

COMcheck™ Plan Review and Inspection Guide for Building Officials



This COMcheck Plan Review Guide provides guidance to code enforcement officials on how to utilize COMcheck reports to support energy code plan review for commercial building projects.

The Massachusetts State Building Code 780 CMR requires that all permit applications for commercial building projects, including those in Stretch Code communities, submit documentation from the U.S. Department of Energy's COMcheck software.

C107.2.6 COMcheck Submittal.

- The construction documents submitted with the application for permit shall be accompanied by:
 - Completed COMcheck Envelope, Mechanical, and Lighting certificates
 - A COMcheck Plan Review/Inspection checklist

Benefits of COMcheck submittals for code officials

- Helps designers verify all requirements are met prior to submittal
- Helps ensure comprehensive documentation of energy code requirements
- Facilitates faster plan reviews
- Assists inspectors onsite with auto-generated inspection checklists



COMcheck Software Version COMcheckWeb Envelope Compliance Certificate

Project Information

Energy Code:	2020 Massachusetts Energy Conservation Code A
Project Title:	PSD Office Test 2020MA
Location:	Adams, Massachusetts B
Climate Zone:	5a
Project Type:	New Construction C
Vertical Glazing / Wall Area:	10%
Skylight / Roof Area:	2%

Construction Site: 123 Main Adams, Massachusetts 17999	Owner/Agent:	Designer/Contractor:	D
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Additional Efficiency Package(s)

Credits: 3.0 Required 3.0 Proposed	E
Reduced Lighting Power, 1.0 credit	
On-site Renewable Energy, 1.0 credit	
Renewable Space Heating, 1.0 credit	

Building Area	Floor Area	F
1-Office : Nonresidential	12160	

Envelope Assemblies

Assembly A	Gross Area or Perimeter C	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor _(a)	D
Roof 1: Non-Wood Joist/Rafter/Truss, [Bldg. Use 1 - Office]	6112	19.0	0.0	0.058	0.027	
Skylight 1: Metal Frame, Double Pane, Perf. Specs.: Product ID 12345, SHGC 0.40, VT 0.70, [Bldg. Use 1 - Office] (b)	112	---	---	0.400	0.500	B
Floor 1: Slab-On-Grade:Unheated, Vertical 2 ft., [Bldg. Use 1 - Office] (c)	180	---	0.0	0.730	0.540	
NORTH						
Exterior Wall 1: Solid Concrete:8" Thickness, Medium Density, Furring: Metal, [Bldg. Use 1 - Office]	6000	11.0	7.5	0.075	0.090	
Door 1: Glass (> 50% glazing):Metal Frame, Perf. Specs.: Product ID 12345, SHGC 0.60, PF 0.50, VT 0.70, [Bldg. Use 1 - Office] (b)	42	---	---	0.500	0.770	
Window 1: Metal Frame, Double Pane with Low-E, Perf. Specs.: Product ID 12345, SHGC 0.53, VT 0.70, [Bldg. Use 1 - Office] (b)	1500	---	---	0.300	0.380	
Window 2: Metal Frame, Double Pane, Perf. Specs.: Product ID 34567, SHGC 0.40, VT 0.70, [Bldg. Use 1 - Office] (b)	56	---	---	0.350	0.380	
Door 2: Insulated Metal, Non-Swinging, [Bldg. Use 1 - Office]	288	---	---	0.140	0.179	
Door 3: Insulated Metal, Swinging, [Bldg. Use 1 - Office]	40	---	---	0.200	0.370	
EAST						
Exterior Wall 2: Solid Concrete:8" Thickness, Medium Density, Furring: Metal, [Bldg. Use 1 - Office]	6000	11.0	7.5	0.075	0.090	
SOUTH						
Exterior Wall 3: Solid Concrete:8" Thickness, Medium Density, Furring: Metal, [Bldg. Use 1 - Office]	6000	11.0	7.5	0.075	0.090	

STEP 1 – Review basic project information

- A** Current Massachusetts code version has been selected.
- B** Project location is correct.
- C** Project type (new construction, addition, or alteration) has been selected.
- D** Project details, including address, building and various key project contacts.
- E** Verify that three additional packages have been selected and documented on plans.
- F** All Building Area types are listed and floor areas are correct.

