



COMcheck Software Version 3.9.3

Envelope Compliance Certificate

90.1 (2007) Standard

Section 1: Project Information

Project Type: **New Construction**

Project Title : McDonald's Restaurant (#041-1135)

Construction Site:
Winchester & Malco Way
Memphis, TN

Owner/Agent:

Designer/Contractor:
CORESTATES GROUP
3401 Centerlake Drive
Suite #330
Ontario, CA 91761

Section 2: General Information

Building Location (for weather data): **Memphis, Tennessee**
Climate Zone: **3a**
Building Space Conditioning Type(s): **Nonresidential**
Vertical Glazing / Wall Area Pct.: **14%**

Building Type

Dining: Cafeteria/Fast Food

Floor Area

5207

Section 3: Envelope Assemblies

Envelope PASSES Design 7% better than code

Climate-Specific Requirements:

Component Name/Description	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor ^(a)
Orientation: NORTH					
Front: Concrete Block:8", Partially Grouted, Cells Insulated,Normal Density , Furring: Metal	620	0.0	7.6	0.089	0.123
Arcade Window: Metal Frame with Thermal Break, Perf. Type: Other testing/cert. Product ID: N/A, SHGC 0.25, PF 0.59 (b)	206	---	---	0.600	0.650
Entry Sidelight: Metal Frame with Thermal Break:Double Pane, Perf. Type: Other testing/cert. Product ID: N/A, SHGC 0.25, PF 0.38 (b)	17	---	---	0.600	0.650
Entry Door: Glass (> 50% glazing):Metal Frame, Perf. Type: Other testing/cert. Product ID: N/A, SHGC 0.25, PF 0.38 (b)	25	---	---	0.900	0.900
Orientation: EAST					
DT: Concrete Block:8", Partially Grouted, Cells Insulated,Normal Density , Furring: Metal	1559	0.0	7.6	0.089	0.123
DT Window: Metal Frame with Thermal Break, Double Pane, Perf. Type: Other testing/cert. Product ID: N/A, SHGC 1.10, PF 0.52 (b)	20	---	---	0.600	0.650
DT Window: Metal Frame with Thermal Break, Double Pane, Perf. Type: Other testing/cert. Product ID: N/A, SHGC 0.25, PF 0.52 (b)	20	---	---	0.600	0.650
DT Window: Metal Frame with Thermal Break, Double Pane, Perf. Type: Other testing/cert. Product ID: N/A, SHGC 0.25, PF 0.52 (b)	20	---	---	0.600	0.650
Vestibule Window: Metal Frame with Thermal Break, Double Pane, Perf. Type: Other testing/cert. Product ID: N/A, SHGC 0.25, PF 0.67 (b)	40	---	---	0.600	0.650

Orientation: SOUTH

Rear: Concrete Block:8", Partially Grouted, Cells Insulated,Normal Density , Furring: Metal	620	0.0	7.6	0.089	0.123
Crew Window: Metal Frame with Thermal Break:Double Pane, Perf. Type: Other testing/cert. Product ID: N/A, SHGC 0.25 (b)	12	---	---	0.600	0.650
Rear Door: Uninsulated Single-Layer Metal, Swinging	25	---	---	1.100	0.700

