

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name: TH-87FL
 Street: TH-87FL
 City, State, Zip: JACKSONVILLE, FL,
 Owner:
 Design Location: FL, Jacksonville

Builder Name:
 Permit Office:
 Permit Number:
 Jurisdiction:

NOV 29 2012

1. New construction or existing New (From Plans)
 2. Single family or multiple family Single-family
 3. Number of units, if multiple family 1
 4. Number of Bedrooms 3
 5. Is this a worst case? No
 6. Conditioned floor area above grade (ft²) 2204
 Conditioned floor area below grade (ft²) 0

7. Windows (318.0 sqft.) Description Area
 a. U-Factor: Dbl, U=0.35 318.00 ft²
 SHGC: SHGC=0.33
 b. U-Factor: N/A ft²
 SHGC:
 c. U-Factor: N/A ft²
 SHGC:
 d. U-Factor: N/A ft²
 SHGC:
 Area Weighted Average Overhang Depth: 0.000 ft.
 Area Weighted Average SHGC: 0.330
 8. Floor Types (2204.0 sqft.) Insulation Area
 a. Crawlspace R=11.0 2204.00 ft²
 b. N/A R= ft²
 c. N/A R= ft²

9. Wall Types (1890.0 sqft.) Insulation Area
 a. Frame - Wood, Exterior R=19.0 1890.00 ft²
 b. N/A R= ft²
 c. N/A R= ft²
 d. N/A R= ft²
 10. Ceiling Types (2204.0 sqft.) Insulation Area
 a. Under Attic (Vented) R=30.0 2204.00 ft²
 b. N/A R= ft²
 c. N/A R= ft²
 11. Ducts R ft²
 a. Sup: Main, Ret: Main, AH: Main 6 200

12. Cooling systems kBtu/hr Efficiency
 a. Central Unit 42.0 SEER:13.00

13. Heating systems kBtu/hr Efficiency
 a. Electric Heat Pump 34.0 HSPF:7.70

14. Hot water systems
 a. Electric Cap: 50 gallons
 b. Conservation features EF: 0.900
 None

15. Credits Pstat

Glass/Floor Area: 0.144

Total Proposed Modified Loads: 42.39

Total Standard Reference Loads: 58.31

PASS

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

PREPARED BY: **WILLIAM J. KALKER JR**
 DATE: _____

Digitally signed by WILLIAM J. KALKER JR
 DN: cn=WILLIAM J. KALKER JR,
 c=US, email=kalker@earthlink.net
 Date: 2012.11.29 11:13:04 -05'00'

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 11-29-12 Plan No. 198-019
 Approved By SCOTT S. FRANCIS
 DATE: _____

- Compliance requires completion of a Florida Air Barrier and Insulation Inspection Checklist

Modular Building Plans Examiner
 Florida License No. SMP-42



PROJECT

Title:	TH-87FL	Bedrooms:	3	Address Type:	Street Address
Building Type:	User	Conditioned Area:	2204	Lot #	
Owner:		Total Stories:	1	Block/SubDivision:	
# of Units:	1	Worst Case:	No	PlatBook:	
Builder Name:		Rotate Angle:	315	Street:	TH-87FL
Permit Office:		Cross Ventilation:	No	County:	DUVAL
Jurisdiction:		Whole House Fan:	No	City, State, Zip:	JACKSONVILLE , FL ,
Family Type:	Single-family				
New/Existing:	New (From Plans)				
Comment:					

CLIMATE

✓	Design Location	TMY Site	IECC Zone	Design Temp		Int Design Temp		Heating	Design	Daily Temp
				97.5 %	2.5 %	Winter	Summer	Degree Days	Moisture	Range
✓	FL, Jacksonville	FL_JACKSONVILLE_INT	2	32	93	70	75	1281	49	Medium

BLOCKS

Number	Name	Area	Volume
1	Block1	2204	19836

SPACES

Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated
1	Main	2204	19836	Yes	4	3	1	Yes	Yes	Yes

