

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name: Hans Dindial Residence
 Street:
 City, State, Zip: Gainesville, FL,
 Owner: Hans Dindial
 Design Location: FL, Gainesville

Builder Name: The Sustainable Design Group,
 Permit Office:
 Permit Number:
 Jurisdiction: Alachua County

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) 1600
 Conditioned floor area below grade (ft²) 0

7. Windows(200.0 sqft.)	Description	Area
a. U-Factor:	Dbl, U=0.36	200.00 ft ²
	SHGC:	SHGC=0.30
b. U-Factor:	N/A	ft ²
	SHGC:	
c. U-Factor:	N/A	ft ²
	SHGC:	
d. U-Factor:	N/A	ft ²
	SHGC:	
Area Weighted Average Overhang Depth:		2.500 ft.
Area Weighted Average SHGC:		0.300

8. Floor Types (1600.0 sqft.)	Insulation	Area
a. Raised Floor	R=19.0	1600.00 ft ²
b. N/A	R=	ft ²
c. N/A	R=	ft ²

9. Wall Types (1476.0 sqft)	Insulation	Area
a. Frame - Wood, Exterior	R=19.0	1476.00 ft ²
b. N/A	R=	ft ²
c. N/A	R=	ft ²
d. N/A	R=	ft ²

10. Ceiling Types (1600.0 sqft)	Insulation	Area
a. Under Attic (Vented)	R=30.0	1600.00 ft ²
b. N/A	R=	ft ²
c. N/A	R=	ft ²

11. Ducts	R	ft ²
a. Sup: Attic, Ret: Attic, AH: ac	6	638

12. Cooling systems	kBtu/hr	Efficiency
a. Central Unit	26.8	SEER:13.00

13. Heating systems	kBtu/hr	Efficiency
a. Electric Heat Pump	26.4	HSPF:8.20

14. Hot water systems	Cap: 40 gallons
a. Electric	EF: 0.920
b. Conservation features	
None	

15. Credits	CF, Pstat

Glass/Floor Area: 0.125

Total Proposed Modified Loads: 33.19

Total Standard Reference Loads: 48.05

PASS

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

PREPARED BY: T.L. Miao, P.E.DATE: 9/17/2013

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: _____

- Compliance requires certification by the air handler unit manufacturer that the air handler enclosure qualifies as certified factory-sealed in accordance with 403.2.2.1.1.
- Compliance requires completion of a Florida Air Barrier and Insulation Inspection Checklist

PROJECT

Title: Hans Dindial Residence	Bedrooms: 3	Address Type: Street Address
Building Type: User	Conditioned Area: 1600	Lot #
Owner: Hans Dindial	Total Stories: 1	Block/SubDivision:
# of Units: 1	Worst Case: No	PlatBook:
Builder Name: The Sustainable Design Grou	Rotate Angle: 0	Street:
Permit Office:	Cross Ventilation: No	County: Alachua
Jurisdiction: Alachua County	Whole House Fan: No	City, State, Zip: Gainesville , FL ,
Family Type: Single-family		
New/Existing: New (From Plans)		
Comment:		

CLIMATE

	Design Location	TMY Site	IECC Zone	Design Temp 97.5 %	Design Temp 2.5 %	Int Design Temp Winter	Int Design Temp Summer	Heating Degree Days	Design Moisture	Daily Temp Range
✓	FL, Gainesville	FL_GAINESVILLE_REGI	2	32	92	70	75	1305 5	51	Medium

BLOCKS

Number	Name	Area	Volume
1	Entire House	1600	14400

SPACES

Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated
1	Kitchen	240	2160	Yes	1		1	Yes	Yes	Yes
2	Dining	176	1584	No	0		1	Yes	Yes	Yes
3	Master	224	2016	No	1	1	1	Yes	Yes	Yes
4	Util	72	648	No	0		1	Yes	Yes	Yes
5	ac	24	216	No	0		1	No	Yes	Yes
6	Bath	48	432	No	0		1	No	Yes	Yes
7	BR2	168	1512	No	0	2	1	Yes	Yes	Yes
8	Liv	312	2808	No	1		1	Yes	Yes	Yes
9	Mc	25	225	No	0		1	Yes	Yes	Yes
10	MBath	131	1179	No	0		1	Yes	Yes	Yes
11	Study	180	1620	No	0		1	Yes	Yes	Yes