Step 2 – Verify assembly types, areas, and orientation

- A** All proposed envelope assemblies are listed.
- B** Assembly types, materials, and framing spacing match plans.
- C** Assembly areas (and slab perimeter lengths) are reasonable.
- D** Orientation matches site plan.

Envelope Assemblies

Assembly	Gross Area or Perimeter	A Cavity R-Value	B Cont. R-Value	C Proposed U-Factor	Budget U-Factor ^(a)
Roof 1: Non-Wood Joist/Rafter/Truss, [Bldg. Use 1 - Office]	6112	19.0	0.0	0.058	0.027
Skylight 1: Metal Frame, Double Pane, Perf. Specs.: Product ID 12345, SHGC 0.40, VT 0.70, [Bldg. Use 1 - Office] (b)	112	---	---	0.400	0.500
Floor 1: Slab-On-Grade:Unheated, Vertical 2 ft., [Bldg. Use 1 - Office] (c)	180	---	0.0	0.730	0.540
NORTH					
Exterior Wall 1: Solid Concrete:8" Thickness, Medium Density, Furring: Metal, [Bldg. Use 1 - Office]	6000	11.0	7.5	0.075	0.090
Door 1: Glass (> 50% glazing):Metal Frame, Perf. Specs.: Product ID 12345, SHGC 0.60, PF 0.50, VT 0.70, [Bldg. Use 1 - Office] (b)	42	---	---	0.500	0.770
Window 1: Metal Frame, Double Pane with Low-E, Perf. Specs.: Product ID 12345, SHGC 0.53, VT 0.70, [Bldg. Use 1 - Office] (b)	1500	---	---	0.300	0.380
Window 2: Metal Frame, Double Pane, Perf. Specs.: Product ID 34567, SHGC 0.40, VT 0.70, [Bldg. Use 1 - Office] (b)	56	---	---	0.350	0.380
Door 2: Insulated Metal, Non-Swinging, [Bldg. Use 1 - Office]	288	---	---	0.140	0.179
Door 3: Insulated Metal, Swinging, [Bldg. Use 1 - Office]	40	---	---	0.200	0.370
EAST					
Exterior Wall 2: Solid Concrete:8" Thickness, Medium Density, Furring: Metal, [Bldg. Use 1 - Office]	6000	11.0	7.5	0.075	0.090
SOUTH					
Exterior Wall 3: Solid Concrete:8" Thickness, Medium Density, Furring: Metal, [Bldg. Use 1 - Office]	6000	11.0	7.5	0.075	0.090

STEP 3 – Verify Envelope Data

- A** Cavity R-values match plan cross sections and are appropriate for framing depth.
- B** Continuous R-values match plan cross sections and are only listed where insulation is uninterrupted by framing.
- C** Proposed fenestration U-factors match window/door schedules.

Envelope PASSES: Design 6% better than code

A

Envelope 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 systems have been designed to meet the 780 CMR Massachusetts State Building Code, 9th Edition, Energy Efficiency requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title

Signature

Date

B

STEP 4 – Envelope Compliance Statement

- A** Compliance bar reads, “Envelope PASSES”.
- B** Design professional has signed and dated the Envelope Compliance Statement.



COMcheck Software Version COMcheckWeb Mechanical Compliance Certificate

Project Information

Energy Code: 2020 Massachusetts Energy Conservation Code
 Project Title: PSD Office Test 2020MA
 Location: Adams, Massachusetts
 Climate Zone: 5a
 Project Type: New Construction

Construction Site: 123 Main
 Adams, Massachusetts 17999
 Owner/Agent:
 Designer/Contractor:

Additional Efficiency Package(s)

Credits: 3.0 Required 3.0 Proposed
 Reduced Lighting Power, 1.0 credit
 On-site Renewable Energy, 1.0 credit
 Renewable Space Heating, 1.0 credit

