

# Florida Energy Efficiency Code For Building Construction

EnergyGauge Summit® Fla/Com-2010, Effective Date: March 15, 2012 -- Form 506-2010  
Total Building Performance Method for Commercial Buildings

## PROJECT SUMMARY

**Short Desc:** New Prj

**Owner:** HUGH DAMPIER

**Address1:** 118 SE GILLIEN TERRACE

**Address2:**

**Type:** Religious Building

**Jurisdiction:** COLUMBIA COUNTY, COLUMBIA COUNTY, FL (221000)

**Conditioned Area:** 6263 SF

**No of Stories:** 1

**Permit No:** 0

**Description:** LULU BAPTIST CHURCH

**City:** LULU

**State:** FL

**Zip:** 32061

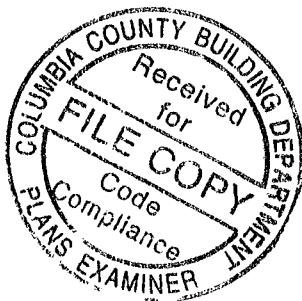
**Class:** New Finished building

**Conditioned & UnConditioned Area:** 6263 SF

**Area entered from Plans** 6608 SF

**Max Tonnage** 5

**If different, write in:** \_\_\_\_\_



| Compliance Summary                           |         |          |               |
|----------------------------------------------|---------|----------|---------------|
| Component                                    | Design  | Criteria | <u>Result</u> |
| Gross Energy Cost (in \$)                    | 8,231.0 | 8,721.0  | PASSED        |
| LIGHTING CONTROLS                            |         |          | PASSES        |
| EXTERNAL LIGHTING                            |         |          | PASSES        |
| HVAC SYSTEM                                  |         |          | PASSES        |
| PLANT                                        |         |          | No Entry      |
| WATER HEATING SYSTEMS                        |         |          | PASSES        |
| PIPING SYSTEMS                               |         |          | PASSES        |
| Met all required compliance from Check List? |         |          | Yes/No/NA     |

**IMPORTANT MESSAGE**  
Info 5009 -- -- -- An input report of this design building must be submitted along with this Compliance Report

## CERTIFICATIONS

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

Prepared By: NICHOLAS GEISLER

Building Official: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

I certify that this building is in compliance with the Florida Energy Efficiency Code

Owner Agent: \_\_\_\_\_

Date: \_\_\_\_\_

If Required by Florida law, I hereby certify (\*) that the system design is in compliance with the Florida Energy Efficiency Code

Architect: NICHOLAS GEISLER

Reg No: \_\_\_\_\_

Electrical Designer: \_\_\_\_\_

Reg No: \_\_\_\_\_

Lighting Designer: \_\_\_\_\_

Reg No: \_\_\_\_\_

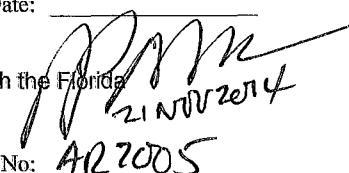
Mechanical Designer: \_\_\_\_\_

Reg No: \_\_\_\_\_

Plumbing Designer: \_\_\_\_\_

Reg No: \_\_\_\_\_

(\*) Signature is required where Florida Law requires design to be performed by registered design professionals

  
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A27005

**Project: New Prj**  
**Title: LULU BAPTIST CHURCH**  
**Type: Religious Building**  
**(WEA File: FL JACKSONVILLE INTL ARPT.tm3)**

**Building End Uses**

|                          | 1) Proposed    | 2) Baseline     |
|--------------------------|----------------|-----------------|
| <b>Total</b>             | <b>510.70</b>  | <b>674.10</b>   |
|                          | <b>\$8,231</b> | <b>\$10,901</b> |
| ELECTRICITY(MBtu/kWh/\$) | 510.70         | 674.10          |
|                          | 149652         | 197478          |
|                          | <b>\$8,231</b> | <b>\$10,901</b> |
| AREA LIGHTS              | 57.00          | 117.20          |
|                          | 16706          | 34333           |
|                          | <b>\$919</b>   | <b>\$1,895</b>  |
| MISC EQUIPMNT            | 37.40          | 37.40           |
|                          | 10966          | 10966           |
|                          | <b>\$603</b>   | <b>\$605</b>    |
| PUMPS & MISC             | 0.20           | 0.30            |
|                          | 73             | 78              |
|                          | <b>\$4</b>     | <b>\$4</b>      |
| SPACE COOL               | 187.90         | 306.30          |
|                          | 55067          | 89733           |
|                          | <b>\$3,029</b> | <b>\$4,953</b>  |
| SPACE HEAT               | 36.50          | 45.30           |
|                          | 10683          | 13275           |
|                          | <b>\$588</b>   | <b>\$733</b>    |
| VENT FANS                | 191.70         | 167.60          |
|                          | 56157          | 49093           |
|                          | <b>\$3,089</b> | <b>\$2,710</b>  |