FLOORS

✓	#	Floor Type	Space	Exposed PerWall Ins.	R-Value	Area	Floor Joist R-Value	Tile	Wood	Carpet
✓	1	Crawlspace	Main	210 ft	0	2204 ft²	11	0	0	1

ROOF

✓	#	Type	Materials	Roof Area	Gable Area	Roof Color	Solar Absor.	SA Tested	Emitt	Emitt Tested	Deck Insul.	Pitch (deg)
✓	1	Gable or shed	Composition shingles	2271 ft²	274 ft²	Medium	0.96	No	0.9	No	0	14

ATTIC

✓	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
✓	1	Full attic	Vented	300	2204 ft²	N	N

CEILING

✓	#	Ceiling Type	Space	R-Value	Area	Framing Frac	Truss Type
✓	1	Under Attic (Vented)	Main	30	2204 ft²	0.11	Wood

WALLS

✓ #	Ornt	Adjacent To	Wall Type	Space	Cavity R-Value	Width Ft	In	Height Ft	In	Area	Sheathing R-Value	Framing Fraction	Solar Absor.	Below Grade%
1	N=>NW	Exterior	Frame - Wood	Main	19	76		9	0	684 ft²	0	0.23	0.75	0
2	E=>NE	Exterior	Frame - Wood	Main	19	29	0	9	0	261 ft²	0	0.23	0.75	0
3	S=>SE	Exterior	Frame - Wood	Main	19	76	0	9	0	684 ft²	0	0.23	0.75	0
4	W=>SW	Exterior	Frame - Wood	Main	19	29		9	0	261 ft²	0	0.23	0.75	0

DOORS

✓ #	Ornt	Door Type	Space	Storms	U-Value	Width Ft	In	Height Ft	In	Area
1	N=>NW	Insulated	Main	None	0.52	2	8	6	8	17.77777
2	S=>SE	Insulated	Main	None	0.460000	2	8	6	8	20 ft²

WINDOWS

Orientation shown is the entered orientation (=>) changed to As Built (rotated 315 degrees).

✓ #	Ornt	Wall ID	Frame	Panes	NFRC	U-Factor	SHGC	Area	Overhang Depth	Separation	Int Shade	Screening
1	N=>NW	1	Vinyl	Low-E Double	Yes	0.35	0.33	60 ft²	0 ft 0 in	0 ft 0 in	Drapes/blinds	None
2	N=>NW	1	Vinyl	Low-E Double	Yes	0.35	0.33	25 ft²	0 ft 0 in	0 ft 0 in	Drapes/blinds	None
3	N=>NW	1	Vinyl	Low-E Double	Yes	0.35	0.33	10 ft²	0 ft 0 in	0 ft 0 in	Drapes/blinds	None
4	N=>NW	1	Vinyl	Low-E Double	Yes	0.35	0.33	80 ft²	0 ft 0 in	0 ft 0 in	Drapes/blinds	None
5	S=>SE	3	Vinyl	Low-E Double	Yes	0.35	0.33	9 ft²	0 ft 0 in	0 ft 0 in	Drapes/blinds	None
6	S=>SE	3	Vinyl	Low-E Double	Yes	0.35	0.33	2 ft²	0 ft 0 in	0 ft 0 in	Drapes/blinds	None
7	S=>SE	3	Vinyl	Low-E Double	Yes	0.35	0.33	75 ft²	0 ft 0 in	0 ft 0 in	Drapes/blinds	None
8	W=>SW	4	Vinyl	Low-E Double	Yes	0.35	0.33	7.5 ft²	0 ft 0 in	0 ft 0 in	Drapes/blinds	None
9	N=>NW	1	Vinyl	Low-E Double	Yes	0.35	0.33	7.5 ft²	0 ft 0 in	0 ft 0 in	Drapes/blinds	None
10	N=>NW	1	Vinyl	Low-E Double	Yes	0.35	0.33	24 ft²	0 ft 0 in	0 ft 0 in	Drapes/blinds	None
11	S=>SE	3	Vinyl	Low-E Double	Yes	0.35	0.33	18 ft²	0 ft 0 in	0 ft 0 in	Drapes/blinds	None