Mechanical Systems List

Quantity System Type & Description

- 2 RT-2 & RT-3 - Pkg. gas/elec. (Single Zone):
 Heating: 1 each - Central Furnace, Gas, Capacity = 150 kBtu/h
 Proposed Efficiency = 95.00% Et, Required Efficiency: 80.00 % Et or 78% AFUE
 Cooling: 1 each - Packaged Terminal Unit, Capacity = 113 kBtu/h, Air-Cooled Condenser, Air Economizer
 Proposed Efficiency = 12.00 EER, Required Efficiency: 9.50 EER
 Fan System: FAN SYSTEM 1 -- Compliance (Motor nameplate HP and fan efficiency method) : Passes
 Fans:
 FAN 1 Supply, Constant Volume, 5000 CFM, 5.0 motor nameplate hp, 70.0 fan efficiency grade, 0.0 total fan efficiency, 0.0 design fan efficiency , fan exception: Single fan <= 5HP
- 1 CU-1 - Condensing unit (Single Zone):
 Cooling: 1 each - Packaged Terminal Unit, Capacity = 113 kBtu/h, Air-Cooled Condenser, Air Economizer
 Proposed Efficiency = 12.00 EER, Required Efficiency: 9.50 EER
 Fan System: FAN SYSTEM 1 -- Compliance (Motor nameplate HP and fan efficiency method) : Passes
 Fans:
 FAN 1 Supply, Constant Volume, 5000 CFM, 5.0 motor nameplate hp, 70.0 fan efficiency grade, 0.0 total fan efficiency, 0.0 design fan efficiency , fan exception: Single fan <= 5HP
- 1 UH-1 - Gas unit heater (Unknown):
 Heating: 1 each - Unit Heater, Gas, Capacity = 150 kBtu/h
 Proposed Efficiency = 95.00% Ec, Required Efficiency: 80.00 % Ec
 Fan System: None
- 1 F-1 - Gas furnace (Single Zone):
 Heating: 1 each - Central Furnace, Gas, Capacity = 150 kBtu/h
 Proposed Efficiency = 95.00% Et, Required Efficiency: 80.00 % Et or 78% AFUE
 Fan System: FAN SYSTEM 2 -- Compliance (Motor nameplate HP and fan efficiency method) : Passes
 Fans:
 FAN 2 Supply, Constant Volume, 10000 CFM, 10.0 motor nameplate hp, 65.0 fan efficiency grade, 0.0 total fan efficiency, 0.0 design fan efficiency , fan exception: Single fan <= 5HP

STEP 5 – Mechanical Equipment and Controls

- A** All heating and cooling systems in the equipment schedule(s) on the plans are listed.
- B** Equipment types, capacities and proposed efficiencies match the equipment schedule/specs and the word “fails” does not appear anywhere.
- C** For each piece of equipment, all fan systems in the fan schedule are listed.



COMcheck Software Version COMcheckWeb Interior Lighting Compliance Certificate

Project Information

Energy Code: 2020 Massachusetts Energy Conservation Code
 Project Title: PSD Office Test 2020MA
 Project Type: New Construction

Construction Site: 123 Main
 Adams, Massachusetts 17999
 Owner/Agent:
 Designer/Contractor:

Additional Efficiency Package(s)

Credits: 3.0 Required 3.0 Proposed
 Reduced Lighting Power, 1.0 credit
 On-site Renewable Energy, 1.0 credit
 Renewable Space Heating, 1.0 credit

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts
1-Common Space Types:Office - Open Plan	1000	0.55	550
2-Retail:Sales Area	5000	0.57	2850
3-Common Space Types:Workshop	2700	1.13	3051
Total Allowed Watts =			6451

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
1-Common Space Types:Office - Open Plan				
LED: K: LED Panel 19W:	2	10	38	380
LED: B: LED Linear 8W:	2	10	16	160
2-Retail:Sales Area				
LED: C: LED Linear 10W:	1	50	10	500
3-Common Space Types:Workshop				
HID: Metal Halide: Standard:	1	50	32	1600
Total Proposed Watts =			2640	

Example lighting schedule for illustration; does not correspond to listed fixtures and wattages above

STEP 6 – Interior Lighting

- A** Area Categories match those present on plans.
- B** Floor areas for each Area Category match plans.
- C** Fixture descriptions match lighting schedule.
- D** Number of fixtures and wattage per fixture match lighting schedule.

