER THAT IT MAY BE MADE WITHOUT DELAY OR INCONVIENCE, PHONE 758-1008. THIS PERMIT IS NOT VALID UNLESS THE WORK AUTHORIZED BY IT IS COMMENCED WITHIN 6 MONTHS AFTER ISSUANCE.

Columbia County Building	Permit Application
Application Approved by - Zoning Official Date Date Date Development Permit NA Zoning Comments	Permit # 2 35 24  Local Plans Examiner OK 57H Date 5-16-0  Land Use Plan Map Category RES Mar. Des
Applicants Name Kenny Townsend  Address 545 SE Huge Lane L.C.  Owners Name John & Shirley Primave  911 Address 143 SE Tristin Lane  Contractors Name Columbia Home Builder  Address 545 SE Huge Lane  Fee Simple Owner Name & Address (Same)  Bonding Co. Name & Address Freeman Design	Lake City FL 32025  Phone 752-407/
Driving Directions Baya Rast of Vill  Lotan Left - (7th)  Type of Construction Frame Nu  Total Acreage Lot Size Number of Stories 1 He	ated Floor Area 12 12 Roof Pitch 5/12
Application is hereby made to obtain a permit to do work and instinstallation has commenced prior to the issuance of a permit and all laws regulating construction in this jurisdiction.  OWNERS AFFIDAVIT: I hereby certify that all the foregoing inform compliance with all applicable laws and regulating construction at the work of	that all work be performed to meet the standards of nation is accurate and all work will be done in and zoning.  F COMMENCMENT MAY RESULT IN YOU PAYING ND TO OBTAIN FINANCING, CONSULT WITH YOUR

PERMIT N	0:
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#### TAX FOLIO NO: 34-3S-17-07018-194

#### NOTICE OF COMMMENCEMENT

#### STATE OF FLORIDA COUNTY OF COLUMBIA

The undersigned hereby gives notice that improvement will be made to certain real property, and in accordance wit chapter 713, Florida Statues, the following information is provided in this Notice of Commencement.

- 1. Description of property: Lot #94 of Eastside Village Unit I
- 2. General description of improvements: Construction of dwelling
- 3. Owner information:
- a. JOHN & SHIRLEY PRIMAVERE of 143 SE Tristin Lane, Lake City, FL 32025
  - b. Interest in property: Fee Simple
  - c: Name and address of fee simple title holder (if other than Owner):
- 4. Contractor: Kenneth R. Townsend, d/b/a Columbia Home Improvements, 935
  Hugo Street, Lake City, FL 32025
- 5. Surety
  - a. Name and address: Allstate Preferred Insurance Home Builders Insurance Post Office Box 10 Live Oak, FL 32064
  - b. Amount of bond: \$300,000.00
- 6. Lender: N/A
- Personals within the State of Florida designated by Owner upon whom notices
  of other documents may be served as provided by section 713.13 (1)7., Florida
  Statues: None
- 8. In addition to himself, Owner designates N/A to receive a copy of the Lien's Notice as provided in Section 713.13 (1) (b), Florida Statues.
- Expiration date of notice of commencement (the expiration date is 1 year from the date of recording (unless a different date is specified)

The foregoing instrument was acknowledged before me this 23rd day of June

Project Name:

Address:

Kingswood

compliance with the Florida Energy Code.

OWNER/AGENT:

# FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Community Affairs
Residential Whole Building Performance Method A

Builder:

Permitting Office:

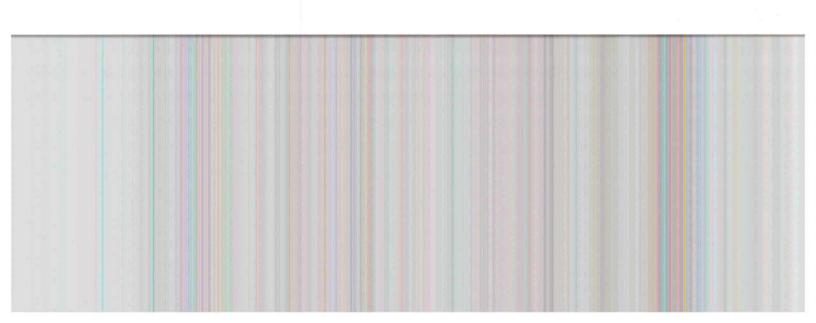
City, State: , Owner: Kenny Townsend Climate Zone: North		Permit Number: Jurisdiction Number:	
b. N/A c. N/A 9. Wall types a. Frame, Wood, Exterior b. N/A c. N/A d. N/A e. N/A 10. Ceiling types a. Under Attic b. N/A c. N/A 11. Ducts	New	12. Cooling systems a. Central Unit b. N/A c. N/A  13. Heating systems a. Electric Heat Pump b. N/A c. N/A  14. Hot water systems a. Electric Resistance b. N/A  c. Conservation credits (HR-Heat recovery, Solar DHP-Dedicated heat pump) 15. HVAC credits (CF-Ceiling fan, CV-Cross ventilation, HF-Whole house fan, PT-Programmable Thermostat, MZ-C-Multizone cooling, MZ-H-Multizone heating)	Cap: 24.0 kBtu/hr SEER: 12.00 Cap: 24.0 kBtu/hr HSPF: 7.40 Cap: 50.0 gallons EF: 0.90 PT, CF,
Glass/Floor Area: 0.10	Total as-built p	DACE	
I hereby certify that the plans and specifical by this calculation are in compliance with the Energy Code.  PREPARED BY: William H. Free DATE: 1/27/05  I hereby certify that this building, as design	he Florida eeman	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	OR THE STATE OF TH

EnergyGauge® (Version: FLRCPB v3.30)

Florida Statutes.

DATE:

**BUILDING OFFICIAL:** 



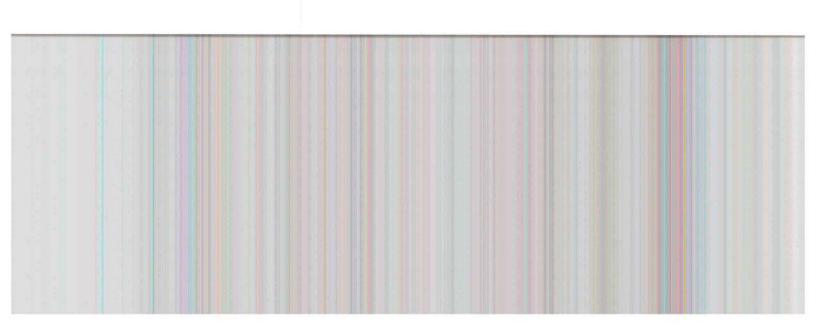
#### **SUMMER CALCULATIONS**

### Residential Whole Building Performance Method A - Details

ADDRESS: , , , PERMIT #:

BA	SE		1		AS-E	BUIL	_T				
GLASS TYPES .18 X Conditioned > Floor Area	( BSPM =	Points	Type/SC		erhang Len I	Hgt /	Area X	SPI	их	SOF	= Points
.18 1212.0	20.04	4371.9	Double, Clear	N	1.5	6.0	60.0	19.2	20	0.94	1081.3
			Double, Clear	E	1.5	4.0	6.0	42.0	06	0.82	205.8
			Double, Clear	S		6.0	30.0	35.8	37	0.86	921.2
			Double, Clear	S	1.5	6.0	25.0	35.8	37	0.86	767.7
			As-Built Total:				121.0				2976.1
WALL TYPES Are	a X BSPN	1 = Points	Туре		R-V	/alue	Area	X	SPN	/ =	Points
Adjacent 0.0 Exterior 1299.		0.0	Frame, Wood, Exterior		1:	3.0	1299.2		1.50		1948.8
Exterior 1299	2 1.70	2208.6									
Base Total: 129	9.2	2208.6	As-Built Total:			39	1299.2				1948.8
DOOR TYPES Are	a X BSPM	1 = Points	Туре				Area	Х	SPN	/ =	Points
Adjacent 0.0	0.00	0.0	Exterior Insulated				40.8		4.10		167.3
Exterior 40.8	6.10	248.9									107.0
Base Total: 4	0.8	248.9	As-Built Total:				40.8				167.3
CEILING TYPES Are	a X BSPM	1 = Points	Туре		R-Value	e A	rea X :	SPM	X SC	CM =	Points
Under Attic 1212.0	1.73	2096.8	Under Attic		30	0.0	1333.2	1.73 )	( 1.00		2306.4
Base Total: 121	2.0	2096.8	As-Built Total:				1333.2				2306.4
FLOOR TYPES Are	a X BSPM	I = Points	Туре		R-V	'alue	Area	X	SPN	1 =	Points
Slab 162.4(p	-37.0	-6008.8	Slab-On-Grade Edge Insulation	on	(	0.0 1	62.4(p		41.20		-6690.9
Raised 0.0	0.00	0.0	1 <del>2</del> 0 10 00 00 00 00 00 00 00 00 00 00 00 0				M				
Base Total:		-6008.8	As-Built Total:				162.4				-6690.9
INFILTRATION Are	a X BSPM	I = Points					Area	Х	SPN	1 =	Points
1212	2.0 10.21	12374.5					1212.	0	10.21		12374.5

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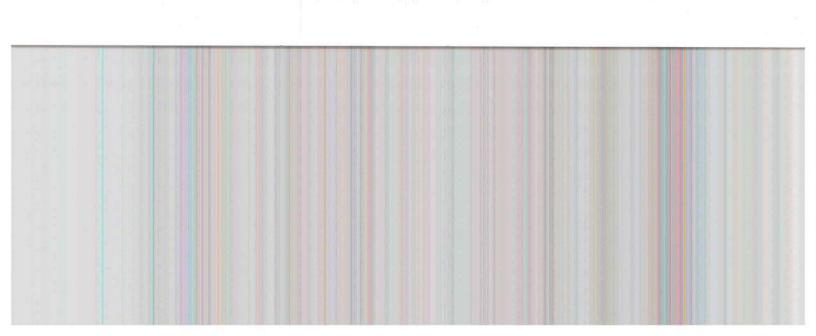
#### **SUMMER CALCULATIONS**

Residential Whole Building Performance Method A - Details

ADDDESS:	
ADDRESS: , , ,	PERMIT #:

	BASE	S.	AS-BUILT								
Summer Bas	se Points:	15291.9	Summer As-Built Points:	13082.3							
Total Summer Points	X System Multiplier	= Cooling Points	Total X Cap X Duct X System X Cred Component Ratio Multiplier Multiplier Multip (DM x DSM x AHU)								
15291.9	0.4266	6523.5	13082.3 1.000 (1.090 x 1.147 x 0.91) 0.284 0.90 13082.3 1.00 1.138 0.284 0.90								

EnergyGauge™ DCA Form 600A-2001



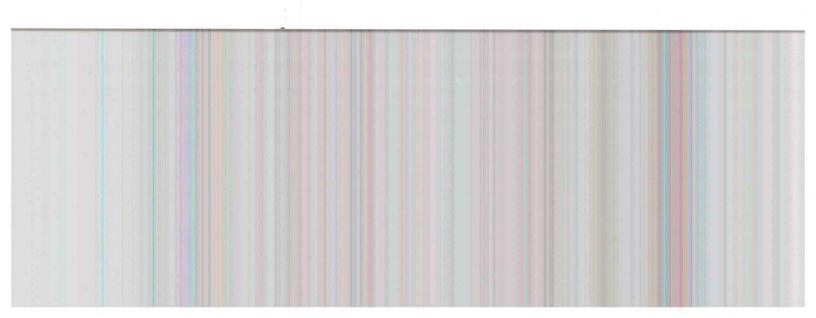
#### WINTER CALCULATIONS

### Residential Whole Building Performance Method A - Details

ADDRESS: , , , PERMIT #:

	BASE			AS-BUILT								
GLASS TYPES .18 X Condition Floor Are		WPM =	Points	Type/SC		erhang Len		Area X	W	РМ Х	wo	F = Point
.18 1212.	0	12.74	2779.4	Double, Clear	N	1.5	6.0	60.0	24	.58	1.00	1478.2
			7.	Double, Clear	E	1.5	4.0	6.0	18	.79	1.07	121.1
				Double, Clear	S	1.5	6.0	30.0	13	.30	1.12	445.8
				Double, Clear	S	1.5	6.0	25.0	13	.30	1.12	371.5
			10	As-Built Total:				121.0				2416.7
WALL TYPES	Area X	BWPM	= Points	Туре		R	-Value	Area	Х	WPI	VI =	Points
Adjacent Exterior	0.0 1299.2	0.00 3.70	0.0 4807.0	Frame, Wood, Exterior			13.0	1299.2		3.40		4417.3
Base Total:	1299.2	3	4807.0	As-Built Total:				1299.2				4417.3
DOOR TYPES	Area X	BWPM	= Points	Туре				Area	Х	WPI	и =	Points
Adjacent Exterior	0.0 40.8	0.00 12.30	0.0 501.8	Exterior Insulated				40.8		8.40		342.7
Base Total:	40.8		501.8	As-Built Total:				40.8				342.7
CEILING TYPES	Area X	BWPM	= Points	Туре	R	R-Value	e Ar	ea X W	PM	X W	CM =	Points
Under Attic	1212.0	2.05	2484.6	Under Attic			30.0	1333.2	2.05	X 1.00		2733.1
Base Total:	1212.0		2484.6	As-Built Total:				1333.2				2733.1
FLOOR TYPES	Area X	BWPM	= Points	Туре		R-	-Value	Area	Х	WPN	<b>1</b> =	Points
Slab 1 Raised	62.4(p) 0.0	8.9 0.00	1445.4 0.0	Slab-On-Grade Edge Insulation	on		0.0	162.4(p		18.80		3053.1
Base Total:			1445.4	As-Built Total:				162.4				3053.1
INFILTRATION	Area X	BWPM	= Points					Area	х	WPN	Λ =	Points
	1212.0	-0.59	-715.1					1212.0	)	-0.59	)	-715.1

EnergyGauge® DCA Form 600A-2001



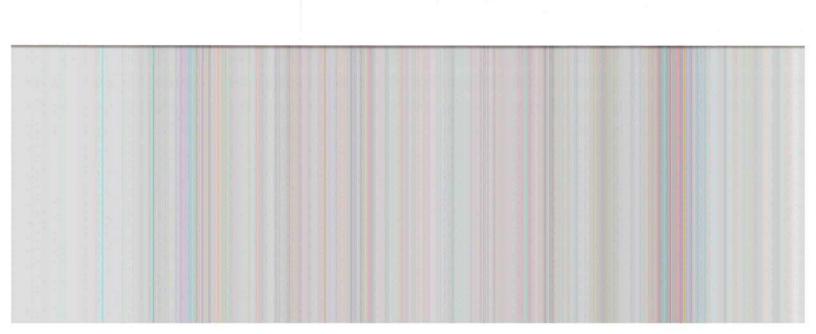
#### **WINTER CALCULATIONS**

Residential Whole Building Performance Method A - Details

ADDRESS: ,,,	PERMIT #:	
--------------	-----------	--

	BASE		AS-BUILT									
Winter Base	Points:	11303.1	Winter As-Built Points:	12247.8								
Total Winter Points	X System = Multiplier	Heating Points	Total X Cap X Duct X System X Cree Component Ratio Multiplier Mult									
11303.1	0.6274	7091.6	12247.8 1.000 (1.069 x 1.169 x 0.93) 0.461 0.9 12247.8 1.00 1.162 0.461 0.9									

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### **WATER HEATING & CODE COMPLIANCE STATUS**

Residential Whole Building Performance Method A - Details

ADDRESS: , , , PERMIT #:

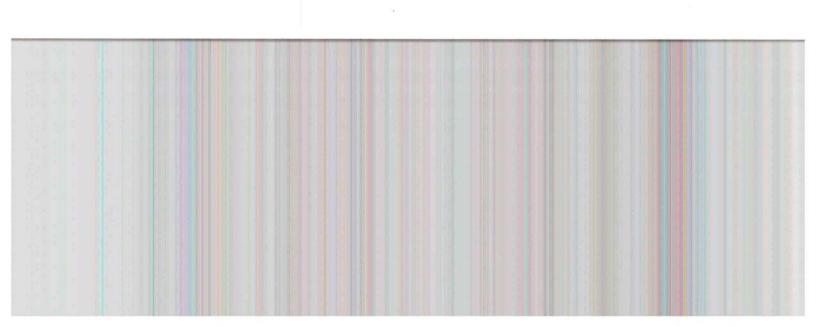
	BASE						AS-BUILT									
WATER HEA Number of Bedrooms	X	Multiplier	=	Total	Tank Volume	EF	Number of Bedrooms	х	Tank X Ratio	Multiplier	X Credit Multipli		Total			
2		2746.00		5492.0	50.0 As-Built To	0.90 otal:	2		1.00	2684.98	1.00		5370.0 <b>5370.0</b>			

	CODE COMPLIANCE STATUS												
BASE							AS-BUILT						
Cooling Points	+	Heating Points	+	Hot Water Points	=	Total Points	Cooling Points	+	Heating Points	+	Hot Water Points	=	Total Points
6524		7092		5492		19107	3820		6231		5370		15422

**PASS** 



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### **Code Compliance Checklist**

### Residential Whole Building Performance Method A - Details

ADDRESS: , , , 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.	OFFICE
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 6-12. Switch or clearly marked circuit breaker (electric) or cutoff (gas) must be provided. External or built-in heat trap required.	7
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 61		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.	

EnergyGauge™ DCA Form 600A-2001

### **ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD**

#### ESTIMATED ENERGY PERFORMANCE SCORE\* = 86.9

The higher the score, the more efficient the home.

			Kenn	y Tov	vnsend, , , ,	
1.	New construction or existing		New		12. Cooling systems	
2.	Single family or multi-family		Single family		a. Central Unit	Cap: 24.0 kBtu/hr
3.	Number of units, if multi-family		1	_	Service de Company de Company (Company)	SEER: 12.00
4.	Number of Bedrooms		2		b. N/A	SLLK. 12.00 _
5.	Is this a worst case?		No	_	3	
6.	Conditioned floor area (ft2)		1212 ft <sup>2</sup>	_	c. N/A	· -
7.	Glass area & type	Single Pane	Double Pane			_
	Clear - single pane	0.0 ft <sup>2</sup>	121.0 ft <sup>2</sup>		13. Heating systems	-
	Clear - double pane	0.0 ft <sup>2</sup>	0.0 ft <sup>2</sup>		a. Electric Heat Pump	Cap: 24.0 kBtu/hr
	Tint/other SHGC - single pane	0.0 ft <sup>2</sup>	0.0 ft <sup>2</sup>	-		HSPF: 7.40
d.	Tint/other SHGC - double pane			0.00	b. N/A	11511.7.40
8.	Floor types					-
a.	Slab-On-Grade Edge Insulation	R=0	0.0, 162.4(p) ft		c. N/A	_
b.	N/A					
	N/A				14. Hot water systems	_
	Wall types				a. Electric Resistance	Cap: 50.0 gallons
a.	Frame, Wood, Exterior	R=1	3.0, 1299.2 ft <sup>2</sup>	THE SECOND		EF: 0.90
b.	N/A				b. N/A	
c.	N/A					· ·
d.	N/A				c. Conservation credits	1999
e.	N/A			_	(HR-Heat recovery, Solar	-
10.	Ceiling types				DHP-Dedicated heat pump)	
a.	Under Attic	R=3	0.0, 1333.2 ft <sup>2</sup>	_	15. HVAC credits	PT, CF,
b.	N/A		N. Commercial	_	(CF-Ceiling fan, CV-Cross ventilation,	П, СГ,
c.	N/A			_	HF-Whole house fan,	
11.	Ducts				PT-Programmable Thermostat,	
a.	Sup: Unc. Ret: Unc. AH: Interior	Sup.	R=6.0, 40.4 ft	). ——·	MZ-C-Multizone cooling,	
b.	N/A				MZ-H-Multizone heating)	
					<i>-</i>	
T	4:C. 414 41.1 1 1 11		•		manager with the wind worker broken	

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.