Orientation: WEST

Non-DT: Concrete Block:8", Partially Grouted, Cells Insulated,Normal Density , Furring: Metal	1559	0.0	7.6	0.089	0.123
Arcade Window: Metal Frame with Thermal Break, Double Pane, Perf. Type: Other testing/cert. Product ID: N/A, SHGC 0.25, PF 0.72 (b)	48	---	---	0.600	0.650
Ribbon Window: Metal Frame with Thermal Break, Double Pane, Perf. Type: Other testing/cert. Product ID: N/A, SHGC 0.25, PF 0.67 (b)	64	---	---	0.600	0.650
Ribbon Window: Metal Frame with Thermal Break, Double Pane, Perf. Type: Other testing/cert. Product ID: N/A, SHGC 0.25, PF 0.67 (b)	64	---	---	0.600	0.650
Entry Sidelight: Metal Frame with Thermal Break, Double Pane, Perf. Type: Other testing/cert. Product ID: N/A, SHGC 0.25, PF 0.46 (b)	51	---	---	0.600	0.650
Entry Door: Glass (> 50% glazing):Metal Frame, Perf. Type: Other testing/cert. Product ID: N/A, SHGC 0.25, PF 0.46 (b)	25	---	---	0.900	0.900
Delivery Door: Uninsulated Single-Layer Metal, Swinging	32	---	---	0.700	0.700
Cooler Door: Uninsulated Single-Layer Metal, Swinging	32	---	---	0.700	0.700

Orientation: UNSPECIFIED ORIENTATION

Main Roof: Insulation Entirely Above Deck	5265	---	25.0	0.039	0.048
Floor: Slab-On-Grade:Unheated	339	---	---	---	---

(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.

(b) Fenestrations product performance must be certified in accordance with NFRC and requires supporting documentation.

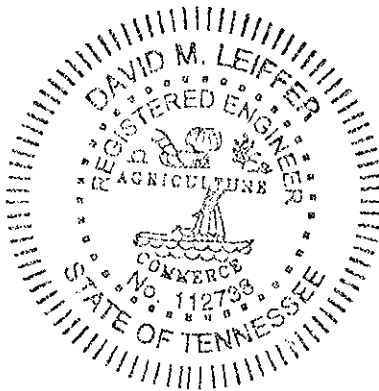
Section 4: Compliance Statement

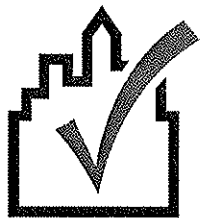
Compliance Statement: The proposed envelope design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed envelope system has been designed to meet the 90.1 (2007) Standard requirements in COMcheck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

David Leiffer P.E.
Name - Title

[Signature]
Signature

2-21-14
Date





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 : McDonald's Restaurant (#041-1135)

Construction Site:
Winchester & Malco Way
Memphis, TN

Owner/Agent:

Designer/Contractor:
CORESTATES GROUP
3401 Centerlake Drive
Suite #330
Ontario, CA 91761

Section 2: Interior Lighting and Power Calculation

A	B Floor Area	C Allowed Watts / ft2	D Allowed Watts
Dining: Cafeteria/Fast Food	5207	1.4	7290
Total Allowed Watts =			7290

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)
Dining: Cafeteria/Fast Food (5207 sq.ft.)				
Linear Fluorescent 2: F7: 1x4 Grid Fluorescent: 48" T8 32W: Electronic:	2	2	50	100
Linear Fluorescent 1: F2: 2x4 Grid Fluorescent: 48" T8 32W: Electronic:	3	31	74	2294
LED 1: F10: LED DOWNLIGHT: Other:	2	3	24	72
LED-3: F12/F12A/F12B: 6" LED DOWNLIGHT: Other:	1	76	13	988
Linear Fluorescent 3: F14: Pendant: Other: Electronic:	1	1	45	45
Compact Fluorescent 2: F14A: Compact Fluor. Pendant: Spiral 13W: Electronic:	2	4	30	120
Compact Fluorescent 2 copy 1: F14B: Compact Fluor. Pendant: Quad 4-pin 42W: Electronic:	2	2	50	100
Total Proposed Watts =				3719

Interior Lighting PASSES Design 49% 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.