**Credits Applied: None**

**PASSES**

**Passing Criteria = 8721**

**Design (including any credits) = 8231**

**Passing requires Proposed Building cost to be at most 80% of  
Baseline cost. This Proposed Building is at 75.5%**

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#### External Lighting Compliance

| Description                                                    | Category     | Tradable? | Allowance<br>(W/Unit) | Area or Length<br>or No. of Units<br>(Sqft or ft) | ELPA<br>(W) | CLP<br>(W) |
|----------------------------------------------------------------|--------------|-----------|-----------------------|---------------------------------------------------|-------------|------------|
| Ext Light 1                                                    | Main entries | Yes       | 30.00                 | 24.0                                              | 720         | 104        |
| Tradable Surfaces: 104 (W) Allowance for Tradable: 1470 (W)    |              |           |                       |                                                   |             | PASSES     |
| All External Lighting: 104 (W)                                 |              |           |                       |                                                   |             |            |
| Compliance check includes a excess/Base allowance of 750.00(W) |              |           |                       |                                                   |             |            |

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#### Lighting Controls Compliance

| Acronym   | Ashrae<br>ID | Description            | Area<br>(sq.ft) | Design<br>CP | Min<br>CP | Compli-<br>ance |
|-----------|--------------|------------------------|-----------------|--------------|-----------|-----------------|
| Pr0Zo1Sp1 | 14           | Classroom/Lecture Hall | 1,221           | 6            | 1         | PASSES          |
| Pr0Zo1Sp2 | 24,001       | Worship-Pulpit, Choir  | 3,309           | 8            | 2         | PASSES          |
| Pr0Zo2Sp1 | 24,002       | Fellowship Hall        | 822             | 9            | 1         | PASSES          |
| Pr0Zo2Sp2 | 24,002       | Fellowship Hall        | 911             | 1            | 1         | PASSES          |
|           |              |                        |                 |              |           | PASSES          |

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### System Report Compliance

| Pr0Sy1                        | System 1                                                                                  | Constant Volume Air Cooled<br>Split System < 65000 Btu/hr |            |              |             | No. of Units  |            |
|-------------------------------|-------------------------------------------------------------------------------------------|-----------------------------------------------------------|------------|--------------|-------------|---------------|------------|
| Component                     | Category                                                                                  | Capacity                                                  | Design Eff | Eff Criteria | Design IPLV | IPLV Criteria | Compliance |
| Cooling System                | Air Conditioners Air Cooled<br>Split System < 65000 Btu/h<br>Cooling Capacity             | 60000                                                     | 14.00      | 12.23        | 8.00        |               | PASSES     |
| Heating System                | Heat Pumps Air Cooled<br>(Heating Mode) Split System<br>< 65000 Btu/h Cooling<br>Capacity | 60000                                                     | 8.20       | 7.70         |             |               | PASSES     |
| Air Handling System -Supply   | Air Handler (Supply) -<br>Constant Volume                                                 | 2000                                                      | 0.80       | 0.82         |             |               | PASSES     |
| Air Handling System - Return  | Air Handler (Return) -<br>Constant Volume                                                 | 2000                                                      | 0.80       | 0.82         |             |               | PASSES     |
| Air Distribution System (Sup) | ADS System (Sup)                                                                          |                                                           | 6.00       |              |             |               | PASSES     |
| Air Distribution System (Ret) | ADS System (Ret)                                                                          |                                                           | 6.00       |              |             |               | PASSES     |
| Pr0Sy2                        | System 2                                                                                  | Constant Volume Air Cooled<br>Split System < 65000 Btu/hr |            |              |             | No. of Units  |            |
| Component                     | Category                                                                                  | Capacity                                                  | Design Eff | Eff Criteria | Design IPLV | IPLV Criteria | Compliance |
| Cooling System                | Air Conditioners Air Cooled<br>Split System < 65000 Btu/h<br>Cooling Capacity             | 60000                                                     | 14.00      | 12.23        | 8.00        |               | PASSES     |
| Heating System                | Heat Pumps Air Cooled<br>(Heating Mode) Split System<br>< 65000 Btu/h Cooling<br>Capacity | 60000                                                     | 8.20       | 7.70         |             |               | PASSES     |
| Air Handling System -Supply   | Air Handler (Supply) -<br>Constant Volume                                                 | 2000                                                      | 0.80       | 0.82         |             |               | PASSES     |
| Air Handling System - Return  | Air Handler (Return) -<br>Constant Volume                                                 | 2000                                                      | 0.80       | 0.82         |             |               | PASSES     |
| Air Distribution System (Sup) | ADS System (Sup)                                                                          |                                                           | 6.00       |              |             |               | PASSES     |
| Air Distribution System (Ret) | ADS System (Ret)                                                                          |                                                           | 6.00       |              |             |               | PASSES     |
| PASSES                        |                                                                                           |                                                           |            |              |             |               |            |

| Plant Compliance |              |          |            |         |             |          |          |            |
|------------------|--------------|----------|------------|---------|-------------|----------|----------|------------|
| Description      | Installed No | Size Eff | Design Eff | Min Eff | Design IPLV | Min IPLV | Category | Compliance |
|                  |              |          |            |         |             |          |          | None       |