INFILTRATION

#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH	ACH 50
1	Wholehouse	Best Guess	0.000300	1734.3	95.212	179.06	0.2310	5.2460

HEATING SYSTEM

✓ #	System Type	Subtype	Efficiency	Capacity	Block	Ducts
1	Electric Heat Pump	None	HSPF: 7.7	34 kBtu/hr	1	sys#1

COOLING SYSTEM

✓ #	System Type	Subtype	Efficiency	Capacity	Air Flow	SHR	Block	Ducts
1	Central Unit	None	SEER: 13	42 kBtu/hr	1260 cfm	0.75	1	sys#1

HOT WATER SYSTEM

✓	#	System Type	SubType	Location	EF	Cap	Use	SetPnt	Conservation
	1	Electric	None	Main	0.9	50 gal	70 gal	120 deg	None

SOLAR HOT WATER SYSTEM

✓	FSEC Cert #	Company Name	System Model #	Collector Model #	Collector Area	Storage Volume	FEF
	None	None			ft²		

DUCTS

✓	#	--- Supply --- Location	R-Value	Area	--- Return --- Location	Area	Leakage Type	Air Handler	CFM 25	Percent Leakage	QN	RLF	HVAC # Heat	Cool
	1	Main	6	200 ft²	Main	100 ft²	Default Leakage	Main	(Default)	(Default) %			1	1

TEMPERATURES

Programable Thermostat: Y					Ceiling Fans:									
Cooling	<input checked="" type="checkbox"/> Jan	<input checked="" type="checkbox"/> Feb	<input checked="" type="checkbox"/> Mar	<input checked="" type="checkbox"/> Apr	<input checked="" type="checkbox"/> May	<input checked="" type="checkbox"/> Jun	<input checked="" type="checkbox"/> Jul	<input checked="" type="checkbox"/> Aug	<input checked="" type="checkbox"/> Sep	<input checked="" type="checkbox"/> Oct	<input checked="" type="checkbox"/> Nov	<input checked="" type="checkbox"/> Dec		
Heating	<input checked="" type="checkbox"/> Jan	<input checked="" type="checkbox"/> Feb	<input checked="" type="checkbox"/> Mar	<input checked="" type="checkbox"/> Apr	<input checked="" type="checkbox"/> May	<input checked="" type="checkbox"/> Jun	<input checked="" type="checkbox"/> Jul	<input checked="" type="checkbox"/> Aug	<input checked="" type="checkbox"/> Sep	<input checked="" type="checkbox"/> Oct	<input checked="" type="checkbox"/> Nov	<input checked="" type="checkbox"/> Dec		
Venting	<input checked="" type="checkbox"/> Jan	<input checked="" type="checkbox"/> Feb	<input checked="" type="checkbox"/> Mar	<input checked="" type="checkbox"/> Apr	<input checked="" type="checkbox"/> May	<input checked="" type="checkbox"/> Jun	<input checked="" type="checkbox"/> Jul	<input checked="" type="checkbox"/> Aug	<input checked="" type="checkbox"/> Sep	<input checked="" type="checkbox"/> Oct	<input checked="" type="checkbox"/> Nov	<input checked="" type="checkbox"/> Dec		
Thermostat Schedule: HERS 2006 Reference														
Schedule Type		1	2	3	4	5	6	7	8	9	10	11	12	
Cooling (WD)	AM	78	78	78	78	78	78	78	78	80	80	80	80	
	PM	80	80	78	78	78	78	78	78	78	78	78	78	
Cooling (WEH)	AM	78	78	78	78	78	78	78	78	78	78	78	78	
	PM	78	78	78	78	78	78	78	78	78	78	78	78	
Heating (WD)	AM	66	66	66	66	66	68	68	68	68	68	68	68	
	PM	68	68	68	68	68	68	68	68	68	68	66	66	
Heating (WEH)	AM	66	66	66	66	66	68	68	68	68	68	68	68	
	PM	68	68	68	68	68	68	68	68	68	68	66	66	

