FORM R405-2020

# FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

| | | | |
|---|---|---|---|
| Project Name: | DRAWDY RESIDENCE | Builder Name: | |
| Street: | 11351 SW HWY. 351 | Permit Office: | Columbia |
| City, State, Zip: | , FL , | Permit Number: | |
| Owner: | | Jurisdiction: | |
| Design Location: | FL, Gainesville | County: | Columbia (Florida Climate Zone 2 ) |

| | |
|---|---|
| 1. New construction or existing | New (From Plans) |
| 2. Single family or multiple family | Detached |
| 3. Number of units, if multiple family | 1 |
| 4. Number of Bedrooms | 4 |
| 5. Is this a worst case? | No |
| 6. Conditioned floor area above grade (ft²) | 2002 |
| Conditioned floor area below grade (ft²) | 0 |

| 7. Windows(170.0 sqft.) | Description | Area |
|---|---|---|
| a. U-Factor: | Dbl, U=0.40 | 170.00 ft² |
| SHGC: | SHGC=0.25 | |
| b. U-Factor: | N/A | ft² |
| SHGC: | | |
| c. U-Factor: | N/A | ft² |
| SHGC: | | |
| Area Weighted Average Overhang Depth: | | 5.804 ft. |
| Area Weighted Average SHGC: | | 0.250 |

| 8. Skylights | | Area |
|---|---|---|
| c. U-Factor:(AVG) | N/A | ft² |
| SHGC(AVG): | N/A | |

| 9. Floor Types (2002.0 sqft.) | Insulation | Area |
|---|---|---|
| a. Slab-On-Grade Edge Insulation | R=0.0 | 2002.00 ft² |
| b. N/A | R= | ft² |
| c. N/A | R= | ft² |

| 10. Wall Types (2330.6 sqft.) | Insulation | Area |
|---|---|---|
| a. Frame - Wood, Exterior | R=13.0 | 2123.60 ft² |
| b. Frame - Steel, Exterior | R=13.0 | 207.00 ft² |
| c. N/A | R= | ft² |
| d. N/A | R= | ft² |

| 11. Ceiling Types (2002.0 sqft.) | Insulation | Area |
|---|---|---|
| a. Under Attic (Vented) | R=38.0 | 2002.00 ft² |
| b. N/A | R= | ft² |
| c. N/A | R= | ft² |

| 12. Ducts | R | ft² |
|---|---|---|
| a. Sup: Attic, Ret: Main, AH: Main | 6 | 128 |

| 13. Cooling systems | kBtu/hr | Efficiency |
|---|---|---|
| a. Central Unit | 16.2 | SEER:15.00 |

| 14. Heating systems | kBtu/hr | Efficiency |
|---|---|---|
| a. Electric Heat Pump | 29.7 | HSPF:8.50 |

| 15. Hot water systems | |
|---|---|
| a. Electric | Cap: 50 gallons |
| | EF: 0.950 |
| b. Conservation features | |
| None | |
| 16. Credits | CF, Pstat |

Glass/Floor Area: 0.085

Total Proposed Modified Loads: 42.20

Total Baseline Loads: 54.97

**PASS**

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

PREPARED BY: _____

DATE: _____

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 R403.3.2.1.**

**- Compliance requires an Air Barrier and Insulation Inspection Checklist in accordance with R402.4.1.1 and this project requires an envelope leakage test report with envelope leakage no greater than 4.70 ACH50 (R402.4.1.2).**

**- Compliance with a proposed duct leakage Qn requires a Duct Leakage Test Report confirming duct leakage to outdoors, tested in accordance with ANSI/RESNET/ICC 380, is not greater than 0.030 Qn for whole house.**

FORM R405-2020

# INPUT SUMMARY CHECKLIST REPORT

## PROJECT

| | | | | | |
|---|---|---|---|---|---|
| Title: | DRAWDY RESIDENCE | Bedrooms: | 4 | Address Type: | Lot Information |
| Building Type: | User | Conditioned Area: | 2002 | Lot # | |
| Owner Name: | | Total Stories: | 1 | Block/Subdivision: | |
| # of Units: | 1 | Worst Case: | No | PlatBook: | |
| Builder Name: | | Rotate Angle: | 0 | Street: | 11351 SW HWY. 351 |
| Permit Office: | Columbia | Cross Ventilation: | | County: | Columbia |
| Jurisdiction: | | Whole House Fan: | | City, State, Zip: | , |
| Family Type: | Detached | | | | FL , |
| New/Existing: | New (From Plans) | | | | |
| Comment: | | | | | |

## CLIMATE

| √ | Design Location | TMY Site | 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 | 32 | 92 | 70 | 75 | 1305.5 | 51 | Medium |

## BLOCKS

| Number | Name | Area | Volume |
|---|---|---|---|
| 1 | Block1 | 2002 | 18018 |

