

Florida Building Code, 8th Edition (2023) - Energy Conservation.

Filing Version - Not for Compliance Submission

EnergyGauge Summit® Fla/Com-2023, Effective Date: Dec 31, 2023

C402.1.5: FBC Component Performance Alternative Option

Building envelope values and fenestration areas determined in accordance with Equation 4-2 in lieu of compliance with the U-, F- and C-factors in Tables C402.1.4 and C402.4 and the maximum allowable fenestration areas in Section C402.4.1

Check List

Applications for compliance with the Florida Building Code, Energy Conservation shall include:

- The full compliance report generated by the software that contains the project summary, compliance summary, certifications and detailed component compliance reports.
- The compliance report must include the full input report generated by the software as contiguous part of the compliance report.
- Boxes appropriately checked in the Mandatory Section of the compliance report.

PROJECT SUMMARY

Short Desc: FBC2023

Description: FBC2023

Owner: Enter Owner's name here

Address1: Anywhere

City: Anywhers

Address2: Enter Address here

State: FL

Zip: 32952

Type: Office

Class: New Finished building

Jurisdiction: MIAMI, MIAMI-DADE COUNTY, FL (232400)

Conditioned Area: 4887 SF

Conditioned & UnConditioned Area: 4887 SF

No of Stories: 1

Area entered from Plans 0 SF

Permit No: 0

Max Tonnage 5.8

If different, write in: _____

Compliance Summary

Component	Design	Criteria	Result
ENVELOPE PRESCRIPTIVE			FAILS
Additional Efficiency Package Option - None			FAILED
LIGHTING POWER	3450.00	3495.92	PASSES
LIGHTING CONTROLS			FAILS
EXTERNAL LIGHTING			PASSES
HVAC SYSTEM			PASSES
PLANT			PASSES
WATER HEATING SYSTEMS			PASSES
PIPING SYSTEMS			FAILS
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: _____

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: _____

Reg No: _____ Signature _____

Electrical
Designer: _____

Reg No: _____ Signature _____

Lighting
Designer: _____

Reg No: _____ Signature _____

Mechanical
Designer: _____

Reg No: _____ Signature _____

Plumbing
Designer: _____

Reg No: _____ Signature _____

(*) Signature is required where Florida Law requires design to be performed by registered design professionals per C103.1.1.1.2

Project: FBC2023
 Title: FBC2023
 Type: Office
 (WEA File: FL_MIAMI_INTL_AP.tm3)

Prescriptive Envelope Compliance

Item	Zone	Description	Design	Criteria	Meet Req.
All Fenestration	FBC2023	Percent Fenestration Max allowed (%)	13.960	30.000	Yes
Pr0Zo1Wa1Wi1	SOUTH	Exterior Window: SHGC Max allowed	.200	0.250	Yes
Pr0Zo1Wa2Wi1	WEST	Exterior Window: SHGC Max allowed	.200	0.250	Yes
Pr0Zo1Rf1	ZONE 1	Exterior Roof Absorptance (3-year aged) Max allowed	.700	0.450	No
Pr0Zo1Rf1	ZONE 1	Exterior Roof Emissivity (3-year aged) Min Required	.900	0.750	Yes
Pr0Zo2Wa1Wi1	SOUTH	Exterior Window: SHGC Max allowed	.200	0.250	Yes
Pr0Zo1Rf1	ZONE 2	Exterior Roof Absorptance (3-year aged) Max allowed	.700	0.450	No
Pr0Zo1Rf1	ZONE 2	Exterior Roof Emissivity (3-year aged) Min Required	.900	0.750	Yes
Pr0Zo3Wa3Wi1	EAST	Exterior Window: SHGC Max allowed	.200	0.250	Yes
Pr0Zo3Wa3Wi1	EAST-2	Exterior Window: SHGC Max allowed	.200	0.250	Yes
Pr0Zo9Wa1Wi1	EAST	Exterior Window: SHGC Max allowed	.200	0.250	Yes
Pr0Zo9Rf1	ZONE 5	Exterior Roof Absorptance (3-year aged) Max allowed	.700	0.450	No
Pr0Zo9Rf1	ZONE 5	Exterior Roof Emissivity (3-year aged) Min Required	.900	0.750	Yes

DOES NOT meet Prescriptive Envelope Requirements -- FAILS

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Component Performance Alternative

<u>Item</u>	<u>IParent</u>	<u>Description</u>	<u>Area Design</u>	<u>U Design</u>	<u>Area Budget</u>	<u>U Budget</u>	<u>UA Diff</u>
SOUTH	ZONE 1	Exterior Wall	476.8	0.0920	476.8	0.0640	13.3
WEST	ZONE 1	Exterior Wall	684.0	0.0920	684.0	0.0640	19.1
Pr0Zo1Rf1	ZONE 1	Exterior Roof	906.3	0.0967	906.3	0.0270	63.2
Pr0Zo1F11	ZONE 1	Slab Floor	120.5	0.6000	120.5	0.7300	-15.7
SOUTH	ZONE 2	Exterior Wall	476.8	0.0920	476.8	0.0640	13.3
EAST	ZONE 2	Exterior Wall	645.2	0.0920	645.2	0.0640	18.1
WEST	ZONE 2	Exterior Wall	568.7	0.0920	568.7	0.0640	15.9
Pr0Zo1Rf1	ZONE 2	Exterior Roof	906.3	0.0967	906.3	0.0270	63.2
Pr0Zo1F11	ZONE 2	Slab Floor	120.5	0.6000	120.5	0.7300	-15.7
EAST	ZONE 3	Exterior Wall	352.7	0.0920	352.7	0.0640	9.9
Pr0Zo3F11	ZONE 3	Slab Floor	122.8	0.6000	122.8	0.7300	-16.0
EAST	ZONE 4	Exterior Wall	72.5	0.0920	72.5	0.0640	2.0
EAST-2	ZONE 4	Exterior Wall	102.1	0.0920	102.1	0.0640	2.9
SOUTH	ZONE 4	Exterior Wall	153.5	0.0920	153.5	0.0640	4.3
Pr0Zo4F11	ZONE 4	Slab Floor	156.6	0.6000	156.6	0.7300	-20.4
EAST	ZONE 5	Exterior Wall	132.2	0.0920	132.2	0.0640	3.7
Pr0Zo9Rf1	ZONE 5	Exterior Roof	736.3	0.0967	736.3	0.0270	51.4
(DA*UV)-	Project	All Vertical	0.0	1.0000	0.0	0.0000	0.0
(DA*UWall)		Glazing					
(EA*US)-	Project	All Skylight	0.0	1.0000	0.0	0.0000	0.0
(EA*URoof)							

