

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Community Affairs
Residential Whole Building Performance Method A

Project Name: **LICKS RES**
Address:
City, State: ,
Owner:
Climate Zone: **North**

Builder: **STEPHEN CRAWFORD**
Permitting Office:
Permit Number: **21913**
Jurisdiction Number: **221000**

1. New construction or existing	New	___	12. Cooling systems		
2. Single family or multi-family	Single family	___	a. Central Unit	Cap: 42.0 kBtu/hr	___
3. Number of units, if multi-family	1	___		SEER: 12.00	___
4. Number of Bedrooms	3	___	b. N/A		___
5. Is this a worst case?	Yes	___	c. N/A		___
6. Conditioned floor area (ft ²)	2065 ft ²	___			___
7. Glass area & type	Single Pane	Double Pane	13. Heating systems		
a. Clear glass, default U-factor	0.0 ft ²	357.0 ft ²	a. Electric Heat Pump	Cap: 40.0 kBtu/hr	___
b. Default tint	0.0 ft ²	0.0 ft ²		HSPF: 7.00	___
c. Labeled U or SHGC	0.0 ft ²	0.0 ft ²	b. N/A		___
8. Floor types			c. N/A		___
a. Slab-On-Grade Edge Insulation	R=0.0, 246.0(p) ft	___			___
b. N/A		___	14. Hot water systems		
c. N/A		___	a. Electric Resistance	Cap: 50.0 gallons	___
9. Wall types				EF: 0.88	___
a. Frame, Wood, Exterior	R=13.0, 1750.0 ft ²	___	b. N/A		___
b. Frame, Wood, Adjacent	R=13.0, 180.0 ft ²	___	c. Conservation credits		___
c. N/A		___	(HR-Heat recovery, Solar		___
d. N/A		___	DHP-Dedicated heat pump)		___
e. N/A		___	15. HVAC credits	PT, ___	___
10. Ceiling types			(CF-Ceiling fan, CV-Cross ventilation,		___
a. Under Attic	R=38.0, 2065.0 ft ²	___	HF-Whole house fan,		___
b. N/A		___	PT-Programmable Thermostat,		___
c. N/A		___	MZ-C-Multizone cooling,		___
11. Ducts			MZ-H-Multizone heating)		___
a. Sup: Unc. Ret: Unc. AH: Garage	Sup. R=6.0, 125.0 ft	___			___
b. N/A		___			___

Glass/Floor Area: 0.17

Total as-built points: 30432
Total base points: 31276

PASS

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

PREPARED BY: SUNCOAST INSULATORS

DATE: 4/14/01

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: _____

Floor Plan including:

- a) Rooms labeled and dimensioned
- b) Shear walls
- c) Windows and doors (including garage doors) showing size, mfg., approval listing and attachment specs. (FBC 1707) and safety glazing where needed (egress windows in bedrooms to be shown)
- d) Fireplaces (gas appliance) (vented or non-vented) or wood burning with hearth
- e) Stairs with dimensions (width, tread and riser) and details of guardrails and handrails
- f) Must show and identify accessibility requirements (accessible bathroom)

Foundation Plan including:

- a) Location of all load-bearing wall with required footings indicated as standard Or monolithic and dimensions and reinforcing
- b) All posts and/or column footing including size and reinforcing
- c) Any special support required by soil analysis such as piling
- d) Location of any vertical steel

Roof System:

- a) Truss package including:
 - 1. Truss layout and truss details signed and sealed by FI. Pro. Eng.
 - 2. Roof assembly (FBC 104.2.1 Roofing system, materials, manufacturer, fastenin requirements and product evaluation with wind resistance rating)
- b) Conventional Framing Layout including:
 - 1. Rafter size, species and spacing
 - 2. Attachment to wall and uplift
 - 3. Ridge beam sized and valley framing and support details
 - 4. Roof assembly (FBC 104.2.1 Roofing systems, materials, manufacturer, fasteni requirements and product evaluation with wind resistance rating)

Wall Sections including:

- a) Masonry wall
 - 1. All materials making up wall
 - 2. Block size and mortar type with size and spacing of reinforcement
 - 3. Lintel, tie-beam sizes and reinforcement
 - 4. Gable ends with rake beams showing reinforcement or gable truss and wall bra details
 - 5. All required connectors with uplift rating and required number and size of fasten for continuous tie from roof to foundation
 - 6. Roof assembly shown here or on roof system detail (FBC 104.2.1 Roofing syste materials, manufacturer, fastening requirements and product evaluation with resistance rating)
 - 7. Fire resistant construction (if required)
 - 8. Fireproofing requirements
 - 9. Shoe type of termite treatment (termicide or alternative method)
 - 10. Slab on grade
 - a. Vapor retardant (6mil. Polyethylene with joints lapped 6 inches and sealed)
 - b. Must show control joints, synthetic fiber reinforcement or Welded fire fabric reinforcement and supports
 - 11. Indicate where pressure treated wood will be placed
 - 12. Provide insulation R value for the following:
 - a. Attic space
 - b. Exterior wall cavity
 - c. Crawl space (if applicable)

b) Wood frame wall

1. All materials making up wall
2. Size and species of studs
3. Sheathing size, type and nailing schedule
4. Headers sized
5. Gable end showing balloon framing detail or gable truss and wall hinge bracing detail
6. All required fasteners for continuous tie from roof to foundation (truss anchors, straps, anchor bolts and washers)
7. Roof assembly shown here or on roof system detail (FBC104.2.1 Roofing system materials, manufacturer, fastening requirements and product evaluation with wind resistance rating)
8. Fire resistant construction (if applicable)
9. Fireproofing requirements
10. Show type of termite treatment (termicide or alternative method)
11. Slab on grade
 - a. Vapor retardant (6Mil. Polyethylene with joints lapped 6 inches and sealed)
 - b. Must show control joints, synthetic fiber reinforcement or welded wire fabric reinforcement and supports
12. Indicate where pressure treated wood will be placed
13. Provide insulation R value for the following:
 - a. Attic space
 - b. Exterior wall cavity
 - c. Crawl space (if applicable)

c) Metal frame wall and roof (designed, signed and sealed by Florida Prof. Engineer or Architect)

Floor Framing System:

- a) Floor truss package including layout and details, signed and sealed by Florida Registered Professional Engineer
- b) Floor joist size and spacing
- c) Girder size and spacing
- d) Attachment of joist to girder
- e) Wind load requirements where applicable

Plumbing Fixture layout

Electrical layout including:

- a) Switches, outlets/receptacles, lighting and all required GFCI outlets identified
- b) Ceiling fans
- c) Smoke detectors
- d) Service panel and sub-panel size and location(s)
- e) Meter location with type of service entrance (overhead or underground)
- f) Appliances and HVAC equipment
- g) Arc Fault Circuits (AFCI) in bedrooms

HVAC information

- a) Manual J sizing equipment or equivalent computation
- b) Exhaust fans in bathroom

Energy Calculations (dimensions shall match plans)

Gas System Type (LP or Natural) Location and BTU demand of equipment

Disclosure Statement for Owner Builders

*****Notice Of Commencement Required Before Any Inspections Will Be Done**

Private Potable Water

- a) Size of pump motor
- b) Size of pressure tank
- c) Cycle stop valve if used

SUMMER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: , , ,

PERMIT #:

BASE				AS-BUILT							
GLASS TYPES											
.18 X Conditioned X BSPM = Points Floor Area				Type/SC	Overhang Omt Len Hgt		Area X SPM X SOF = Points				
.18	2065.0	20.04	7448.9	Double, Clear	W	2.0	6.0	84.0	38.52	0.85	2748.7
				Double, Clear	E	2.0	6.0	118.0	42.06	0.85	4209.2
				Double, Clear	N	2.0	6.0	145.0	19.20	0.90	2505.9
				Double, Clear	S	2.0	6.0	10.0	35.87	0.78	278.3
				As-Built Total:			367.0			9742.0	
WALL TYPES Area X BSPM = Points				Type	R-Value		Area X SPM = Points				
Adjacent	180.0	0.70	126.0	Frame, Wood, Exterior	13.0		1750.0	1.50		2626.0	
Exterior	1750.0	1.70	2975.0	Frame, Wood, Adjacent	13.0		180.0	0.60		108.0	
Base Total:				As-Built Total:			1930.0 2733.0				
DOOR TYPES Area X BSPM = Points				Type	R-Value		Area X SPM = Points				
Adjacent	20.0	2.40	48.0	Exterior Insulated			100.0	4.10		410.0	
Exterior	100.0	6.10	610.0	Adjacent Insulated			20.0	1.60		32.0	
Base Total:				As-Built Total:			120.0 442.0				
CEILING TYPES Area X BSPM = Points				Type	R-Value		Area X SPM X SCM = Points				
Under Attic	2065.0	1.73	3572.4	Under Attic	38.0		2065.0	1.52 X 1.00		3138.8	
Base Total:				As-Built Total:			2065.0 3138.8				
FLOOR TYPES Area X BSPM = Points				Type	R-Value		Area X SPM = Points				
Slab	245.0(p)	-37.0	-9102.0	Slab-On-Grade Edge Insulation	0.0		248.0(p)	-41.20		-10135.2	
Raised	0.0	0.00	0.0								
Base Total:				As-Built Total:			245.0 -10135.2				
INFILTRATION Area X BSPM = Points						Area X SPM = Points					
2065.0 10.21 21083.7						2065.0 10.21		21083.7			

SUMMER CALCULATIONS**Residential Whole Building Performance Method A - Details**

ADDRESS: , , ,

PERMIT #:

BASE				AS-BUILT											
Summer Base Points:		26762.0		Summer As-Built Points:			27004.3								
Total Summer Points	X	System Multiplier	=	Cooling Points	Total Component	X	Cap Ratio	X	Duct Multiplier (DM x DSM x AHU)	X	System Multiplier	X	Credit Multiplier	=	Cooling Points
26762.0		0.4266		11416.7	27004.3		1.000		(1.090 x 1.147 x 1.00)		0.284		0.950		9122.2
					27004.3		1.00		1.250		0.284		0.950		9122.2

WINTER CALCULATIONS**Residential Whole Building Performance Method A - Details**

ADDRESS: , , ,

PERMIT #:

BASE				AS-BUILT								
GLASS TYPES												
.18 X Conditioned X BWPM = Points Floor Area				Type/SC	Overhang Omt Len Hgt		Area X WPM X WOF = Points					
.18	2065.0	12.74	4735.5	Double, Clear	W	2.0	6.0	84.0	20.73	1.04	1815.6	
				Double, Clear	E	2.0	6.0	118.0	18.79	1.06	2351.8	
				Double, Clear	N	2.0	6.0	145.0	24.58	1.00	3580.5	
				Double, Clear	S	2.0	6.0	10.0	13.30	1.26	167.3	
				As-Built Total:				357.0	7915.2			
WALL TYPES Area X BWPM = Points				Type	R-Value		Area X WPM = Points					
Adjacent	160.0	3.60	648.0	Frame, Wood, Exterior	13.0		1750.0	3.40	5950.0			
Exterior	1750.0	3.70	6475.0	Frame, Wood, Adjacent	13.0		180.0	3.30	594.0			
Base Total:				1930.0		7123.0		As-Built Total:				
						1930.0		9644.0				
DOOR TYPES Area X BWPM = Points				Type	R-Value		Area X WPM = Points					
Adjacent	20.0	11.50	230.0	Exterior Insulated			100.0	8.40	840.0			
Exterior	100.0	12.30	1230.0	Adjacent Insulated			20.0	8.00	160.0			
Base Total:				120.0		1460.0		As-Built Total:				
						120.0		1000.0				
CEILING TYPES Area X BWPM = Points				Type	R-Value		Area X WPM X WCM = Points					
Under Attic	2065.0	2.05	4233.3	Under Attic	36.0		2065.0	1.81 X 1.00	3737.6			
Base Total:				2065.0		4233.3		As-Built Total:				
						2065.0		3737.6				
FLOOR TYPES Area X BWPM = Points				Type	R-Value		Area X WPM = Points					
Slab	246.0(p)	6.9	2189.4	Slab-On-Grade Edge Insulation	0.0		246.0(p)	18.80	4624.8			
Raised	0.0	0.00	0.0									
Base Total:				2189.4		As-Built Total:		246.0		4624.8		
INFILTRATION Area X BWPM = Points								Area X WPM = Points				
2065.0 -0.58 -1218.3								2065.0 -0.58 -1218.3				