FLOORS

	#	Floor Type	Space	Perimeter	Perimeter R-Value	Area	Joist R-Value	Tile	Wood	Carpet
✓	1	Raised Floor	Kitchen	----	----	240 ft²	19	0	1	0
	2	Raised Floor	Dining	----	----	176 ft²	19	0	1	0
	3	Raised Floor	Master	----	----	224 ft²	19	0	1	0
	4	Raised Floor	Util	----	----	72 ft²	19	0	1	0
	5	Raised Floor	ac	----	----	24 ft²	19	0	1	0
	6	Raised Floor	Bath	----	----	48 ft²	19	0	1	0

FLOORS

✓	#	Floor Type	Space	Perimeter	Perimeter R-Value	Area	Joist R-Value	Tile	Wood	Carpet
_____	7	Raised Floor	BR2	----	----	168 ft²	19	0	1	0
_____	8	Raised Floor	Liv	----	----	312 ft²	19	0	1	0
_____	9	Raised Floor	Mc	----	----	25 ft²	19	0	1	0
_____	10	Raised Floor	MBath	----	----	131 ft²	19	0	1	0
_____	11	Raised Floor	Study	----	----	180 ft²	19	0	1	0

ROOF

✓	#	Type	Materials	Roof Area	Gable Area	Roof Color	Solar Absor	SA Tested	Emitt	Emitt Tested	Deck Insul.	Pitch (deg)
_____	1	Hip	Metal	1733 ft²	0 ft²	Medium	0.75	No	0.9	No	30	22.6

ATTIC

✓	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
_____	1	Full attic	Vented	300	1600 ft²	N	N

CEILING

✓	#	Ceiling Type	Space	R-Value	Area	Framing Frac	Truss Type
_____	1	Under Attic (Vented)	Kitchen	30	240 ft²	0.1	Wood
_____	2	Under Attic (Vented)	Dining	30	176 ft²	0.1	Wood
_____	3	Under Attic (Vented)	Master	30	224 ft²	0.1	Wood
_____	4	Under Attic (Vented)	Util	30	72 ft²	0.1	Wood
_____	5	Under Attic (Vented)	ac	30	24 ft²	0.1	Wood
_____	6	Under Attic (Vented)	Bath	30	48 ft²	0.1	Wood
_____	7	Under Attic (Vented)	BR2	30	168 ft²	0.1	Wood
_____	8	Under Attic (Vented)	Liv	30	312 ft²	0.1	Wood
_____	9	Under Attic (Vented)	Mc	30	25 ft²	0.1	Wood
_____	10	Under Attic (Vented)	MBath	30	131 ft²	0.1	Wood
_____	11	Under Attic (Vented)	Study	30	180 ft²	0.1	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	SE	Exterior	Frame - Wood	Kitchen	19	16	0	9	0	144.0 ft²	0	0.25	0.8	0
_____	2	SW	Exterior	Frame - Wood	Kitchen	19	15	0	9	0	135.0 ft²	0	0.25	0.8	0
_____	3	SW	Exterior	Frame - Wood	Dining	19	11	0	9	0	99.0 ft²	0	0.25	0.8	0
_____	4	SW	Exterior	Frame - Wood	Master	19	14	0	9	0	126.0 ft²	0	0.25	0.8	0
_____	5	NW	Exterior	Frame - Wood	Master	19	16	0	9	0	144.0 ft²	0	0.25	0.8	0
_____	6	SE	Exterior	Frame - Wood	Util	19	12	0	9	0	108.0 ft²	0	0.25	0.8	0
_____	7	NE	Exterior	Frame - Wood	BR2	19	14	0	9	0	126.0 ft²	0	0.25	0.8	0
_____	8	SE	Exterior	Frame - Wood	BR2	19	12	0	9	0	108.0 ft²	0	0.25	0.8	0