A = 280.32 B = -67.66 C = 0.00 D = 0.00 E = 0.00
Does not meet Component Performance Alternative.
Sum of UA DIFF = 212.7 (must be <= 0) -- FAILED

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External Lighting Compliance

<u>Description</u>	<u>Category</u>	<u>Tradable?</u>	<u>Allowance (W/Unit)</u>	<u>Area or Length or No. of Units (Sqft or ft)</u>	<u>ELPA (W)</u>	<u>CLP (W)</u>
Ext Light 1	Uncovered Parking Areas -- Parking lots and Drives	Yes	0.04	500.0	20	300
Ext Light 3	Loading areas -- llaw enforcement, fire, emergency	No	0.35	100.0	35	30

Tradable Surfaces: 300 (W) Allowance for Tradable: 420 (W)
All External Lighting: 330 (W)
Compliance check includes an excess/Base allowance of 400.00(W)

PASSES

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Lighting Power Compliance

Space	Ashrae ID	Description	Area (sq.ft)	Height (ft)	No. of Spaces	Design (W)	Effective (W)	Allowance (W)
Space 1	12	Lobby (General) - Reception and Waiting	906	23.0	1	750	750	761
Space 2	12	Lobby (General) - Reception and Waiting	906	23.0	1	750	750	761
Space 3	17	Office - Enclosed	945	12.0	1	850	850	700
Space 4	17	Office - Enclosed	1,393	12.0	1	750	750	1,031
Space 5	2	Storage & Warehouse - Inactive Storage	736	10.0	1	350	350	243

Design : 3450 (W)
Effective: 3450 (W)
Allowance: 3495.916 (W)

PASSES

Passing requires Design to be at most 100% of Criteria

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Lighting Controls Compliance

Acronym	ID	Description	Area (sq.ft)
<u>Space 1</u> Lighting Controls PASSES	<u>12</u>	<u>Lobby (General) - Reception and Waiting</u>	<u>906</u>
<u>Space 2</u> Lighting Controls FAILS Control type 1 required for compliance not found Control type 7 required for compliance not found Atleast one additional control type 8 9 required for compliance	<u>12</u>	<u>Lobby (General) - Reception and Waiting</u>	<u>906</u>
<u>Space 3</u> Lighting Controls FAILS Atleast one of the following additional control types 2 3 required for compliance	<u>17</u>	<u>Office - Enclosed</u>	<u>945</u>
<u>Space 4</u> Lighting Controls FAILS Control type 1 required for compliance not found Atleast one of the following additional control types 2 3 required for compliance Atleast one additional control type 4 8 9 required for compliance	<u>17</u>	<u>Office - Enclosed</u>	<u>1,393</u>
<u>Space 5</u> Lighting Controls PASSES	<u>2</u>	<u>Storage & Warehouse - Inactive Storage</u>	<u>736</u>

FAILS

Cooling System	Air Conditioners Air Cooled 65000 - 1355000 Btu/h Cooling Capacity	70000	13.50	11.00	15.00	14.10	PASSES
Heating System	Heat Pumps Air Cooled (Heating Mode) 65000 to 135000 Btu/h Clg Cap	36000	5.00	3.40			PASSES
Air Handling System -Supply	Air Handler (Supply) - Constant Volume	1500	0.80	0.82			PASSES
Air Distribution System (Sup)	ADS System (Sup)		5.00	4.20			PASSES
Air Distribution System (Ret)	ADS System (Ret)						PASSES
Sys4	System 11				Constant Volume Air Cooled Single Package System < 65000 Btu/hr		No. of Units 1
Component	Category	Capacity	Design Eff	Eff Criteria	Design IPLV	IPLV Criteria	Compliance
Cooling System	Air Conditioners Air Cooled Single Pkg < 65000 Btu/h Cooling Capacity	56000	15.00	13.40			PASSES
Heating System	Electric Furnace	30000	1.00	1.00			PASSES
Air Handling System -Supply	Air Handler (Supply) - Constant Volume	1500	0.80	0.82			PASSES
Air Distribution System (Sup)	ADS System (Sup)		6.00	6.00			PASSES
Air Distribution System (Ret)	ADS System (Ret)		5.00	4.20			PASSES
PASSES							

Plant Compliance								
Description	Installed No	Size	Design Eff	Min Eff	Design IPLV	Min IPLV	Category	Compliance
Domestic hot-water heater	1	10.00	85.000	82.000			Gas Fired >= 2,500,000 Btu/h	PASSES
PASSES								