1

Builder Signature: \_ 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 <u>not</u> a Building Energy Rating. If your score is 80 or greater (or 86 for a US EPA/DOE EnergyStar  $^{\text{TM}}$  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 Affair The State (No. 1997) (1997) Contact the Department of Community Affair The State (1997) (199

## **Residential System Sizing Calculation**

Kenny Townsend

Summary Project Title: Kingswood

Code Only Professional Version Climate: North

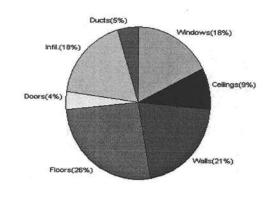
7/27/2005

TV 7/8 (SV )				7/27/2005	
Location for weather data: Gainesv Humidity data: Interior RH (50%)	ille - User co Outdoor we	ustomize t bulb (7	ed: Latitude(29) Temp Range(M) 8F) Humidity difference(51gr.)		
Winter design temperature	31		Summer design temperature	98	F
Winter setpoint	70	F	Summer setpoint	75	F
Winter temperature difference	39	F	Summer temperature difference	23	F
Total heating load calculation	19465	Btuh	Total cooling load calculation	17419	
Submitted heating capacity	% of calc	Btuh	Submitted cooling capacity	% of calc	
Total (Electric Heat Pump)	123.3	24000	Sensible (SHR = 0.5)		12000
Heat Pump + Auxiliary(0.0kW)	123.3	24000	Latent		12000
			Total (Electric Heat Pump)	137.8	24000

#### WINTER CALCULATIONS

Winter Heating Load (for 1212 sqft)

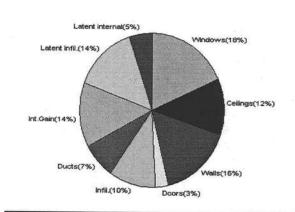
Load component		1	Load	
Window total	121	sqft	3424	Btuh
Wall total	1299	sqft	4028	Btuh
Door total	41	sqft	748	Btuh
Ceiling total	1333	sqft	1733	Btuh
Floor total	162	ft	5132	Btuh
Infiltration	81	cfm	3473	Btuh
Subtotal			18538	Btuh
Duct loss			927	Btuh
TOTAL HEAT LOSS			19465	Btuh



#### **SUMMER CALCULATIONS**

Summer Cooling Load (for 1212 sqft)

Load component			Load	
Window total	121	sqft	3204	Btuh
Wall total	1299	sqft	2780	Btuh
Door total	41	sqft	509	Btuh
Ceiling total	1333	sqft	2080	Btuh
Floor total			0	Btuh
Infiltration	71	cfm	1792	Btuh
Internal gain			2400	Btuh
Subtotal(sensible)			12766	Btuh
Duct gain			1277	Btuh
Total sensible gain			14042	Btuh
Latent gain(infiltration)			2457	Btuh
Latent gain(internal)			920	Btuh
Total latent gain			3377	Btuh
TOTAL HEAT GAIN			17419	Btuh



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

Residential Load - Component Details

Kenny Townsend

Project Title: Kingswood

Code Only Professional Version Climate: North

Reference City: Gainesville (User customized) Winter Temperature Difference: 39.0 F