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|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|------------|--------------------|---------------------------|----------------|--------------------|------------|--|
| <b>Water Heater Compliance</b>                                                                                                                      |                       |            |                    |                           |                |                    |            |  |
| Description                                                                                                                                         | Type                  | Category   | Design Eff         | Min Eff                   | Design Loss    | Max Loss           | Compliance |  |
| Water Heater 1                                                                                                                                      | Electric water heater | <= 12 [kW] | 0.92               | 0.86                      |                |                    | PASSES     |  |
| PASSES                                                                                                                                              |                       |            |                    |                           |                |                    |            |  |
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| <b>Piping System Compliance</b>                                                                                                                     |                       |            |                    |                           |                |                    |            |  |
| Category                                                                                                                                            | Pipe Dia [inches]     | Is Runout? | Operating Temp [F] | Ins Cond [Btu-in/hr SF.F] | Ins Thick [in] | Req Ins Thick [in] | Compliance |  |
| Domestic and Service Hot Water Systems                                                                                                              | 0.75                  | False      | 125.00             | 0.28                      | 0.62           | 0.50               | PASSES     |  |
| PASSES                                                                                                                                              |                       |            |                    |                           |                |                    |            |  |

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### Other Required Compliance

| Category               | Section                             | Requirement (write N/A in box if not applicable)                                                                                                                                                    | Check                    |
|------------------------|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| Report                 | 506 4 2                             | Input Report Print-Out from EnergyGauge FlaCom attached                                                                                                                                             | <input type="checkbox"/> |
| Operations Manual      | 303.3.1,<br>503 2 9.3,<br>505 7 4 2 | Operations manual provided to owner                                                                                                                                                                 | <input type="checkbox"/> |
| Windows & Doors        | 502 3 2                             | Glazed swinging entrance & revolving doors: max. 1.0 cfm/ft <sup>2</sup> , all other products: 0.3 cfm/ft <sup>2</sup>                                                                              | <input type="checkbox"/> |
| Joints/Cracks          | 502 3 3                             | to be caulked, gasketed, weather-stripped or otherwise sealed                                                                                                                                       | <input type="checkbox"/> |
| Dropped Ceiling Cavity | 502 3                               | Vented seal & insulated ceiling. Unvented seal & insulate roof & side walls                                                                                                                         | <input type="checkbox"/> |
| HVAC Efficiency        | 503 2 3                             | Minimum efficiencies Tables 503.2 3(1)-(8)                                                                                                                                                          | <input type="checkbox"/> |
| HVAC Controls          | 503 2 4                             | Zone controls prevent reheat (exceptions), separate thermostatic control per zone,                                                                                                                  | <input type="checkbox"/> |
| Ventilation            | 503 2 5                             | Outdoor air supply & exhaust ducts shall have dampers that automatically shut when systems or spaces served are not in use<br>Exhaust air energy recovery required for cooling systems (Exceptions) | <input type="checkbox"/> |
| ADS                    | 503 2 7 5                           | Duct sizing and Design have been performed                                                                                                                                                          | <input type="checkbox"/> |
| HVAC Ducts             | 503 2 7                             | Air ducts, fittings, mechanical equipment & plenum chambers shall be mechanically attached, sealed, insulated & installed per Table 503 2 7 2 Fan power limitations                                 | <input type="checkbox"/> |
| Balancing              | 503 2 9 1                           | HVAC distribution system(s) tested & balanced Report in construction documents                                                                                                                      | <input type="checkbox"/> |
| Piping Insulation      | 503 2 8                             | HAC and service hot water In accordance with Table 503 2.8                                                                                                                                          | <input type="checkbox"/> |
| Water Heaters          | 504                                 | Performance requirements in accordance with Table 504 2 Heat trap required                                                                                                                          | <input type="checkbox"/> |
| Swimming Pools         | 504 7                               | Vapor-retardant or liquid cover or other means proven to reduce heat loss on heated pools, Time switch (exceptions), readily accessible on/off switch                                               | <input type="checkbox"/> |
| Motors                 | 505 7 5                             | Motor efficiency criteria have been met                                                                                                                                                             | <input type="checkbox"/> |
| Lighting Controls      | 505 2, 502.3                        | Automatic control required for interior lighting in buildings >5,000 s f., Space control, Exterior photo sensor, Tandom wiring with 1 or 3 linear fluorescent lamps>30W                             | <input type="checkbox"/> |