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Water Heater Compliance

Description	Type	Category	Design Eff	Min Eff	Design Loss	Max Loss	Compliance
Water Heater 1	Electric Storage water heater	<= 12 [kW]	0.93	0.92			PASSES
Water Heater 2	Gas Storage water heater	<= 75000 Btu/h; 55 - 100 Gal	0.83	0.78			PASSES

PASSES

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Piping System Compliance

Category	Pipe Dia [inches]	Is Runout?	Operating Temp [F]	Ins Cond [Btu-in/hr .SF.F]	Ins Thick [in]	Req Ins Thick [in]	Compliance
Heating System (Steam, Steam Condensate, & Hot Water)	3.00	False	105.00	0.28	1.00	1.00	PASSES
Cooling Systems (Chilled Water, Brine and Refrigerant)	4.00	False	45.00	0.33	2.00	1.20	PASSES
Domestic and Service Hot Water Systems	2.00	False	130.00	0.30	0.80	1.10	FAILS

FAILS

Mandatory Requirements (as applicable)

Requirements compiled by US Department of Energy and Pacific Northwest National Laboratory. Adopted for FBC with permission. Not all may be applicable

Topic	Section	Component	Description	Yes	N/A	Exempt
1. To be checked by Designer or Engineer						
6013 Insulation	C303.2	Envelope	Below-grade wall insulation installed per manufacturer's instructions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6014 Insulation	C303.2	Envelope	Slab edge insulation installed per manufacturer's instructions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6015 Insulation	C303.2	Envelope	Above-grade wall insulation installed per manufacturer's instructions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6033 Insulation	C402.3	Envelope	High-albedo roofs satisfy one of the following: 3-year-aged solar reflectance ≥ 0.55 and thermal emittance ≥ 0.75 or 3-year-aged solar reflectance index ≥ 64.0 .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6055 Fenestration	C402.4.4	Envelope	U-factor of opaque doors associated with the building thermal envelope meets requirements.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6118 HVAC	C403.2.7	Mechanical	Exhaust air energy recovery on systems meeting Table C403.2.7(1) and C403.2.7(2).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6130 HVAC	C403.2.4.8	Mechanical	HVAC systems serving guestrooms in Group R-1 buildings with > 50 guestrooms: Each guestroom is provided with controls that automatically manage temperature setpoint and ventilation (see sections C403.2.4.8.1 and C403.2.4.8.2).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6139 SYSTEM_SPECIF	C403.3, C403.3.1, C403.3.2	Mechanical	Air economizers provided where required, meet the requirements for design capacity, control signal, ventilation controls, high-limit shut-off, integrated economizer control, and provide a means to relieve excess outside air during operation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6147 SYSTEM_SPECIF	C403.3.2	Mechanical	Economizer operation will not increase heating energy use during normal operation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6148 SYSTEM_SPECIF	C403.3.3.3	Mechanical	Air economizers automatically reduce outdoor air intake to the design minimum outdoor air quantity when outdoor air intake will not reduce cooling energy usage. See Table C403.3.3.3 for applicable device types and climate zones.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6149 SYSTEM_SPECIF	C403.3.3.4	Mechanical	System capable of relieving excess outdoor air during air economizer operation to prevent overpressurizing the building. The relief air outlet located to avoid recirculation into the building.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6150 SYSTEM_SPECIF	C403.3.3.5	Mechanical	Return, exhaust/relief and outdoor air dampers used in economizers have motorized dampers that automatically shut when not in use and meet maximum leakage rates. Reference section C403.2.4.3 for details.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6151 SYSTEM_SPECIF	C403.3.4, C403.3.4.1, C403.3.4.2, C403.3.1	Mechanical	Water economizers provided where required, meet the requirements for design capacity, maximum pressure drop and integrated economizer control.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6157 SYSTEM_SPECIF	C403.4.2.1	Mechanical	Three-pipe hydronic systems using a common return for hot and chilled water are not used.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6172 SYSTEM_SPECIF	C403.4.2.3.1	Mechanical	Hydronic heat pump systems connected to a common water loop meet heat rejection and heat addition requirements.