



COMcheck Software Version 3.9.3
Interior Lighting and Power
Compliance Certificate

90.1 (2007) Standard

Section 1: Project Information

Project Type: **New Construction**
 Project Title : Christ Episcopal School

Construction Site:
 80 Christwood Blvd
 Covington, LA 70433

Owner/Agent:
 Don Mcmath
 Mcmath Construction
 Mandeville, LA 70458
 Don@Mcmathconstruction.com

Designer/Contractor:
 Chuck Dammon
 Dammon Engineering
 554 Old Spanish Trail
 Slidell, LA 70458
 985-649-5832
 dammoneng@bellsouth.net

Section 2: Interior Lighting and Power Calculation

| A | B Floor Area | C Allowed Watts / ft2 | D Allowed Watts |
|-------------------------------|-----------------|-----------------------------|--------------------|
| Classroom (School/University) | 12407 | 1.2 | 14888 |
| Total Allowed Watts = | | | 14888 |

Section 3: Interior Lighting Fixture Schedule

| A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast | B Lamps/ Fixture | C # of Fixtures | D Fixture Watt. | E (C X D) |
|---|------------------------|-----------------------|-----------------------|--------------|
| Classroom (School/University 12407 sq.ft.) | | | | |
| LED 1: LED A Lamp 25W: | 1 | 104 | 23 | 2392 |
| Total Proposed Watts = | | | | 2392 |

Interior Lighting PASSES: Design 84% better than code.

Section 4: Compliance Statement

Compliance Statement: The proposed lighting design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed lighting system has been designed to meet the 90.1 (2007) Standard requirements in COMcheck Version 3.9.3 and to comply with the mandatory requirements in the Requirements Checklist.


 Name - Title _____ Signature _____ Date 5-16-19

Section 5: Post Construction Compliance Statement

Record Drawings and Operating and Maintenance Manuals:

- 1. Construction documents with record drawings and operating and maintenance manuals provided to the owner.

Lighting Designer or Contractor Name _____ Signature _____ Date _____

Project Notes:
 Owner



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Exterior Lighting Compliance
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Section 2: Exterior Lighting Area/Surface Power Calculation

| A Exterior Area/Surface | B Quantity | C Allowed Watts / Unit | D Tradable Wattage | E Allowed Watts (B x C) | F Proposed Watts |
|----------------------------|--------------------|---------------------------------|--------------------------|--------------------------------------|------------------------|
| entry (Main entry/exit) | 3 ft of door width | 30 | Yes | 90 | 90 |
| | | | | Total Tradable Watts* = | 90 |
| | | | | Total Allowed Watts = | 90 |
| | | | | Total Allowed Supplemental Watts** = | 5 |

* Wattage tradeoffs are only allowed between tradable areas/surfaces.

** A supplemental allowance equal to 5% of total allowed wattage may be applied toward compliance of both non-tradable and tradable areas/surfaces.

Section 3: Exterior Lighting Fixture Schedule

| A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast | B Lamps/ Fixture | C # of Fixtures | D Fixture Watt. | E (C X D) | |
|---|------------------------|-----------------------|-----------------------|---------------------------------|----|
| entry (Main entry/exit 3 ft of door width): Tradable Wattage | | | | | |
| Incandescent 1: Incandescent 75W: | 1 | 3 | 30 | 90 | |
| | | | | Total Tradable Proposed Watts = | 90 |

Section 4: Compliance Statement

Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed lighting system has been designed to meet the 90.1 (2007) Standard requirements in COMcheck Version 3.9.3 and to comply with the mandatory requirements in the Requirements Checklist.

Chuck Dammon
 Name - Title

Chuck Dammon
 Signature

5-16-19
 Date



Mechanical Compliance Certificate

90.1 (2007) Standard

Section 1: Project Information

Project Type: **New Construction**
Project Title : Christ Episcopal School

Construction Site:
80 Christwood Blvd
Covington, LA 70433

Owner/Agent:
Don Mcmath
Mcmath Construction
Mandeville, LA 70458
Don@Mcmathconstruction.com

Designer/Contractor:
Chuck Dammon
Dammon Engineering
554 Old Spanish Trail
Slidell, LA 70458
985-649-5832
dammoneng@bellsouth.net

Section 2: General Information

Building Location (for weather data): **Covington, Louisiana**
Climate Zone: **2a**




Section 3: Mechanical Systems List

Quantity **System Type & Description**

- 5 HVAC System 1 (Single Zone) :
Cooling: 5 each - Split System, Capacity = 10 kBtu/h, Air-Cooled Condenser
Proposed Efficiency = 19.00 SEER, Required Efficiency = 13.00 SEER
Fan System: Unspecified

Section 5: Compliance Statement

Compliance Statement: The proposed mechanical design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 90.1 (2007) Standard requirements in COMcheck Version 3.9.3 and to comply with the mandatory requirements in the Requirements Checklist.