WINTER CALCULATIONS**Residential Whole Building Performance Method A - Details**

ADDRESS: , , ,

PERMIT #:

BASE				AS-BUILT							
Winter Base Points:		18522.8		Winter As-Built Points:						22603.3	
Total Winter Points	X System Multiplier	=	Heating Points	Total Component	X Cap Ratio	X Duct Multiplier (DM x DSM x AHU)	X System Multiplier	X Credit Multiplier	=	Heating Points	
18522.8	0.6274		11621.2	22603.3	1.000	(1.069 x 1.169 x 1.00)	0.487	0.950		13072.1	
				22603.3	1.00	1.250	0.487	0.950		13072.1	

WATER HEATING & CODE COMPLIANCE STATUS

Residential Whole Building Performance Method A - Details

ADDRESS: , , ,

PERMIT #:

BASE				AS-BUILT						
WATER HEATING				Tank	EF	Number of	X	Tank	X	Credit
Number of		Multiplier	=	Volume		Bedrooms		Ratio	Multiplier	=
Bedrooms			Total							Total
3		2745.00	8238.0	50.0	0.88	3		1.00	2745.00	1.00
				As-Built Total:						8238.0

CODE COMPLIANCE STATUS							
BASE				AS-BUILT			
Cooling	+	Heating	+	Cooling	+	Heating	+
Points		Points		Points		Points	
11417		11621		9122		13072	
		8238	=			8238	=
		31276				30432	

PASS



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.	
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 joist 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.	
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* = 83.2

The higher the score, the more efficient the home.

1. New construction or existing	New	12. Cooling systems	
2. Single family or multi-family	Single family	a. Central Unit	Cap: 42.0 kBtu/hr
3. Number of units, if multi-family	1		SEER: 12.00
4. Number of Bedrooms	3	b. N/A	
5. Is this a worst case?	Yes	c. N/A	
6. Conditioned floor area (ft ²)	2065 ft ²		
7. Glass area & type	Single Pane Double Pane	13. Heating systems	
a. Clear - single pane	0.0 ft ² 357.0 ft ²	a. Electric Heat Pump	Cap: 40.0 kBtu/hr
b. Clear - double pane	0.0 ft ² 0.0 ft ²		HSPF: 7.00
c. Tint/other SHGC - single pane	0.0 ft ² 0.0 ft ²	b. N/A	
d. Tint/other SHGC - double pane		c. N/A	
8. Floor types		14. Hot water systems	
a. Slab-On-Grade Edge Insulation	R=0.0, 246.0(p) ft	a. Electric Resistance	Cap: 50.0 gallons
b. N/A			EF: 0.88
c. N/A		b. N/A	
9. Wall types		c. Conservation credits	
a. Frame, Wood, Exterior	R=13.0, 1750.0 ft ²	(HR-Heat recovery, Solar	
b. Frame, Wood, Adjacent	R=13.0, 180.0 ft ²	DHP-Dedicated heat pump)	
c. N/A		15. HVAC credits	PT,
d. N/A		(CF-Ceiling fan, CV-Cross ventilation,	
e. N/A		HF-Whole house fan,	
10. Ceiling types		PT-Programmable Thermostat,	
a. Under Attic	R=38.0, 2065.0 ft ²	MZ-C-Multizone cooling,	
b. N/A		MZ-H-Multizone heating)	
c. N/A			
11. Ducts			
a. Sup: Unc. Ret: Unc. AH: Garage	Sup. R=6.0, 125.0 ft		
b. N/A			

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.

EnergyGauge[®] (Version: FLRCSB v3.30)