## SPACES

| Number | Name | Area | Volume | Kitchen | Occupants | Bedrooms | Infil ID | Finished | Cooled | Heated |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Main | 2002 | 18018 | Yes | 4 | 4 | 1 | Yes | Yes | Yes |

## FLOORS

| √ | # | Floor Type | Space | Perimeter | R-Value | Area | | Tile | Wood | Carpet |
|---|---|---|---|---|---|---|---|---|---|---|
| _____ | 1 | Slab-On-Grade Edge Insulatio | Main | 259 ft | 0 | 2002 ft² | ---- | 0 | 0 | 1 |

## ROOF

| √ | # | Type | Materials | Roof Area | Gable Area | Roof Color | Rad Barr | Solar Absor. | SA Tested | Emitt | Emitt Tested | Deck Insul. | Pitch (deg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| _____ | 1 | Gable or shed | Composition shingles | 2406 ft² | 668 ft² | Light | Y | 0.8 | No | 0.9 | No | 0 | 33.69 |

## ATTIC

| √ | # | Type | Ventilation | Vent Ratio (1 in) | Area | RBS | IRCC |
|---|---|---|---|---|---|---|---|
| _____ | 1 | Full attic | Vented | 300 | 2002 ft² | Y | N |

## CEILING

| √ | # | Ceiling Type | Space | R-Value | Ins Type | Area | Framing Frac | Truss Type |
|---|---|---|---|---|---|---|---|---|
| _____ | 1 | Under Attic (Vented) | Main | 38 | Batt | 2002 ft² | 0.11 | Wood |

# INPUT SUMMARY CHECKLIST REPORT

## WALLS

| √ | # | Ornt | Adjacent To | Wall Type | Space | Cavity R-Value | Width Ft | Width In | Height Ft | Height In | Area | Sheathing R-Value | Framing Fraction | Solar Absor. | Below Grade% |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ____ | 1 | S | Exterior | Frame - Wood | Main | 13 | 7 | 1.5 | 9 | | 64.1 ft² | | 0.23 | 0.75 | 0 |
| ____ | 2 | W | Exterior | Frame - Wood | Main | 13 | 6 | 6 | 9 | | 58.5 ft² | | 0.23 | 0.75 | 0 |
| ____ | 3 | S | Exterior | Frame - Wood | Main | 13 | 29 | 4.5 | 9 | | 264.4 ft² | | 0.23 | 0.75 | 0 |
| ____ | 4 | E | Exterior | Frame - Wood | Main | 13 | 6 | 6 | 9 | | 58.5 ft² | | 0.23 | 0.75 | 0 |
| ____ | 5 | N | Exterior | Frame - Wood | Main | 13 | 8 | 6 | 9 | | 76.5 ft² | | 0.23 | 0.75 | 0 |
| ____ | 6 | E | Exterior | Frame - Wood | Main | 13 | 16 | 1 | 9 | | 144.8 ft² | | 0.23 | 0.75 | 0 |
| ____ | 7 | S | Exterior | Frame - Wood | Main | 13 | 23 | | 9 | | 207.0 ft² | | 0.23 | 0.75 | 0 |
| ____ | 8 | E | Exterior | Frame - Wood | Main | 13 | 33 | 4.5 | 9 | | 300.4 ft² | | 0.23 | 0.75 | 0 |
| ____ | 9 | N | Exterior | Frame - Steel | Main | 13 | 23 | | 9 | | 207.0 ft² | | 0.23 | 0.75 | 0 |
| ____ | 10 | W | Exterior | Frame - Wood | Main | 13 | 20 | | 9 | | 180.0 ft² | | 0.23 | 0.75 | 0 |
| ____ | 11 | N | Exterior | Frame - Wood | Main | 13 | 12 | | 9 | | 108.0 ft² | | 0.23 | 0.75 | 0 |
| ____ | 12 | W | Exterior | Frame - Wood | Main | 13 | 5 | 6 | 9 | | 49.5 ft² | | 0.23 | 0.75 | 0 |
| ____ | 13 | N | Exterior | Frame - Wood | Main | 13 | 16 | | 9 | | 144.0 ft² | 0 | 0.23 | 0.75 | 0 |
| ____ | 14 | E | Exterior | Frame - Wood | Main | 13 | 5 | 6 | 9 | | 49.5 ft² | | 0.23 | 0.75 | 0 |
| ____ | 15 | N | Exterior | Frame - Wood | Main | 13 | 17 | | 9 | | 153.0 ft² | | 0.23 | 0.75 | 0 |
| ____ | 16 | N | Exterior | Frame - Wood | Main | 13 | 29 | 6 | 9 | | 265.5 ft² | | 0.23 | 0.75 | 0 |