MECHANICAL VENTILATION

Type	Supply CFM	Exhaust CFM	Fan Watts	HRV	Heating System	Run Time	Cooling System
None	0	0	0	0	1 - Electric Heat Pump	0%	1 - Central Unit

Florida Code Compliance Checklist

Florida Department of Business and Professional Regulations
Residential Whole Building Performance Method

ADDRESS: TH-87FL
JACKSONVILLE, FL,

PERMIT #:

MANDATORY REQUIREMENTS SUMMARY - See individual code sections for full details.

COMPONENT	SECTION	SUMMARY OF REQUIREMENT(S)	CHECK
Air leakage	402.4	To be caulked, gasketed, weatherstripped or otherwise sealed. Recessed lighting IC-rated as meeting ASTM E 283. Windows and doors = 0.30 cfm/sq.ft. Testing or visual inspection required. Fireplaces: gasketed doors & outdoor combustion air. Must complete envelope leakage report or visually verify Table 402.4.2.	
Thermostat & controls	403.1	At least one thermostat shall be provided for each separate heating and cooling system. Where forced-air furnace is primary system, programmable thermostat is required. Heat pumps with supplemental electric heat must prevent supplemental heat when compressor can meet the load.	
Ducts	403.2.2	All ducts, air handlers, filter boxes and building cavities which form the primary air containment passageways for air distribution systems shall be considered ducts or plenum chambers, shall be constructed and sealed in accordance with Section 503.2.7.2 of this code.	
	403.3.3	Building framing cavities shall not be used as supply ducts.	
Water heaters	403.4	Heat trap required for vertical pipe risers. Comply with efficiencies in Table 403.4.3.2. Provide switch or clearly marked circuit breaker (electric) or shutoff (gas). Circulating system pipes insulated to = R-2 + accessible manual OFF switch.	
Mechanical ventilation	403.5	Homes designed to operate at positive pressure or with mechanical ventilation systems shall not exceed the minimum ASHRAE 62 level. No make-up air from attics, crawlspaces, garages or outdoors adjacent to pools or spas.	
Swimming Pools & Spas	403.9	Pool pumps and pool pump motors with a total horsepower (HP) of = 1 HP shall have the capability of operating at two or more speeds. Spas and heated pools must have vapor-retardant covers or a liquid cover or other means proven to reduce heat loss except if 70% of heat from site-recovered energy. Off/timer switch required. Gas heaters minimum thermal efficiency=78% (82% after 4/16/13). Heat pump pool heaters minimum COP= 4.0.	
Cooling/heating equipment	403.6	Sizing calculation performed & attached. Minimum efficiencies per Tables 503.2.3. Equipment efficiency verification required. Special occasion cooling or heating capacity requires separate system or variable capacity system. Electric heat >10kW must be divided into two or more stages.	
Ceilings/knee walls	405.2.1	R-19 space permitting.	

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE INDEX* = 73

The lower the EnergyPerformance Index, the more efficient the home.