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%
9	NE	Exterior	Frame - Wood	Liv	19	13	0	9	0	117.0 ft²	0	0.25	0.8	0
10	SW	Exterior	Frame - Wood	Liv	19	2	0	9	0	18.0 ft²	0	0.25	0.8	0
11	NW	Exterior	Frame - Wood	MBath	19	12	0	9	0	108.0 ft²	0	0.25	0.8	0
12	NE	Exterior	Frame - Wood	Study	19	15	0	9	0	135.0 ft²	0	0.25	0.8	0
13	NW	Exterior	Frame - Wood	Study	19	12	0	9	0	108.0 ft²	0	0.25	0.8	0

WINDOWS

Orientation shown is the entered, Proposed orientation.

✓ #	Ornt	Wall ID	Frame	Panes	NFRC	U-Factor	SHGC	Area	Overhang Depth	Separation	Int Shade	Screening
1	SE	1	Vinyl	Low-E Double	Yes	0.36	0.3	12.0 ft²	2 ft 6 in	1 ft 0 in	Drapes/blinds	Exterior 5
2	SW	2	Vinyl	Low-E Double	Yes	0.36	0.3	30.0 ft²	2 ft 6 in	1 ft 0 in	Drapes/blinds	Exterior 5
3	SW	3	Vinyl	Double (Clear)	Yes	0.36	0.3	20.0 ft²	2 ft 6 in	1 ft 0 in	None	Exterior 5
4	NW	5	Vinyl	Low-E Double	Yes	0.36	0.3	30.0 ft²	2 ft 6 in	1 ft 0 in	Drapes/blinds	Exterior 5
5	NE	7	Vinyl	Low-E Double	Yes	0.36	0.3	20.0 ft²	2 ft 6 in	1 ft 0 in	Drapes/blinds	Exterior 5
6	SE	8	Vinyl	Low-E Double	Yes	0.36	0.3	20.0 ft²	2 ft 6 in	1 ft 0 in	Drapes/blinds	Exterior 5
7	NE	9	TIM	Double (Clear)	Yes	0.36	0.3	20.0 ft²	2 ft 6 in	1 ft 0 in	None	None
8	NW	11	Vinyl	Low-E Double	Yes	0.36	0.3	8.0 ft²	2 ft 6 in	1 ft 0 in	Drapes/blinds	Exterior 5
9	NE	12	Vinyl	Low-E Double	Yes	0.36	0.3	20.0 ft²	2 ft 6 in	1 ft 0 in	Drapes/blinds	Exterior 5
10	NW	13	Vinyl	Low-E Double	Yes	0.36	0.3	20.0 ft²	2 ft 6 in	1 ft 0 in	Drapes/blinds	Exterior 5

INFILTRATION

#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH	ACH 50
1	Wholehouse	Best Guess	0.000500	2098.4	115.20	216.65	0.3850	8.7433

HEATING SYSTEM

✓ #	System Type	Subtype	Efficiency	Capacity	Block	Ducts
1	Electric Heat Pump	None	HSPF: 8.2	26.4 kBtu/hr	1	sys#1

COOLING SYSTEM

✓ #	System Type	Subtype	Efficiency	Capacity	Air Flow	SHR	Block	Ducts
1	Central Unit	Split	SEER: 13	26.8 kBtu/hr	893 cfm	0.7	1	sys#1

HOT WATER SYSTEM

✓ #	System Type	SubType	Location	EF	Cap	Use	SetPnt	Conservation
1	Electric	None	Util	0.92	40 gal	60 gal	120 deg	None