Name - Title _____ Signature _____ Date _____

Section 6: Post Construction Compliance Statement

- HVAC record drawings of the actual installation and performance data for each equipment provided to the owner within 90 days after system acceptance.
- HVAC O&M documents for all mechanical equipment and system provided to the owner within 90 days after system acceptance.
- Written HVAC balancing report provided to the owner.

The above post construction requirements have been completed.

Principal Mechanical Designer-Name _____ Signature _____ Date _____



COMcheck Software Version 3.9.3

Inspection Checklist

Energy Code: 90.1 (2007) Standard

Requirements: 0.0% were addressed directly in the COMcheck software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

| | | | | | |
|---|----------------------|---|------------------------|---|---------------------|
| 1 | High Impact (Tier 1) | 2 | Medium Impact (Tier 2) | 3 | Low Impact (Tier 3) |
|---|----------------------|---|------------------------|---|---------------------|

| 90.1 (2007) Standard | Plan Review | Complies? | Comments/Assumptions |
|---|--|--|----------------------|
| 4.2.2, 6.4.2 [PR2] ¹ | Plans, specifications, and/or calculations provide all information with which compliance can be determined for the mechanical systems and equipment and document where exceptions to the standard are claimed. Load calculations per acceptable engineering standards and handbooks. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| 4.2.2, 7.4.1 [PR3] ¹ | Plans, specifications, and/or calculations provide all information with which compliance can be determined for the service water heating systems and equipment and document where exceptions to the standard are claimed. Hot water system sized per manufacturer's sizing guide. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| 4.2.2 [PR4] ¹ | Plans, specifications, and/or calculations provide all information with which compliance can be determined for the lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| 6.7.2.4 [PR5] ¹ | Detailed instructions for HVAC systems commissioning included on the plans or specifications for projects >=50,000 ft ² . | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| 8.4.1.1, 8.4.1.2 [PR6] ² | Plans, specifications, and/or calculations provide all information with which compliance can be determined for the electrical systems and equipment and document where exceptions are claimed. Feeder connectors sized in accordance with approved plans and branch circuits sized for maximum drop of 3%. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |

Additional Comments/Assumptions:

| | | |
|------------------------|--------------------------|-----------------------|
| 1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3) |
|------------------------|--------------------------|-----------------------|

| Section # & Req.ID | Footing / Foundation Inspection | Plans Verified Value | Field Verified Value | Complies? | Comments/Assumptions |
|----------------------------|--|----------------------|----------------------|--|----------------------|
| 6.4.3.8 [FO9] ³ | Freeze protection and snow/ice melting system sensors for future connection to controls. | | | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |

Additional Comments/Assumptions:

| | | | | | |
|---|----------------------|---|------------------------|---|---------------------|
| 1 | High Impact (Tier 1) | 2 | Medium Impact (Tier 2) | 3 | Low Impact (Tier 3) |
|---|----------------------|---|------------------------|---|---------------------|

| Section # & Req.ID | Mechanical Rough-In Inspection | Plans Verified Value | Field Verified Value | Complies? | Comments/Assumptions |
|-------------------------------------|--|----------------------|----------------------|--|---|
| 6.4.1.4, 6.4.1.5 [ME1] ² | HVAC equipment efficiency verified. Non-NAECA HVAC equipment labeled as meeting 90.1. | Efficiency: ____ | Efficiency: ____ | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | See the Mechanical Systems list for values. |
| 6.4.3.4.1 [ME3] ³ | Stair and elevator shaft vents have motorized dampers that automatically close. | | | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| 6.4.3.4.5 [ME5] ³ | Ventilation fans >0.75 hp have automatic controls to shut off fan when not required. | | | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| 6.4.3.9 [ME6] ¹ | Demand control ventilation provided for spaces >500 ft ² and >40 people/1000 ft ² occupant density and served by systems with air side economizer, auto modulating outside air damper control, or design airflow >3,000 cfm. | | | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| 6.4.4.1.1 [ME7] ³ | Insulation exposed to weather protected from damage. Insulation outside of the conditioned space and associated with cooling systems is vapor retardant. | | | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| 6.4.4.1.2 [ME8] ² | HVAC ducts and plenums insulated. | R- ____ | R- ____ | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| 6.4.4.1.3 [ME9] ² | HVAC piping insulation thickness. | ____ in. | ____ in. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| 6.4.4.2.1 [ME10] ² | Ducts and plenums sealed based on static pressure and location. | | | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| 6.4.4.2.2 [ME11] ³ | Ductwork operating >3 in. water column requires air leakage testing. | | | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | See the Mechanical Systems list for values for HVAC System 1. |
| 6.5.2.3 [ME19] ³ | Dehumidification controls provided to prevent reheating, recooling, mixing of hot and cold airstreams or concurrent heating and cooling of the same airstream. | | | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| 6.5.4.1 [ME25] ³ | HVAC pumping systems >10 hp designed for variable fluid flow. | | | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| 6.5.6.1 [ME30] ¹ | Exhaust air energy recovery on systems >=5,000 cfm and 70% of design supply air. | | | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