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6173 SYSTEM_SPECIF	C403.4.3.2	Mechanical	Multiple-cell heat rejection equipment with variable speed fan drives are controlled to operate the maximum number of fans allowed and so that all fans operate at the same fan speed required for the instantaneous cooling duty. The minimum fan speed will be the minimum allowable speed of the fan drive system in accordance with the manufacturer's recommendations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6176	SYSTEM_SPECIF	C403.4.3.4	Mechanical	Open-circuit cooling towers having water cooled chiller systems and multiple or vairable speed condenser pumps, are designed so that tower cells can run in parallel with larger of flow crteria.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6177	SYSTEM_SPECIF	C403.4.4	Mechanical	Supply air systems serving multiple zones have VAV systems with controls configured to reduce the volume of air that is reheated, recooled or mixed in each zone. See section for details.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6179	SYSTEM_SPECIF	C403.4.4.1	Mechanical	Single-duct VAV systems use terminal devices configured to reduce the supply of primary supply air before reheating or recooling takes place.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6180	SYSTEM_SPECIF	C403.4.4.2	Mechanical	Systems that have 1 warm air duct and 1 cool air duct use terminal devices configured to reduce the flow from one duct to a minimum before mixing of air from the other duct takes place.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6181	SYSTEM_SPECIF	C403.4.4.3	Mechanical	Individual dual-duct or mixing heating and cooling systems with a single fan and with total capacities > 90,000 Btu/h not equipped with air economizers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6198	SYSTEM_SPECIF	C404.2	Mechanical	Service water heating equipment meets efficiency requirements.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6288	SYSTEM_SPECIF	Table_C403.3.2(8)a	Mechanical	Heat Rejection Equipment: Minimum Efficiency Requirement >=40.2 gpm/hp .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6289	SYSTEM_SPECIF	Table_C403.3.2(8)b	Mechanical	Heat Rejection Equipment: Minimum Efficiency Requirement >=20.0 gpm/hp.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6290	SYSTEM_SPECIF	Table_C403.3.2(8)c	Mechanical	Heat Rejection Equipment: Minimum Efficiency Requirement >=16.1 gpm/hp.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6291	SYSTEM_SPECIF	Table_C403.3.2(8)d	Mechanical	Heat Rejection Equipment: Minimum Efficiency Requirement >=7.0 gpm/hp	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6292	SYSTEM_SPECIF	Table_C403.3.2(8)e	Mechanical	Heat Rejection Equipment: Minimum Efficiency Requirement >=134 kBtu/h-hp w/ Ammonia test fluid.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6293	SYSTEM_SPECIF	Table_C403.3.2(8)f	Mechanical	Heat Rejection Equipment: Minimum Efficiency Requirement >=110 kBtu/h-hp w/ Ammonia test fluid.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6294	SYSTEM_SPECIF	Table_C403.3.2(8)g	Mechanical	Heat Rejection Equipment: Minimum Efficiency Requirement >=157 kBtu/h-hp w/ R-507A test fluid.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6295	SYSTEM_SPECIF	Table_C403.3.2(8)h	Mechanical	Heat Rejection Equipment: Minimum Efficiency Requirement >=135 kBtu/h-hp w/ R-507A test fluid.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6296	SYSTEM_SPECIF	Table_C403.3.2(8)i	Mechanical	Heat Rejection Equipment: Minimum Efficiency Requirement >=176 kBtu/h-hp.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6297	SYSTEM_SPECIF	C403.2.12.1	Mechanical	HVAC fan systems at design conditions do not exceed allowable fan system motor nameplate hp or fan system bhp.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6300	SYSTEM_SPECIF	C403.2.12.2	Mechanical	HVAC fan motors not oversized beyond allowable limits.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6301	SYSTEM_SPECIF	C403.2.12.3	Mechanical	Fans have efficiency grade (FEG) >= 67. The total efficiency of the fan at the design point of operation <= 15% of maximum total efficiency of the fan.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6308	SYSTEM_SPECIF	C403.2.12.4	Mechanical	Motors for fans that are not less than 1/12 hp and less than 1 hp are electronically commutated motors or have a minimum motor efficiency of 70 percent. These motors have the means to adjust motor speed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6312	SYSTEM_SPECIF	C403.2.12.5	Mechanical	Each DX cooling system > 65 kBtu and chiller water/evaporative cooling system with fans > 1/4 hp are designed to vary the indoor fan airflow as a function of load and comply with detailed requirements of this section.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. To be checked by Plan Reviewer							
6001	Plan Review	C103.2	Envelope	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"/>	<input type="checkbox"/>	<input type="checkbox"/>