John Ferguson P.E.
Name - Title

[Signature]
Signature

2-21-14
Date

Section 5: Post Construction Compliance Statement

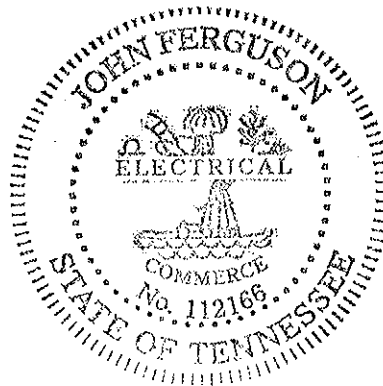
Record Drawings and Operating and Maintenance Manuals:

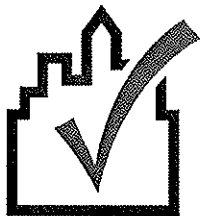
- ☐ 1. Construction documents with record drawings and operating and maintenance manuals provided to the owner.

Lighting Designer or Contractor Name

Signature

Date





COMcheck Software Version 3.9.3

Mechanical Compliance Certificate

90.1 (2007) Standard

Section 1: Project Information

Project Type: **New Construction**

Project Title : McDonald's Restaurant (#041-1135)

Construction Site:
Winchester & Malco Way
Memphis, TN

Owner/Agent:

Designer/Contractor:
CORESTATES GROUP
3401 Centerlake Drive
Suite #330
Ontario, CA 91761

Section 2: General Information

Building Location (for weather data):
Climate Zone:

Memphis, Tennessee
3a

Section 3: Mechanical Systems List

Quantity System Type & Description

- | | |
|---|--|
| 1 | HVAC System 1 (RTU-1) (Single Zone) :
Heating: 1 each - Other, Electric, Capacity = 205 kBtu/h
No minimum efficiency requirement applies
Cooling: 1 each - Single Package DX Unit, Capacity = 244 kBtu/h, Air-Cooled Condenser
Proposed Efficiency = 12.00 EER, Required Efficiency = 10.00 EER
Fan System: FAN SYSTEM 1 Kitchen -- Compliance (Motor nameplate HP method) : Passes

Fans:
FAN 1 Supply, Constant Volume, 7000 CFM, 7.5 motor nameplate hp |
| 1 | HVAC System 2 (RTU-2) (Single Zone) :
Heating: 1 each - Other, Electric, Capacity = 51 kBtu/h
No minimum efficiency requirement applies
Cooling: 1 each - Single Package DX Unit, Capacity = 52 kBtu/h, Air-Cooled Condenser
Proposed Efficiency = 17.60 SEER, Required Efficiency = 13.00 SEER
Fan System: FAN SYSTEM 2 Support -- Compliance (Motor nameplate HP method) : Passes

Fans:
FAN 2 Supply, Constant Volume, 1600 CFM, 0.8 motor nameplate hp |
| 1 | HVAC System 3 (RTU-3) (Single Zone) :
Heating: 1 each - Other, Electric, Capacity = 205 kBtu/h
No minimum efficiency requirement applies
Cooling: 1 each - Single Package DX Unit, Capacity = 179 kBtu/h, Air-Cooled Condenser
Proposed Efficiency = 12.00 EER, Required Efficiency = 11.00 EER
Fan System: FAN SYSTEM 3 Dining -- Compliance (Motor nameplate HP method) : Passes

Fans:
FAN 3 Supply, Constant Volume, 4800 CFM, 3.0 motor nameplate hp |
| 1 | HVAC System 4 (RTU-4) (Single Zone) :
Heating: 1 each - Other, Electric, Capacity = 51 kBtu/h
No minimum efficiency requirement applies
Cooling: 1 each - Single Package DX Unit, Capacity = 51 kBtu/h, Air-Cooled Condenser
Proposed Efficiency = 17.60 SEER, Required Efficiency = 13.00 SEER
Fan System: FAN SYSTEM 3 Dining -- Compliance (Motor nameplate HP method) : Passes

Fans: |

FAN 3 Supply, Constant Volume, 4800 CFM, 3.0 motor nameplate hp

- 1 Water Heater 1:
Electric Storage Water Heater, Capacity: 100 gallons w/ Circulation Pump
Proposed Efficiency: 98.00 EF, Required Efficiency: 0.80 EF

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.