| Section # & Req.ID | Mechanical Rough-In Inspection | Plans Verified Value | Field Verified Value | Complies? | Comments/Assumptions |
|-----------------------------|--|----------------------|----------------------|--|---|
| 6.5.7.1 [ME32] ² | Kitchen hoods >5,000 cfm have make up air >=50% of exhaust air volume. | | | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| 6.5.7.2 [ME33] ¹ | Fume hoods exhaust systems >=15,000 cfm have VAV hood exhaust and supply systems, direct make-up air or heat recovery. | | | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| 6.5.8.1 [ME34] ³ | Unenclosed spaces that are heated use only radiant heat. | | | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| 6.5.9 [ME35] ¹ | Hot gas bypass limited to: <=240 kBtu/h - 50% >240 kBtu/h - 25% | | | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | See the Mechanical Systems list for values for HVAC System 1. |

Additional Comments/Assumptions:

| | | | | | |
|---|----------------------|---|------------------------|---|---------------------|
| 1 | High Impact (Tier 1) | 2 | Medium Impact (Tier 2) | 3 | Low Impact (Tier 3) |
|---|----------------------|---|------------------------|---|---------------------|

| 90.1 (2007) Standard | Rough-In Electrical Inspection | Complies? | Comments/Assumptions |
|-------------------------------|---|--|----------------------|
| 9.4.1.1 [EL1] ² | Automatic controls to shut off all building lighting installed in buildings >5,000 ft ² . | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| 9.4.1.2 [EL2] ² | Independent lighting controls installed per approved lighting plans and all manual controls readily accessible and visible to occupants. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| 9.4.1.3 [EL3] ² | Automatic lighting controls for exterior lighting installed. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| 9.4.1.4 [EL4] ¹ | Separate lighting control devices for specific uses installed per approved lighting plans. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| 9.4.2 [EL5] ³ | Ballasted one and three lamp fixtures with >30 W/lamp have two lamp tandem wired ballasts when >=2 fixtures in same space on same control. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| 9.4.3 [EL6] ¹ | Exit signs do not exceed 5 watts per face. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| 9.4.4 [EL7] ¹ | Exterior grounds lighting over 100 W provides >60 lm/W unless on motion sensor or fixture is exempt from scope of code or from external LPD. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| 9.6.2 [EL8] ¹ | Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| 10.4.1 [EL9] ² | Electric motors meet requirements where applicable. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |

Additional Comments/Assumptions:

| | | |
|------------------------|--------------------------|-----------------------|
| 1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3) |
|------------------------|--------------------------|-----------------------|

| 90.1 (2007) Standard | Final Inspection | Complies? | Comments/Assumptions |
|---|---|--|---|
| 6.4.3.1.1 [FI2] ² | Heating and cooling to each zone is controlled by a thermostat control. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| 6.4.3.1.2, 6.4.3.2, 6.4.3.3, 6.4.3.3.1, 6.4.3.3.2 [FI3] ² | Thermostatic controls have a 5 °F deadband. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| 6.4.3.7 [FI6] ³ | When humidification and dehumidification are provided to a zone, simultaneous operation is prohibited. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| 6.7.2.1 [FI7] ³ | Furnished HVAC as-built drawings submitted within 90 days of system acceptance. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| 6.7.2.2 [FI8] ³ | Furnished O&M manuals for HVAC systems within 90 days of system acceptance. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| 6.7.2.3 [FI9] ¹ | An air and/or hydronic system balancing report is provided for HVAC systems serving zones >5,000 ft ² of conditioned area. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| 6.7.2.4 [FI10] ¹ | HVAC control systems have been tested to ensure proper operation, calibration and adjustment of controls. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| 8.7.1 [FI16] ³ | Furnished as-built drawings for electric power systems within 30 days of system acceptance. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| 8.7.2 [FI17] ³ | Furnished O&M instructions for systems and equipment to the building owner or designated representative. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| 9.2.2.3 [FI18] ¹ | Interior installed lamp and fixture lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | <i>See the Interior Lighting fixture schedule for values.</i> |
| 9.4.5 [FI19] ¹ | Exterior lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | <i>See the Exterior Lighting fixture schedule for values.</i> |
| 6.4.3.2 [FI20] ¹ | Temperature controls have setpoint overlap restrictions. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

| 90.1 (2007) Standard | Final Inspection | Complies? | Comments/Assumptions |
|----------------------------------|---|--|----------------------|
| 6.4.3.3.1 [FI21] ¹ | HVAC systems equipped with at least one automatic shutdown control. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |
| 6.4.3.3.2 [FI22] ¹ | Setback controls allow automatic restart and temporary operation as required for maintenance. | <input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable | |

Additional Comments/Assumptions:

| | | | | | |
|---|----------------------|---|------------------------|---|---------------------|
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|---|----------------------|---|------------------------|---|---------------------|