LIGHT FIXTURE DESCRIPTION						
SYMB	TYPE	MANF	PART #	DESCRIPTION	COUNT	WATTS
	A	LSG	LSPRO LBAR 48 CW80 30W FR MVOLT	4' LED STRIP (INC. (2) 10 FT CABLES). AERIAL MOUNT.	74	30
	A1	LSG	LSPRO LBAR 48 CW80 30W FR MVOLT-ST	4' LED STRIP. SURFACE MOUNT	2	30
	B	LSG	LSPRO LBAR24 CW80 15W FR MVOLT-ST	2' LED STRIP. SURFACE MOUNT	4	15
	C	EXITRONX	VEX-U 8P-WB-WH	LED EXIT SIGN	0	3.4
	D	EXITRONX	VLED-U-WH-FL90-R	EMERGENCY LIGHT/EXIT COMBO 2 HEAD	4	4
	E	EXITRONX	LED-90	EMERGENCY LIGHT (2) HEADS	13	2
	F	EXITRONX	CLED-WP	EGRESS EMERGENCY LIGHT (2) HEAD	3	4
	G	TECHLIGHT	LHSWP-1-C-4-T3-F1-BZ	LED WALL PACK	5	36
	H	TECHLIGHT	LSBT-1-C-X-T3-F1-BZ	LED AREA LIGHT FOR EXT. ARM	4	147
			WMUPS42	42" EXTENSION ARM WITH WALL MOUNTS		



COMcheck Software Version COMcheckWeb Exterior Lighting Compliance Certificate

Project Information

Energy Code: 2020 Massachusetts Energy Conservation Code
 Project Title: PSD Office Test 2020MA
 Project Type: New Construction
 Exterior Lighting Zone: 4 (High activity metropolitan commercial district (LZ4))

Construction Site: 123 Main
 Adams, Massachusetts 17999
 Owner/Agent: _____
 Designer/Contractor: _____

Allowed Exterior Lighting Power

A

A Area/Surface Category	B Quantity	C Allowed Watts /	D Tradable Wattage	E Allowed Watts (B X C)
Parking area	20000 ft2	0.13	Yes	2600
Total Tradable Watts (a) =				2600
Total Allowed Watts =				2600
Total Allowed Supplemental Watts (b) =				1300

(a) Wattage tradeoffs are only allowed between tradable areas/surfaces.
 (b) A supplemental allowance equal to 1300 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

Proposed Exterior Lighting Power

C

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
Parking area (20000 ft2): Tradable Wattage Halogen 1: Halogen 55W:	1	40	55	2200
Total Tradable Proposed Watts =				2200

B

Exterior Lighting PASSES: Design 44% better than code

D

Exterior Lighting Compliance Statement

Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed exterior lighting systems have been designed to meet the 780 CMR Massachusetts State Building Code, 9th Edition, Energy Efficiency requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title _____

Signature _____

Date _____

E

STEP 7 – Exterior Lighting

- A** All applicable areas and surface categories are listed and square footage is correct.
- B** Fixture descriptions match lighting schedule.
- C** Number of fixtures and wattage per fixture match lighting schedule.
- D** Compliance bar says “PASSES”.
- E** Compliance Statement is signed and dated.



Inspection Checklist

Energy Code: 780 CMR Massachusetts State Building Code, 9th Edition,

Requirements: 10.0% were addressed directly in the COMcheck software **A**

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.

Section # & Req.ID	Plan Review B	Complies?	Comments/Assumptions
C103.2 [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	
C103.2 [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	
C103.2 [PR4] ¹	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"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C103.2 [PR8] ¹	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"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C402.4.1 [PR10] ¹	The vertical fenestration area <= 30 percent of the gross above-grade wall area.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C402.4.1 [PR11] ¹	The skylight area <= 3 percent of the gross roof area.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

STEP 8 – Plan Review Checklist

A Consider requiring designers to address 100% of the energy code requirements directly in the COMcheck software. This is done by the designer completing a checklist within COMcheck.

B Complete Plan Review checklist.

C The designer may insert comments and assumptions, including the page on the plans where the applicable information is located. Consider making this a requirement to facilitate plan reviews and inspections.