TH-87FL, JACKSONVILLE, FL,

1. New construction or existing	New (From Plans)	9. Wall Types	Insulation	Area
2. Single family or multiple family	Single-family	a. Frame - Wood, Exterior	R=19.0	1890.00 ft ²
3. Number of units, if multiple family	1	b. N/A	R=	ft ²
4. Number of Bedrooms	3	c. N/A	R=	ft ²
5. Is this a worst case?	No	d. N/A	R=	ft ²
6. Conditioned floor area (ft ²)	2204	10. Ceiling Types	Insulation	Area
7. Windows**	Description	a. Under Attic (Vented)	R=30.0	2204.00 ft ²
a. U-Factor:	Dbl, U=0.35	b. N/A	R=	ft ²
SHGC:	SHGC=0.33	c. N/A	R=	ft ²
b. U-Factor:	N/A	11. Ducts		R ft ²
SHGC:		a. Sup: Main, Ret: Main, AH: Main	6	200
c. U-Factor:	N/A			
SHGC:				
d. U-Factor:	N/A	12. Cooling systems	kBtu/hr	Efficiency
SHGC:		a. Central Unit	42.0	SEER:13.00
Area Weighted Average Overhang Depth:	0.000 ft.			
Area Weighted Average SHGC:	0.330	13. Heating systems	kBtu/hr	Efficiency
8. Floor Types	Insulation	a. Electric Heat Pump	34.0	HSPF:7.70
a. Crawlspace	R=11.0			
b. N/A	R=	14. Hot water systems		Cap: 50 gallons
c. N/A	R=	a. Electric		EF: 0.9
		b. Conservation features		
		None		
		15. Credits		Pstat

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: _____

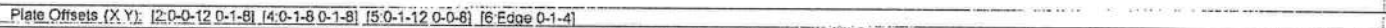
Address of New Home: _____ City/FL Zip: _____



*Note: This is not a Building Energy Rating. If your Index is below 70, your home may qualify for energy efficient mortgage (EEM) incentives if you obtain a Florida EnergyGauge Rating. Contact the EnergyGauge Hotline at (321) 638-1492 or see the EnergyGauge web site at energygauge.com for information and a list of certified Raters. For information about the Florida Building Code, Energy Conservation, contact the Florida Building Commission's support staff.

**Label required by Section 303.1.3 of the Florida Building Code, Energy Conservation, if not DEFAULT.

Universal Forest Products Inc. Grand Rapids, MI 49525 Peggy Beckett 7,330 e Feb 17 2012 MITek Industries, Inc. Mon May 14 09:11:41 2012 Page 1 of
This print replaces print issued 5/11/12 Added opl cut-off




Larry C. Tamm

FLORIDA PROFESSIONAL ENGINEER

WARNING - Verify design parameters and READ NOTES

Universal Forest Products Inc. 2801 EAST BELTLINE RD, NE
 PHONE (616)-364-6161 FAX (616)-365-0060 GRAND RAPIDS MI 49525

This building component has only been designed for the loads noted on this drawing. Construction and lifting forces have not been considered. The builder is responsible for lifting methods and system design. Builder responsibilities are defined under TP11. This design is based only upon parameters shown, and is for individual building component to be installed and loaded vertically. Applicability of design parameters and proper incorporation of component is responsibility of building designer - not truss designer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to insure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding erection, quality control, storage, delivery, erection and bracing, consult BCSI 1-06 from the Wood Truss Council of America and Truss Plate Institute Recommendation available from WTCA. 6300 Enterprise LN, Madison WI 53719. J:\support\MilekSupplies\templates\lupr tpe ©copyright 2012 by: Universal Forest Products Inc.





COLUMBIA COUNTY OFFICIAL 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 07-4S-17-08110-000

Building permit No. 000030656

Use Classification MODULAR, UTILITY

Fire: 97.76

Permit Holder CHRISTOPHER SCOTT COLLINS

Waste: 134.00

Owner of Building RICHARD & PAULA GORMAN

Total: 231.76

Location: 348 SW HIDEAWAY DRIVE, LAKE CITY, FL 32025

Date: 02/01/2013

Ray Cur



Building Inspector

POST IN A CONSPICUOUS PLACE
(Business Places Only)

#30656

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BUILDING MANUFACTURER'S DATA PLATE

MANUFACTURER: TOWNHOMES, LLC.
 ADDRESS: 133 SE NEWELL DRIVE
LAKE CITY, FLORIDA 32025

BUILDING SERIAL NO.(S): MO1112 MODEL NO.: 2198-0193F
 STATE LABEL NO.(S): 1028930 DATE OF MANUFACTURE: 12/19/12
 HWC LABEL NO.(S): 142348 DATE DATA PLATE ATTACHED: 12/19/12