6002 Plan Review	C103.2	Mechanical	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"/>	<input type="checkbox"/>	<input type="checkbox"/>
6003 Plan Review	C103.2	Mechanical	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"/>	<input type="checkbox"/>	<input type="checkbox"/>
6004 Plan Review	C103.2	Interior Lighting	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the interior 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"/>	<input type="checkbox"/>	<input type="checkbox"/>
6005 Plan Review	C103.2	Exterior Lighting	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the exterior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include exterior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6027 Insulation	C402.2.5	Envelope	Slab edge insulation depth/length. Slab insulation extending away from building is covered by pavement or ≥ 10 inches of soil.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6028 Insulation	C402.2.4	Envelope	Installed floor insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6029 Insulation	C402.2.6	Project	Radiant heating systems panels insulated to $\geq R-3.5$ on face opposite space being heated.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6030 HVAC	C402.2.6	Mechanical	Thermally ineffective panel surfaces of sensible heating panels have insulation $\geq R-3.5$.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6031 Insulation	C402.2.6	Envelope	Radiant panels and associated components, designed for heat transfer from the panel surfaces to the occupants or indoor space are insulated with a minimum of R-3.5.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6066 Air Leakage	C402.5.7	Envelope	Vestibules are installed on all building entrances. Doors have self-closing devices.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6083 HVAC	C403.2.13	Mechanical	Systems that heat outside the building envelope are radiant heat systems controlled by an occupancy sensing device or timer switch.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6096 HVAC	C403.2.4.2	Mechanical	Each zone equipped with setback controls using automatic time clock or programmable control system.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6097 HVAC	C403.2.4.2	Mechanical	Each zone equipped with setback controls using automatic time clock or programmable control system.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6098 HVAC	C403.2.4.2	Mechanical	Each zone equipped with setback controls using automatic time clock or programmable control system.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6101 SYSTEM_SPECIF	C403.2.4.4	Mechanical	Zone isolation devices and controls installed where applicable.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6104 SYSTEM_SPECIF	C403.2.4.4	Mechanical	Zone isolation devices and controls installed where applicable.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6106 SYSTEM_SPECIF	C403.2.4.7	Mechanical	Fault detection and diagnostics installed with air-cooled unitary DX units having economizers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6107 SYSTEM_SPECIF	C403.2.5	Mechanical	Hot water boilers supplying heat via one- or two-pipe systems include outdoor setback control.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6108 HVAC	C403.2.6	Mechanical	Natural or mechanical ventilation is provided in accordance with International Mechanical Code Chapter 4. Mechanical ventilation has capability to reduce outdoor air supply to minimum per IMC Chapter 4.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6109 HVAC	C403.2.6.1	Mechanical	Demand control ventilation provided for spaces >500 ft2 and >25 people/1000 ft2 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"/>	<input type="checkbox"/>	<input type="checkbox"/>
6153 SYSTEM_SPECIF	C403.2.12.5.1	Mechanical	Hydronic and multizone HVAC system controls are VAV fans driven by mechanical or electrical variable speed drive per Table C403.2.12.5.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6155 SYSTEM_SPECIF	C403.2.12.5.3	Mechanical	Reset static pressure setpoint for DDC controlled VAV boxes reporting to central controller based on the zones requiring the most pressure.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6156 SYSTEM_SPECIF	C403.4.2	Mechanical	The heating of fluids in hydronic systems that have been previously mechanically cooled, and the cooling of fluids that have been previously mechanically heated are limited in accordance with Sections C403.4.2.1-C403.4.2.3. Single boiler systems >500,000 Btu/h have multistaged or modulating burner.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6159 SYSTEM_SPECIF	C403.4.2.3.2	Mechanical	Closed-circuit cooling tower within heat pump loop have either automatic bypass valve or lower leakage positive closure dampers. Open-circuit tower within heat pump loop have automatic valve to bypass all heat pump water flow around the tower. Open- or closed-circuit cooling towers used in conjunction with a separate heat exchanger have heat loss by shutting down the circulation pump on the cooling tower loop. Open- or closed circuit cooling towers have a separate heat exchanger to isolate the cooling tower from the heat pump loop, and heat loss is controlled by shutting down the circulation pump on the cooling tower loop.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6162 SYSTEM_SPECIF	C403.4.2.4	Mechanical	Hydronic systems greater than 500,000 Btu/h designed for variable fluid flow. See section language for full details.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6167 SYSTEM_SPECIF	C403.4.2.5	Mechanical	System turndown requirement met through multiple single-input boilers, one or more modulating boilers, or a combination of single-input and modulating boilers. Boiler input between 1.0 MBtu/h and 5 MBtu/h has 3:1 turndown ratio, boiler input between 5.0 MBtu/h and 10 MBtu/h has 4:1 turndown ratio, boiler input > 10.0 MBtu/h has 5:1 turndown ratio.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6168 SYSTEM_SPECIF	C403.4.2.6	Mechanical	Chilled water plants with multiple chillers have capability to reduce flow automatically through the chiller plant when a chiller is shut down. Boiler plants with multiple boilers have the capability to reduce flow automatically through the boiler plant when a boiler is shut down.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6169 SYSTEM_SPECIF	C403.4.3.1	Mechanical	Fan systems with total system motor capacity >=5 hp associated with heat rejection equipment configured to automatically modulate the fan speed to control the leaving fluid temperature or condensing temp/pressure of heat rejection device.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6174 SYSTEM_SPECIF	C403.4.3.3	Mechanical	Centrifugal fan open-circuit cooling towers having combined rated capacity >= 1100 gpm meets minimum efficiency requirement: >=40.2 gpm/hp.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6182 SYSTEM_SPECIF	C403.4.4.5	Mechanical	Multiple zone HVAC systems have supply air temperature reset controls.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6186 SYSTEM_SPECIF	C403.4.4.6	Mechanical	Multiple zone VAV systems with DDC of individual zone boxes have static pressure setpoint reset controls.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6199 SYSTEM_SPECIF	C404.2.1	Mechanical	Gas-fired water-heating equipment installed in new buildings: where a singular piece of water-heating equipment $\geq 1,000$ kBtu/h serves the entire building, thermal efficiency ≥ 90 Et. Where multiple pieces of water-heating equipment serve the building with combined rating $\geq 1,000$ kBtu/h, the combined input-capacity-weighted-average thermal efficiency ≥ 90 Et. Exclude input rating of equipment in individual dwelling units and equipment ≤ 100 kBtu/h.