Section # & Req.ID	Plan Review C	Complies?	Comments/Assumptions
C402.4.2 [PR14] ¹	In enclosed spaces > 2,500 ft ² directly under a roof with ceiling heights >15 ft. and used as an office, lobby, atrium, concourse, corridor, storage, gymnasium/exercise center, convention center, automotive service, manufacturing, non-refrigerated warehouse, retail store, distribution/sorting area, transportation, or workshop, the following requirements apply: (a) the daylight zone under skylights is >= half the floor area; (b) the skylight area to daylight zone is >= 3 percent with a skylight VT >= 0.40; or a minimum skylight effective aperture >= 1 percent.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C402.4.2.2 [PR15] ¹	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"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C406 [PR9] ¹	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the additional energy efficiency package options.	<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:

A

Section # & Req.ID	Footing / Foundation Inspection	Complies?	Comments/Assumptions
C303.2 [FO4] ²	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	
C303.2.1 [FO6] ¹	Exterior insulation protected against damage, sunlight, moisture, wind, landscaping and equipment maintenance activities.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C402.2.6 [ME41] ³	Thermally ineffective panel surfaces of sensible heating panels have insulation >= R-3.5.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C402.5.5, C403.2.4.3 [ME3] ³	Stair and elevator shaft vents have motorized dampers that automatically close. Referenece section C403.7.7 for operational details.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.3 [ME55] ²	HVAC equipment efficiency verified.	<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.
C403.7.2 [ME115] ³	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"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.7.5 [ME116] ³	Kitchen exhaust systems comply with replacement air and conditioned supply air limitations, and satisfy hood rating requirements and maximum exhaust rate criteria.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.4.1.4 [ME63] ²	Heating for vestibules and air curtains with integral heating include automatic controls that shut off the heating system when outdoor air temperatures > 45F. Vestibule heating and cooling systems controlled by a thermostat in the vestibule with heating setpoint <= 60F and cooling setpoint >= 80F.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.2.1 [ME53] ³	Air outlets and zone terminal devices have means for air balancing.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.5, C403.5.1, C403.5.2 [ME123] ³	Refrigerated display cases, walk-in coolers or walk-in freezers served by remote compressors and remote condensers not located in a condensing unit, have fan-powered condensers that comply with Sections C403.5.1 and refrigeration compressor systems that comply with C403.5.2..	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

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

STEP 9 – Inspection Checklists

- A** Take the remaining inspection checklists to the applicable inspections and complete them in the field.
- B** Pacific Northwest National Labs has designated each item as High Impact (Tier 1), Medium Impact (Tier 2), or Low Impact (Tier 3). All items are required by code, but this information might be useful in prioritizing your time.

STEP 10 – Insulation Inspection

A Verify installed insulation and air sealing requirements are met.

Section # & Req.ID	Insulation Inspection	Complies?	Comments/Assumptions
C303.1 [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	
C303.1 [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	
C303.2 [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	
C303.2.1 [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	
C402.1.3 [IN19] ³	Non-swinging opaque doors have R-4.75 insulation.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C402.2.6 [IN18] ³	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"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C402.5.1.1 [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	

Additional Comments/Assumptions:

A

STEP 11 – Final Inspection

A Verify commissioned elements and installed equipment. Massachusetts-specific requirements will be included.

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C406.3 [FI59] ¹	Reduced lighting power. Total connected lighting power for interior and exterior lighting shall be < 90% of total lighting power calculated according to C405.3.2 for interior lighting and C405.4.2 for exterior lighting.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C408.2.3.2 [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	
C408.2.3.3 [FI32] ¹	Economizers have been tested to ensure proper operation.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C406.10 [FI60] ¹	All space heating provided with cold-climate air source heat pumps with a COP >= 1.75 at 5F outdoor air.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C408.2.4 [FI29] ¹	Preliminary commissioning report completed and certified by registered design professional or approved agency.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.5.1 [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	
C408.2.5.1 [FI16] ³	Furnished as-built drawings for electric power 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	
C408.2.5.3 [FI43] ¹	An air and/or hydronic system balancing report is provided for HVAC systems.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.5.4 [FI30] ¹	Final commissioning report due to building owner within 90 days of receipt of certificate of occupancy.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.3 [FI33] ¹	Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

A