THIS BUILDING IS DESIGNED AND CONSTRUCTED IN COMPLIANCE WITH THE FOLLOWING CODES:

DISCIPLINE	CODE/YEAR	AMENDMENTS/SUPPLEMENTS
BUILDING:	2010 FBC	
PLUMBING:	2010 FBC	
GAS:		
*MECHANICAL:	2010 FMC/FGC	
ELECTRICAL:	2008 NEC	

THIS BUILDING IS DESIGNED FOR THE FOLLOWING CONDITIONS:

USE GROUP/OCCUPANCY: R-3 FLOOR LIVE LOAD (PSF): 40
 CONSTRUCTION TYPE: VB ROOF LIVE LOAD (PSF): 20
 FIRE RATING OF EXTERIOR WALLS (HRS): 0 WIND LOAD (MPH): 130
 SEISMIC ZONE: _____
 U₁ FLOOR: R-11 U₂ WALLS: R-19 U₃ ROOF/CEILING: R-30
 ELECTRICAL SERVICE: 200 AMPS VOLTS _____ PHASE _____ HZ
 FUEL TYPE: ☐ NATURAL GAS ☐ LP GAS ☐ OTHER _____
 WATER SYSTEM TEST PRESSURE: 100 PSI

THE FOLLOWING MAJOR APPLIANCES WERE PROVIDED BY THE BUILDING MANUFACTURER:

APPLIANCE	MANUFACTURER	MODEL
HEATING		
AIR CONDITIONING		
WATER HEATER		
FIREPLACE SER#BC36MH #BC36MHX120804576		
GARBAGE DISPOSAL SER#291PC #1C1545159		

NOTICE: THE INSTALLATION OF THIS BUILDING AND UTILITY CONNECTIONS SHOULD BE PERFORMED ONLY BY QUALIFIED PERSONS AND IS SUBJECT TO INSPECTION BY LOCAL AUTHORITIES. REFER TO THE APPROVED PLANS FOR REQUIRED ON-SITE WORK AND CONNECTIONS AND TO THE INSTALLATION INSTRUCTIONS PROVIDED BY THE MANUFACTURER. ALL INSTRUCTIONS MUST BE FOLLOWED PRECISELY.

SPECIAL INSTRUCTIONS LIMITATIONS, ETC.

142348

THIRD PARTY
INSPECTION
AGENCY LABEL NO: M

THE FACTORY BUILT STRUCTURE HAS BEEN MANUFACTURED AND INSPECTED IN ACCORDANCE WITH THE APPLICABLE STATE THIRD PARTY INSPECTION REQUIREMENTS.

SEE THE DATA PLATE INSTALLED IN THE BUILDING AND THE APPROVED PLANS FOR THE PARAMETERS UNDER WHICH THE DESIGN WAS APPROVED (DESIGN LOAD, USE GROUP ETC.) AND FOR ANY SPECIAL CONDITIONS OR LIMITATIONS ON THE INSTALLATION OR USE OF THE BUILDING. INSTRUCTIONS REGARDING THE SHIPPING, HANDLING, INSTALLATION AND ERECTION OF THE BUILDING.

Hilborn, Werner, Carter & Associates, Inc.

State of Florida
 Professional Regulation
 Insignia #: 1028930
 Plan Tracking #: _____
 Manufacturer: _____
 Inspection Agency: _____
 Occupancy: _____
 Number of Modules: _____
 Date of Manufacture: _____

This insignia certifies that the building was manufactured in compliance with the Florida Manufactured Building Act (Chapter 553, Part I F.S.)
 Permanent Do Not Remove this Insignia



HWC

THIRD PARTY
INSPECTION
AGENCY

Hilborn, Werner, Carter & Associates, Inc.
 1627 SOUTH MYRTLE AVENUE CLEARWATER FLORIDA 33756