SOLAR HOT WATER SYSTEM

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

DUCTS

✓	#	---- Supply ----			---- Return ----		Leakage Type	Air Handler	CFM25	CFM25 OUT	QN	RLF	HVAC #	
		Location	R-Value	Area	Location	Area							Heat	Cool
_____	1	Attic	6	638 ft²	Attic	638 ft²	Default Leakage	ac	cfm	(Default)			1	1

TEMPERATURES

Programable Thermostat: Y														Ceiling Fans:											
Cooling	[X]	Jan	[X]	Feb	[X]	Mar	[X]	Apr	[X]	May	[X]	Jun	[X]	Jul	[X]	Aug	[X]	Sep	[X]	Oct	[X]	Nov	[X]	Dec	
Heating	[X]	Jan	[X]	Feb	[X]	Mar	[X]	Apr	[X]	May	[X]	Jun	[X]	Jul	[X]	Aug	[X]	Sep	[X]	Oct	[X]	Nov	[X]	Dec	
Venting	[X]	Jan	[X]	Feb	[X]	Mar	[X]	Apr	[X]	May	[X]	Jun	[X]	Jul	[X]	Aug	[X]	Sep	[X]	Oct	[X]	Nov	[X]	Dec	

Thermostat Schedule: HERS 2006 Reference														Hours											
Schedule Type		1	2	3	4	5	6	7	8	9	10	11	12												
Cooling (WD)	AM	78.5	78.5	78.5	78.5	78.5	78.5	78.5	78.5	78.5	78.5	78.5	78.5												
	PM	80.5	80.5	78.5	78.5	78.5	78.5	78.5	78.5	78.5	78.5	78.5	78.5												
Cooling (WEH)	AM	78.5	78.5	78.5	78.5	78.5	78.5	78.5	78.5	78.5	78.5	78.5	78.5												
	PM	78.5	78.5	78.5	78.5	78.5	78.5	78.5	78.5	78.5	78.5	78.5	78.5												
Heating (WD)	AM	66	66	66	66	66	66	66	66	66	66	66	66												
	PM	68	68	68	68	68	68	68	68	68	68	68	68												
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	68	68												

MECHANICAL VENTILATION

Type	Supply CFM	Exhaust CFM	Fan Watts	HRV	Heating System	Run Time	Cooling System
Runtime Vent	40	0		0	1 - Electric Heat Pump	%	1 - Central Unit

Florida Code Compliance Checklist

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

ADDRESS: <div style="text-align: center; margin-top: 5px;">Gainesville, FL,</div>	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.	N/A
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* = 68

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

, Gainesville, 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	1476.00 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)	1600		10. Ceiling Types	Insulation	Area
7. Windows**	Description	Area	a. Under Attic (Vented)	R=30.0	1600.00 ft ²
a. U-Factor.	DbI, U=0.36	160.00 ft ²	b. N/A	R=	ft ²
SHGC:	SHGC=0.30		c. N/A	R=	ft ²
b. U-Factor.	DbI, U=0.36	40.20 ft ²	11. Ducts		R ft ²
SHGC:	SHGC=0.29		a. Sup: Attic, Ret: Attic, AH: ac		6 638
c. U-Factor:	N/A	ft ²	12. Cooling systems	kBtu/hr	Efficiency
SHGC:			a. Central Unit	37.9	SEER.13.00
d. U-Factor:	N/A	ft ²	13. Heating systems	kBtu/hr	Efficiency
SHGC:			a. Electric Heat Pump	28.2	HSPF.8.20
Area Weighted Average Overhang Depth:		2.500 ft.	14. Hot water systems		Cap: 40 gallons
Area Weighted Average SHGC:		0.298	a. Electric		EF: 0.92
8. Floor Types	Insulation	Area	b. Conservation features		
a. Raised Floor	R=19.0	1600.00 ft ²	None		
b. N/A	R=	ft ²	15. Credits		CF, Pstat
c. N/A	R=	ft ²			

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.