## DOORS

| √ | # | Ornt | Door Type | Space | Storms | U-Value | Width Ft | Width In | Height Ft | Height In | Area |
|---|---|---|---|---|---|---|---|---|---|---|---|
| _____ | 1 | S | Insulated | Main | None | .4 | 5 | | 6 | 8 | 33.3 ft² |
| _____ | 2 | S | Insulated | Main | None | .4 | 2 | 8 | 6 | 8 | 17.8 ft² |
| _____ | 3 | N | Insulated | Main | None | .46 | 6 | | 6 | 8 | 40 ft² |
| _____ | 4 | N | Insulated | Main | None | .46 | 6 | | 6 | 8 | 40 ft² |

## WINDOWS

Orientation shown is the entered, Proposed orientation.

| √ | # | Ornt | Wall ID | Frame | Panes | NFRC | U-Factor | SHGC | Imp | Area | Overhang Depth | Overhang Separation | Int Shade | Screening |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| _____ | 1 | S | 1 | Metal | Double (Tinted) | Yes | 0.4 | 0.25 | N | 6.0 ft² | 1 ft 4 in | 2 ft 0 in | Drapes/blinds | None |
| _____ | 2 | S | 3 | Metal | Double (Tinted) | Yes | 0.4 | 0.25 | N | 50.0 ft² | 9 ft 4 in | 1 ft 0 in | Drapes/blinds | None |
| _____ | 3 | E | 8 | Metal | Double (Tinted) | Yes | 0.4 | 0.25 | N | 24.0 ft² | 1 ft 4 in | 1 ft 0 in | Drapes/blinds | None |
| _____ | 4 | N | 9 | Vinyl | Double (Tinted) | Yes | 0.4 | 0.25 | N | 30.0 ft² | 1 ft 4 in | 1 ft 0 in | Drapes/blinds | None |
| _____ | 5 | N | 11 | Vinyl | Double (Tinted) | Yes | 0.4 | 0.25 | N | 30.0 ft² | 9 ft 4 in | 2 ft 0 in | Drapes/blinds | None |
| _____ | 6 | N | 15 | Vinyl | Double (Tinted) | Yes | 0.4 | 0.25 | N | 15.0 ft² | 9 ft 4 in | 2 ft 0 in | Drapes/blinds | None |
| _____ | 7 | N | 16 | Vinyl | Double (Tinted) | Yes | 0.4 | 0.25 | N | 15.0 ft² | 1 ft 4 in | 2 ft 0 in | Drapes/blinds | None |

FORM R405-2020

# INPUT SUMMARY CHECKLIST REPORT

## INFILTRATION

| # | Scope | Method | SLA | CFM 50 | ELA | EqLA | ACH | ACH 50 |
|---|---|---|---|---|---|---|---|---|
| 1 | Wholehouse | Proposed ACH(50) | .000269 | 1411.4 | 77.43 | 145.37 | .0965 | 4.7 |

## HEATING SYSTEM

| √ | # | System Type | Subtype | Speed | Efficiency | Capacity | Block | Ducts |
|---|---|---|---|---|---|---|---|---|
| _____ | 1 | Electric Heat Pump/ | None | Singl | HSPF:8.5 | 29.72 kBtu/hr | 1 | sys#1 |

## COOLING SYSTEM

| √ | # | System Type | Subtype | Subtype | Efficiency | Capacity | Air Flow | SHR | Block | Ducts |
|---|---|---|---|---|---|---|---|---|---|---|
| _____ | 1 | Central Unit/ | None | Singl | SEER: 15 | 16.2 kBtu/hr | 480 cfm | 0.75 | 1 | sys#1 |

## HOT WATER SYSTEM

| √ | # | System Type | SubType | Location | EF | Cap | Use | SetPnt | Conservation |
|---|---|---|---|---|---|---|---|---|---|
| _____ | 1 | Electric | None | Main | 0.95 | 50 gal | 60 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 TOT | CFM25 OUT | QN | RLF | HVAC # Heat | Cool |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| _____ | 1 | Attic | 6 | 128 ft² | Main | 32 ft² | Prop. Leak Free | Main | --- cfm | 60.1 cfm | 0.03 | 0.60 | 1 | 1 |

## TEMPERATURES

Programable Thermostat: Y

Ceiling Fans:

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cooling | [ ] | [ ] | [ ] | [ ] | [ ] | [X] | [X] | [X] | [X] | [ ] | [ ] | [ ] |
| Heating | [X] | [X] | [X] | [ ] | [ ] | [ ] | [ ] | [ ] | [ ] | [ ] | [X] | [X] |
| Venting | [ ] | [ ] | [X] | [X] | [ ] | [ ] | [ ] | [ ] | [ ] | [X] | [X] | [ ] |

# INPUT SUMMARY CHECKLIST REPORT

| Thermostat Schedule: HERS 2006 Reference | | Hours | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | 600 | 0 | 1 - Electric Heat Pump | 0% | 1 - Central Unit |

## MASS

| Mass Type | Area | Thickness | Furniture Fraction | Space |
|---|---|---|---|---|
| Default(8 lbs/sq.ft. | 0 ft² | 0 ft | 0.3 | Main |