7/27/2005

Window	Panes/SHGC/Frame/U	Orientation	n Area X	HTM=	Load
1	2, Clear, Metal, DEF	N	60.0	28.3	1698 Btuh
2	2, Clear, Metal, DEF	E	6.0	28.3	170 Btuh
3	2, Clear, Metal, DEF	S	30.0	28.3	849 Btuh
4	2, Clear, Metal, DEF	S	25.0	28.3	708 Btuh
	Window Total		121		3424 Btuh
Walls	Туре	R-Value	Area X	HTM=	Load
1	Frame - Exterior	13.0	1299	3.1	4028 Btuh
	Wall Total		1299		4028 Btuh
Doors	Туре		Area X	HTM=	Load
1	Insulated - Exter		41	18.3	748 Btuh
	Door Total		41		748Btuh
Ceilings	Туре	R-Value	Area X	HTM=	Load
1	Under Attic	30.0	1333	1.3	1733 Btuh
	Ceiling Total		1333		1733Btuh
Floors	Туре	R-Value	Size X	HTM=	Load
1	Slab-On-Grade Edge Insul	0	162.4 ft(p)	31.6	5132 Btuh
	Floor Total		162		5132 Btuh
Infiltration	Туре	ACH X	<b>Building Volume</b>	CFM=	Load
	Natural	0.40	12120(sqft)	81	3473 Btuh
	Mechanical			0	0 Btuh
	Infiltration Total			81	3473 Btuh

	Subtotal	18538 Btuh
Totals for Heating	Duct Loss(using duct multiplier of 0.05)	927 Btuh
	Total Btuh Loss	19465 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 - Component Details

Kenny Townsend

Project Title: Kingswood

Code Only Professional Version Climate: North

Reference City: Gainesville (User customized)

Summer Temperature Difference: 23.0 F

7/27/2005

	Туре		hang	Win	dow Are	a(sqft)	sqft) HTM			
Window	Panes/SHGC/U/InSh/ExSh Ornt	Len	Hgt	Gross		Unshaded			Load	
1	2, Clear, DEF, N, N N	1.5	6	60.0	0.0	60.0	24	24	1440	Btuh
2	2, Clear, DEF, N, N E	1.5	4	6.0	0.0	6.0	24	74	444	
3	2, Clear, DEF, N, N S	1.5	6	30.0	30.0	0.0	24	39	720	Btuh
4	2, Clear, DEF, N, N S	1.5	6	25.0	25.0	0.0	24	39	600	2500000
	Window Total			121			40.0	- 1	3204	Rtub
Walls	Туре	R-	Value			Area		НТМ	Load	Diui
1	Frame - Exterior		13.0			299.2		2.1	2780	Btuh
	Wall Total				12	299.2		- 1	2780	Rtub
Doors	Туре					Area		НТМ	Load	Diui
1	Insulated - Exter					40.8		12.5	509	Btuh
	Door Total					10.8		- 1	500	Btuh
Ceilings	Type/Color	R-\	/alue			Area		нтм	Load	Dlur
1,	Under Attic/Dark		30.0			333.2		1.6	2080	Btuh
	Ceiling Total				13	333.2			2080	Dtub
Floors	Туре	R-\	/alue			Size		нтм	Load	Dlui
1	Slab-On-Grade Edge Insulation		0.0			62.4 ft(p)		0.0	0	Btuh
	Floor Total				1	62.4			0	Btuh
nfiltration	Туре	A	CH			lume		CFM=	Load	Diuli
	Natural	(	0.35			2120		70.8	1792	Btuh
	Mechanical							0.0		
	Infiltration Total							71	0 1792	Btuh

Occupants	Btuh/occupant	Appliance	Load
4	X 300 +	1200	2400 Btuh
	4	4 X 300 +	

	Subtotal	12766	Btuh
	Duct gain(using duct multiplier of 0.10)	1277	Btuh
	Total sensible gain	14042	Btuh
<b>Totals for Cooling</b>	Latent infiltration gain (for 51 gr. humidity difference)	2457	Btuh
	Latent occupant gain (4 people @ 230 Btuh per person)	920	Btuh
	Latent other gain	0	Btuh
	TOTAL GAIN	17419	Btuh

Key: Window types (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/Daperies(B) or Roller Shades(R))
(ExSh - Exterior shading device: none(N) or numerical value)
(Ornt - compass orientation)

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