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6200 SYSTEM_SPECIF	C404.2.1	Mechanical	Gas-fired water-heating equipment installed in new buildings: where a singular piece of water-heating equipment $\geq 1,000$ kBtu/h serves the entire building, thermal efficiency ≥ 90 Et. Where multiple pieces of water-heating equipment serve the building with combined rating $\geq 1,000$ kBtu/h, the combined input-capacity-weighted-average thermal efficiency ≥ 90 Et. Exclude input rating of equipment in individual dwelling units and equipment ≤ 100 kBtu/h.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6203 SYSTEM_SPECIF	C404.4	Mechanical	All piping insulated in accordance with section details and Table C403.2.10.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6204 SYSTEM_SPECIF	C404.5, C404.5.1, C404.5.2	Mechanical	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6207 SYSTEM_SPECIF	C404.6.3	Mechanical	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to ≤ 5 minutes after end of heating cycle.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6208 SYSTEM_SPECIF	C404.7	Mechanical	Demand recirculation water systems have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6239 Wattage	C405.4.1	Exterior Lighting	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"/>	<input type="checkbox"/>	<input type="checkbox"/>
6240 Plan Review	C405.5.2	Project	Group R-2 dwelling units have separate electrical meters.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6241 Plan Review	C406	Project	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the additional energy efficiency package options.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6250 SYSTEM_SPECIF	C408.2.2.2	Mechanical	HVAC hydronic heating and cooling coils have means to balance and have pressure test connections.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. To be checked by Inspector						
6006 Insulation	C303.1	Envelope	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"/>	<input type="checkbox"/>	<input type="checkbox"/>
6007 Insulation	C303.1	Envelope	Building envelope insulation is labeled with R-value or insulation certificate providing R-value and other relevant data.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6008 Insulation	C402.2.2	Envelope	Insulation installed on a suspended ceiling having ceiling tiles is not being specified for roof/ceiling assemblies. Continuous insulation board installed in 2 or more layers with edge joints offset between layers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6009 Insulation	C402.2.2	Envelope	Skylight curbs are insulated to the level of roofs with insulation above deck or R-5.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6011 Fenestration	C303.1.3	Envelope	Fenestration products rated in accordance with NFRC.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6016 Insulation	C303.2, C402.2.5	Envelope	Floor insulation installed per manufacturer's instructions. Cavity or structural slab insulation installed in permanent contact with underside of decking or structural slabs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6019 Insulation	C303.2.1	Envelope	Exterior insulation protected against damage, sunlight, moisture, wind, landscaping and equipment maintenance activities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6020 Insulation	C303.2.1	Envelope	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"/>	<input type="checkbox"/>	<input type="checkbox"/>
6023 Insulation	C402.1.3	Envelope	Non-swinging opaque doors have R-4.75 insulation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6025 Insulation	C104	Envelope	Installed above-grade wall insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6026 Insulation	C104	Envelope	Installed slab-on-grade insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6048 Insulation	C104	Envelope	Installed roof insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports. For some ceiling systems, verification may need to occur during Framing Inspection.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6056 Air Leakage	C402.5	Envelope	Building envelope contains a continuous air barrier that has been tested and deemed to limit air leakage ≤ 0.40 cfm/ft ² .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6057 Air Leakage	C402.5.1	Envelope	The building envelope contains a continuous air barrier that is sealed in an approved manner and either constructed or tested in an approved manner. Air barrier penetrations are sealed in an approved manner.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6058 Air Leakage	C402.5.1.1	Envelope	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"/>	<input type="checkbox"/>	<input type="checkbox"/>
6059 Air Leakage	C402.5.1.2.1	Envelope	The building envelope contains a continuous air barrier that is sealed in an approved manner and material permeability ≤ 0.004 dfm/ft ² . Air barrier penetrations are sealed in an approved manner.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6060 Air Leakage	C402.5.1.2.2	Envelope	The building envelope contains a continuous air barrier that is sealed in an approved manner and average assembly air leakage ≤ 0.04 cfm/ft ² . Air barrier penetrations are sealed in an approved manner.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6061 Air Leakage	C402.5.2, C402.5.4	Envelope	Factory-built fenestration and doors are labeled as meeting air leakage requirements.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6064 Air Leakage	C402.5.5, C403.2.4.3	Envelope	Stair and elevator shaft vents have motorized dampers that automatically close. Refernce section C403.2.4.3 for operational details.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6065 Air Leakage	C402.5.6	Envelope	Weatherseals installed on all loading dock cargo door openings and provide direct contact along the top and sides of vehicles parked in the doorway.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6073 Air Leakage	C402.5.6	Envelope	Weatherseals installed on all loading dock cargo door openings and provide direct contact along the top and sides of vehicles parked in the doorway.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6074 Air Leakage	C402.5.8	Envelope	Recessed luminaires in thermal envelope to limit infiltration and be IC rated and labeled. Seal between interior finish and luminaire housing.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6075 HVAC	C403.2.1	Mechanical	HVAC systems and equipment design loads calculated in accordance with ANSI/ASHRAE/ACCA Standard 183 or by an approved equivalent computational procedure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6076 SYSTEM_SPECIF	C403.2.10	Mechanical	HVAC piping insulation insulated in accordance with Table C403.2.10. Insulation exposed to weather is protected from damage and is provided with shielding from solar radiation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6086 HVAC	C403.2.3	Mechanical	HVAC equipment efficiency verified.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6087 SYSTEM_SPECIF	C403.2.3	Mechanical	PTAC and PTHP with sleeves 16 in. by 42 in. labeled for replacement only as per Footnote b to Table C403.2.3(3).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6090	SYSTEM_SPECIF	C403.2.3	Mechanical	Centrifugal fan open-circuit cooling towers having combined rated capacity \geq 1100 gpm meets minimum efficiency requirement: \geq 38.2 gpm/hp.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6091	SYSTEM_SPECIF	C403.2.4.1	Mechanical	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6092	SYSTEM_SPECIF	C403.2.4.1.1	Mechanical	Heat pump controls prevent supplemental electric resistance heat from coming on when not needed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6093	HVAC	C403.2.4.1.2	Mechanical	Thermostatic controls have a 5 °F deadband.