David Leiffer P.E.  2/21/14
Name - Title Signature Date

Section 6: Post Construction Compliance Statement

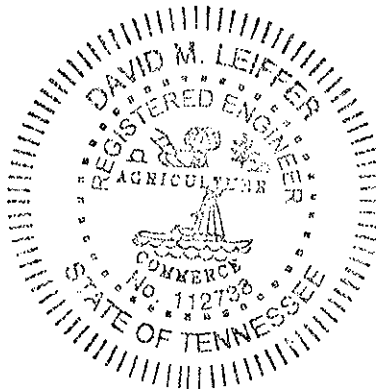
- ☐ HVAC record drawings of the actual installation and performance data for each equipment provided to the owner within 90 days after system acceptance.
☐ HVAC O&M documents for all mechanical equipment and system provided to the owner within 90 days after system acceptance.
☐ Written HVAC balancing 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: 100.0% 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)
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90.1 (2007) Standard	Plan Review	Complies?	Comments/Assumptions
4.2.2 [PR1] ¹	Plans and/or specifications provide all information with which compliance can be determined for the building envelope and document where exceptions to the standard are claimed.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. Location on plans/spec: Drawings & Specifications
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	Requirement will be met.
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	Requirement will be met.
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	Requirement will be met. Location on plans/spec: E2.0, E2.1, E4.1
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	Exception: Requirement does not apply.
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	Requirement will be met. Location on plans/spec: E2.0, E2.1, E4.1

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
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Section # & Req.ID	Footing / Foundation Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
5.5.3.3 [FO1] ¹	Below-grade wall insulation R-value.	R-_____	R-_____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
5.5.3.5 [FO3] ¹	Slab edge insulation R-value.	R-_____ <input type="checkbox"/> Unheated <input type="checkbox"/> Heated	R-_____ <input type="checkbox"/> Unheated <input type="checkbox"/> Heated	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
5.8.1.2 [FO4] ¹	Slab edge insulation installed per manufacturer's instructions.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. Location on plans/spec: Not Applicable
5.5.3.5 [FO5] ¹	Slab edge insulation depth/length.	_____ ft	_____ ft	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
5.8.1.7.3 [FO7] ¹	Insulation in contact with the ground has $\leq 0.3\%$ water absorption rate per ASTM C272.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. Location on plans/spec: Not Applicable
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	Requirement will be met.

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
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Section # & Req.ID	Framing / Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
5.4.3.2 [FR1] ³	Factory-built fenestration and doors are labeled as meeting air leakage requirements.	Fenestration _____ cfm/ft ² Doors _____ cfm/ft ²	Fenestration _____ cfm/ft ² Doors _____ cfm/ft ²	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
5.5.4.3a [FR8] ¹	Vertical fenestration U-Factor.	U- _____	U- _____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
5.5.4.3b [FR9] ¹	Skylight fenestration U-Factor.	U- _____	U- _____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
5.5.4.4.1 [FR10] ¹	Vertical fenestration SHGC value.	SHGC: _____	SHGC: _____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
5.5.4.4.2 [FR11] ¹	Skylight SHGC value.	SHGC: _____	SHGC: _____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
5.8.2.1, 5.8.2.4 [FR12] ²	Fenestration products rated in accordance with NFRC.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. Location on plans/spec: A5.0 - Exterior Window Assembly Requirements
5.8.2.2 [FR13] ¹	Fenestration products are certified as to performance labels or certificates provided.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. Location on plans/spec: A5.0 - Exterior Window Assembly Requirements
5.8.2.3, 5.5.3.6 [FR14] ²	U-factor of opaque doors associated with the building thermal envelope meets requirements.	U- _____ <input type="checkbox"/> Swinging <input type="checkbox"/> Nonswinging	U- _____ <input type="checkbox"/> Swinging <input type="checkbox"/> Nonswinging	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
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90.1 (2007) Standard	Plumbing Rough-In Inspection	Complies?	Comments/Assumptions
7.4.3 [PL1] ²	Service hot-water piping systems insulated. Where piping is installed in or under a slab, verification may need to occur during Foundation Inspection.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. <i>See the Mechanical Systems list for values for Water Heater 1.</i>
7.4.4.1 [PL2] ³	Temperature controls installed on service water heating systems (<=120°F to maximum temperature for intended use).	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. Location on plans/spec: P4.1 <i>See the Mechanical Systems list for values for Water Heater 1.</i>
7.4.4.2 [PL3] ¹	Automatic time switches installed to automatically switch off the recirculating hot-water system or heat trace.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. Location on plans/spec: P4.1 <i>See the Mechanical Systems list for values for Water Heater 1.</i>