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6094	HVAC	C403.2.4.1.2	Mechanical	Thermostatic controls have a 5 °F deadband.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6095	HVAC	C403.2.4.1.3	Mechanical	Temperature controls have setpoint overlap restrictions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6099	HVAC	C403.2.4.2.1, C403.2.4.2.2	Mechanical	Automatic Controls: Setback to 55°F (heat) and 85°F (cool); 7-day clock, 2-hour occupant override, 10-hour backup	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6100	SYSTEM_SPECIF	C403.2.4.2.3	Mechanical	Systems include optimum start controls.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6105	HVAC	C403.2.4.5, C403.2.4.6	Mechanical	Snow/ice melting system and freeze protection systems have sensors and controls configured to limit service for pavement temperature and outdoor temperature. future connection to controls.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6115	HVAC	C403.2.6.2	Mechanical	Enclosed parking garage ventilation has automatic contaminant detection and capacity to stage or modulate fans to 50% or less of design capacity.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6131	Air Leakage	C403.2.4.3	Mechanical	Outdoor air and exhaust systems have motorized dampers that automatically shut when not in use and meet maximum leakage rates. Check gravity dampers where allowed. Reference section language for operational details.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6136	HVAC	C403.2.9.1, C403.2.9.2	Mechanical	HVAC ducts and plenums insulated in accordance with C403.2.9.1 and constructed in accordance with C403.2.9.2, verification may need to occur during Foundation Inspection.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6154	SYSTEM_SPECIF	C403.2.12.5.2	Mechanical	VAV fans have static pressure sensors located so controller setpoint \leq 1.2 w.c..	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6158	SYSTEM_SPECIF	C403.4.2.2	Mechanical	Two-pipe hydronic systems using a common distribution system have controls to allow a deadband \geq 15 °F, allow operation in one mode for at least 4 hrs before changeover, and have rest controls to limit heating and cooling supply temperature to \leq 30 °F.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6161	SYSTEM_SPECIF	C403.4.2.3.3	Mechanical	Two-position automatic valve interlocked to shut off water flow when hydronic heat pump with pumping system $>$ 10 hp is off.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6189	SYSTEM_SPECIF	C403.4.4.7	Mechanical	Parallel-flow fan-powered VAV air terminals have automatic controls configured to 1) turn off the terminal fan except when space heating is required or where required for ventilation, 2) turn on the terminal fan as the first stage of heating before the heating coil is activated, and 3) during heating for warmup or setback temperature control, either operate the terminal fan and heating coil without primary air or, reverse the terminal damper logic and provide heating from the central air handler by primary air.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6190	SYSTEM_SPECIF	C403.2.12.5.3	Mechanical	Systems with DDC of individual zones reporting to the central control panel configured to reset the static pressure setpoint based on zone requiring the most pressure. The DDC is capable of monitoring zone damper positions or have an alternative method of indicating the need for static pressure. See section for details.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6191 SYSTEM_SPECIF	C403.2.12.5.2	Mechanical	Static pressure sensors used to control VAV fans located such that the controller setpoint is <= 1.2 inches w.c.. Where this results in one or more sensors being located downstream of major duct splits, not less than one sensor located on each major branch.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
6192 SYSTEM_SPECIF	C403.4.5	Mechanical	Condenser heat recovery system that can heat water to 85 °F or provide 60% of peak heat rejection is installed for preheating of service hot water.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
6197 SYSTEM_SPECIF	C403.4.6	Mechanical	Hot gas bypass limited to: <=240 kBtu/h – 50% >240 kBtu/h – 25%	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
6201 SYSTEM_SPECIF	C404.3	Mechanical	Heat traps installed on supply and discharge piping of non-circulating systems.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
6205 SYSTEM_SPECIF	C404.6.1	Mechanical	Controls are installed that limit the operation of a recirculation pump installed to maintain temperature of a storage tank. System return pipe is a dedicated return pipe or a cold water supply pipe.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
6206 SYSTEM_SPECIF	C404.6.1, C404.6.2	Mechanical	Automatic time switches installed to automatically switch off the recirculating hot-water system or heat trace.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
6209 SYSTEM_SPECIF	C404.9.1	Mechanical	Pool heaters are equipped with on/off switch and no continuously burning pilot light.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
6210 SYSTEM_SPECIF	C404.9.2	Mechanical	Time switches are installed on all pool heaters and pumps.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
6213 SYSTEM_SPECIF	C404.9.3	Mechanical	Vapor retardant pool covers are provided for heated pools and permanently installed spas.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
6215 Controls	C405.2.1, C405.2.1.1	Interior Lighting	Occupancy sensors installed in classrooms/lecture/training rooms, conference/meeting/multipurpose rooms, copy/print rooms, lounges/breakrooms, enclosed offices, open plan office areas, restrooms, storage rooms, locker rooms, warehouse storage areas, and other spaces <= 300 sqft that are enclosed by floor-to-ceiling height partitions. Reference section language C405.2.1.2 for control function in warehouses and section C405.2.1.3 for open plan office spaces.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
6220 Controls	C405.2.1.2	Interior Lighting	Occupancy sensors control function in warehouses: In warehouses, the lighting in aiseways and open areas is controlled with occupant sensors that automatically reduce lighting power by 50% or more when the areas are unoccupied. The occupant sensors control lighting in each aisleway independently and do not control lighting beyond the aisleway being controlled by the sensor.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
6221 Controls	C405.2.1.3	Interior Lighting	Occupant sensor control function in open plan office areas: Occupant sensor controls in open office spaces >= 300 sq.ft. have controls 1) configured so that general lighting can be controlled separately in control zones with floor areas <= 600 sq.ft. within the space, 2) automatically turn off general lighting in all control zones within 20 minutes after all occupants have left the space, 3) are configured so that general lighting power in each control zone is reduced by >= 80% of the full zone general lighting power within 20 minutes of all occupants leaving that control zone, and 4) are configured such that any daylight responsive control will activate space general lighting or control zone general lighting only when occupancy for the same area is detected.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
6222 Controls	C405.2.2, C405.2.2.1, C405.2.2.2	Interior Lighting	Each area not served by occupancy sensors (per C405.2.1) have time-switch controls and functions detailed in sections C405.2.2.1 and C405.2.2.2.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

6225 Controls	C405.2.2.2	Interior Lighting	Spaces required to have light-reduction controls have a manual control that allows the occupant to reduce the connected lighting load in a reasonably uniform illumination pattern \geq 50 percent.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6228 Controls	C405.2.3, C405.2.3.1, C405.2.3.2	Interior Lighting	Daylight zones provided with individual controls that control the lights independent of general area lighting. See code section C405.2.3 Daylight-responsive controls for applicable spaces, C405.2.3.1 Daylight responsive control function and section C405.2.3.2 Sidelit zone.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6233 Controls	C405.2.4	Interior Lighting	Separate lighting control devices for specific uses installed per approved lighting plans.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6234 Wattage	C405.2.4	Interior Lighting	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"/>	<input type="checkbox"/>	<input type="checkbox"/>
6235 Controls	C405.2.6	Exterior Lighting	Exterior lighting systems shall be provided with controls that comply with Sections C405.2.6.1 through C405.2.6.4. Decorative lighting systems shall comply with Sections C405.2.6.1, C405.2.6.2, and C405.2.6.4.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6238 Wattage	C405.3.1	Interior Lighting	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"/>	<input type="checkbox"/>	<input type="checkbox"/>
6242 Mandatory Additior	C406.4	Project	Enhanced digital lighting controls efficiency package: Interior lighting has following enhanced lighting controls in accordance with Section C405.2.2: Luminaires capable of continuous dimming and being addressed individually, \leq 8 luminaires controlled in combination in a daylight zone, digital control system for fixtures, "Sequence of Operations" documentation, and functional testing per Section C408.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6244 Mandatory Additior	C406.6	Project	Dedicate outdoor air system efficiency package: Buildings with hydronic and/or multiple-zone HVAC systems are equipped with an independent ventilation system designed to provide \geq 100-percent outdoor air to each individual occupied space, as specified by the IMC. The ventilation system is capable of total energy recovery and includes HVAC system controls that manage temperature resets \geq 25 percent of delta design supply-air / room-air temp. Reference section C406.6 for qualifying systems/equipment.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6245 Mandatory Additior	C406.7, C406.7.1	Project	Enhanced Service Water Heat System efficiency package. One of the following SWH system enhancements must satisfy 60 percent of buildings annual hot water requirements, or 100 percent if the building requirements otherwise complies with heat recovery per Section C403.9.5: Waste heat recovery (from SWH, process equipment, OR on-site renewable water-heating.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6248 HVAC	C408.2.2.1	Mechanical	Air outlets and zone terminal devices have means for air balancing.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6253 Testing	C408.2.3.2	Mechanical	HVAC control systems have been tested to ensure proper operation, calibration and adjustment of controls.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6261 HVAC	C403.2.14, C403.2.14.1, C403.2.14.2	Mechanical	Commercial refrigerators, freezers, refrigerator-freezers and refrigeration equipment, defined in U.S. 10 CFR part 431.62, shall have an energy use in kWh/day not greater than the values of Table C403.2.14.1(1) when tested and rated in accordance with AHRI Standard 1200. Walk-in cooler and walk-in freezer refrigeration systems, except for walk-in process cooling refrigeration systems as defined in U.S. 10 CFR 431.302, shall meet the requirements of Tables C403.2.14.2(1), C403.2.14.2(2) and C403.2.14.2(3).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. To be checked by Inspector at Project Completion and Prior to Issuance of Certificate of Occupancy						
6201 Post Construction	C408.1.1, C408.2.5.2	Interior Lighting	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6202 Post Construction	C408.1.1, C408.2.5.3	Mechanical	Furnished O&M manuals for HVAC systems within 90 days of system acceptance.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6049 Fenestration	C402.4.2.2	Envelope	Skylights in office, storage, automotive service, manufacturing, non-refrigerated warehouse, retail store, and distribution/sorting area have a measured haze value > 90 percent unless designed to exclude direct sunlight.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6246 Post Construction	C408.1.1	Project	Building operations and maintenance documents will be provided to the owner. Documents will cover manufacturers' information, specifications, programming procedures and means of illustrating to owner how building, equipment and systems are intended to be installed, maintained, and operated.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6247 Post Construction	C408.2.1	Mechanical	Commissioning plan developed by registered design professional or approved agency.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6252 Post Construction	C408.2.3.1	Mechanical	HVAC equipment has been tested to ensure proper operation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6254 Post Construction	C408.2.3.3	Mechanical	Economizers have been tested to ensure proper operation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6255 Post Construction	C408.2.4	Mechanical	Preliminary commissioning report completed and certified by registered design professional or approved agency.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6256 Post Construction	C408.2.5.1	Mechanical	Furnished HVAC as-built drawings submitted within 90 days of system acceptance.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6258 Post Construction	C408.2.5.3	Mechanical	An air and/or hydronic system balancing report is provided for HVAC systems.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6259 Post Construction	C408.2.5.4	Mechanical	Final commissioning report due to building owner within 90 days of receipt of certificate of occupancy.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6260 Post Construction	C408.3	Interior Lighting	Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6264 Post Construction	C405.6	Project	Low-voltage dry-type distribution electric transformers meet the minimum efficiency requirements of Table C405.6.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6279 Post Construction	C405.7	Project	Electric motors meet the minimum efficiency requirements of Tables C405.7(1) through C405.7(4). Efficiency verified through certification under an approved certification program or the equipment efficiency ratings shall be provided by motor manufacturer (where certification programs do not exist).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6285 Post Construction	C405.8.2, C405.8.2.1	Project	Escalators and moving walks comply with ASME A17.1/CSA B44 and have automatic controls configured to reduce speed to the minimum permitted speed in accordance with ASME A17.1/CSA B44 or applicable local code when not conveying passengers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6287 Post Construction	C405.5.3	Project	Total voltage drop across the combination of feeders and branch circuits <= 5%.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