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
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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	Exception: Requirement does not apply.
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	Requirement will be met.
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	Requirement will be met.
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	Requirement will be met. Location on plans/spec: M4.0
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	Requirement will be met.
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	Requirement will be met.
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	Requirement will be met.
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	Requirement will be met. See the Mechanical Systems list for values for HVAC System 1 (RTU-1).
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	Requirement will be met. See the Mechanical Systems list for values for HVAC System 2 (RTU-2).
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	Requirement will be met. See the Mechanical Systems list for values for HVAC System 3 (RTU-3).
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	Requirement will be met. See the Mechanical Systems list for values for HVAC System 4 (RTU-4).

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
6.5.2.3 [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	Requirement will be met.
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	Exception: Minimum flow is less than required for proper operation and pump power = 75 hp.
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	Exception: Requirement does not apply.
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	Exception: Requirement does not apply.
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	Exception: Requirement does not apply.
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	Requirement will be met.
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	Requirement will be met. <i>See the Mechanical Systems list for values for HVAC System 1 (RTU-1).</i>
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	Requirement will be met. <i>See the Mechanical Systems list for values for HVAC System 2 (RTU-2).</i>
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	Requirement will be met. <i>See the Mechanical Systems list for values for HVAC System 3 (RTU-3).</i>
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	Requirement will be met. <i>See the Mechanical Systems list for values for HVAC System 4 (RTU-4).</i>
7.4.2 [ME36] ²	Service water heating equipment meets efficiency requirements.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	<i>See the Mechanical Systems list for values for Water Heater 1.</i>

Additional Comments/Assumptions:

1 High Impact (Tier 1)	2 Medium Impact (Tier 2)	3 Low Impact (Tier 3)
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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	Requirement will be met. Location on plans/spec: E2.0, E2.1, E4.1
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	Requirement will be met. Location on plans/spec: E2.0, E2.1, E4.1
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	Requirement will be met. Location on plans/spec: E2.0, E2.1, E4.1
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	Exception: Electronic high-frequency ballasts. Location on plans/spec: E2.0, E2.1, E4.1
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	Requirement will be met. Location on plans/spec: E2.0, E2.1, E4.1
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	Requirement will be met. Location on plans/spec: E2.0, E2.1, E4.1
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	Requirement will be met.

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
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Section # & Req.ID	Insulation Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
5.4.3.1 [IN1] ¹	All sources of air leakage in the building thermal envelope are sealed, caulked, gasketed, weather stripped or wrapped with moisture vapor-permeable wrapping material to minimize air leakage.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
5.5.3.1 [IN2] ¹	Roof R-value. For some ceiling systems, verification may need to occur during Framing Inspection.	R-_____ <input type="checkbox"/> Above deck <input type="checkbox"/> Metal <input type="checkbox"/> Attic	R-_____ <input type="checkbox"/> Above deck <input type="checkbox"/> Metal <input type="checkbox"/> Attic	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
5.8.1.2, 5.8.1.3 [IN3] ¹	Roof insulation installed per manufacturer's instructions. Blown or poured loose-fill insulation is installed only where the roof slope is ≤ 3 in 12.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. Location on plans/spec: Drawing A1.3 -Roofing Notes
5.5.3.1.1 [IN5] ³	High-albedo roofs meet solar reflectance of 0.70 and thermal emittance of 0.75 or SRI of 82.	SR:_____ SRI:_____	SR:_____ SRI:_____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. Location on plans/spec: Drawing A1.3 -Roofing Notes
5.5.3.2 [IN6] ¹	Above-grade wall insulation R-value.	R-_____ <input type="checkbox"/> Mass <input type="checkbox"/> Metal <input type="checkbox"/> Steel <input type="checkbox"/> Wood	R-_____ <input type="checkbox"/> Mass <input type="checkbox"/> Metal <input type="checkbox"/> Steel <input type="checkbox"/> Wood	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
5.8.1.2 [IN7] ¹	Above-grade wall insulation installed per manufacturer's instructions.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. Location on plans/spec: Drawing A5.0 - Exterior Wall Assembly Description
5.5.3.4 [IN8] ¹	Floor insulation R-value.	R-_____ <input type="checkbox"/> Mass <input type="checkbox"/> Steel <input type="checkbox"/> Wood	R-_____ <input type="checkbox"/> Mass <input type="checkbox"/> Steel <input type="checkbox"/> Wood	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
5.8.1.1 [IN10] ²	Building envelope insulation is labeled with R-value or insulation certificate providing R-value and other relevant data.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
5.8.1.4 [IN11] ²	Eaves are baffled to deflect air to above the insulation.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. Location on plans/spec: Not Applicable
5.8.1.5 [IN12] ²	Insulation is installed in substantial contact with the inside surface separating conditioned space from unconditional space.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. Location on plans/spec: Drawing A5.0 - Exterior Wall Assembly Description
5.8.1.6 [IN13] ²	Recessed equipment installed in building envelope assemblies does not compress the adjacent insulation.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.

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

Section # & Req.ID	Insulation Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
5.8.1.7 [IN14] ²	Exterior insulation is protected from damage with a protective material. Verification for exposed foundation insulation may need to occur during Foundation Inspection.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. Location on plans/spec: Drawing A5.0 - Exterior Wall Assembly Description
5.8.1.7.1 [IN15] ²	Attics and mechanical rooms have insulation protected where adjacent to attic or equipment access.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. Location on plans/spec: Not Applicable
5.8.1.7.2 [IN16] ²	Foundation vents do not interfere with insulation.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
5.8.1.8 [IN17] ³	Insulation intended to meet the roof insulation requirements cannot be installed on top of a suspended ceiling. Mark this requirement compliant if insulation is installed accordingly.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
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90.1 (2007) Standard	Final Inspection	Complies?	Comments/Assumptions
5.4.3.3 [FI1] ¹	Weatherseals installed on all loading dock cargo doors in Climate Zones 4-8.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
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	Requirement will be met. Location on plans/spec: M1.0, M4.1
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	Requirement will be met.
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	Requirement will be met.
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	Requirement will be met.
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	Requirement will be met.
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	Exception: Requirement does not apply.
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	Requirement will be met.
7.4.4.3 [FI11] ³	Public lavatory faucet water temperature ≤110°F.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. Location on plans/spec: P4.1, Valve Schedule <i>See the Mechanical Systems list for values for Water Heater 1.</i>
7.4.4.4 [FI12] ³	Controls are installed that limit the operation of a recirculation pump installed to maintain temperature of a storage tank.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. Location on plans/spec: P4.1 <i>See the Mechanical Systems list for values for Water Heater 1.</i>
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	Requirement will be met.
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	Requirement will be met.

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

90.1 (2007) Standard	Final Inspection	Complies?	Comments/Assumptions
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	See the Interior Lighting fixture schedule for values.
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	Requirement will be met.
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	Requirement will be met.
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	Requirement will be met.

Additional Comments/Assumptions:

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