

	maintenance shall be reviewed for applicability to installed equipment and systems before such manuals are provided to the owner. Labels required for such equipment or systems shall be inspected for accuracy and completeness and for compliance with ECC 102.3.	issuance of Certificate of Occupancy	documents	
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(2) **Commercial buildings.** The progress inspections and tests described in Table II shall be performed for buildings regulated by ECC Chapter 8, including ASHRAE 90.1 where applicable.

TABLE II – PROGRESS INSPECTIONS FOR ENERGY CODE COMPLIANCE – COMMERCIAL BUILDINGS

	Inspection/Test	Periodic (minimum)	Reference Standard (See ECC Chapter 10) or Other Criteria	ECC or Other Citation
IIA	Envelope Inspections			
IIA1	Protection of exposed foundation insulation: Insulation shall be visually inspected to verify proper protection where applied to the exterior of basement or cellar walls, crawl-space walls and/or the perimeter of slab-on-grade floors.	As required during foundation work and prior to backfill	Approved construction documents	102.2.1
IIA2	Insulation placement and R-values: Installed insulation for each component of the conditioned space envelope and at junctions between components shall be visually inspected to ensure that the R-values are marked, that such R-values conform to the R-values identified in the construction documents and that the insulation is properly installed. Certifications for unmarked insulation shall be similarly visually inspected.	As required to verify continuous enclosure while walls, ceilings and floors are open	Approved construction documents	102.1, 802.2, Tables 802.2; ASHRAE 90.1 – 5.4.1, 5.5, 5.6, 5.8.1
IIA3	Fenestration values and product ratings for U-factors and SHGC values: U-factors and SHGC values of installed fenestration shall be visually inspected for conformance with the U-factors and SHGC values identified in the construction drawings by verifying the manufacturer’s NFRC labels or, where not labeled, using the ratings in ECC Tables 102.1.3(1), (2) and (3). Where ASHRAE 90.1 is used, visible light transmittance values shall also be verified.	As required during installation	Approved construction documents; NFRC 100, NFRC 200, Tables 102.1.3	102.1.3, Tables 802.2, ASHRAE 90.1 – 5.4.2, 5.5.4, Tables 5.5; 5.6, 5.8.2
IIA4	Fenestration and door assembly product ratings for air leakage: Windows, skylights and sliding or swinging door assemblies, except site-	As required during installation	NFRC 400, AAMA/WDMA101/I.S.2, AAMA/WDMA101/I.S.2/NAFS-02; ASTM E283	802.3.1, 802.3.2; ASHRAE 90.1 –

	built windows, skylights and/or doors, shall be visually inspected to verify that installed assemblies are listed and labeled by the manufacturer to the referenced standard.			5.4.3.1, 5.4.3.2, 5.5.4, 5.6, 5.8.2
IIA5	Fenestration areas: Dimensions of windows, doors and skylights shall be verified by visual inspection.	Prior to final inspection	Approved construction documents	802.2; ASHRAE 90.1 – 5.5.4.1
IIA6	Sealing: Openings and penetrations in the building envelope, including site-built fenestration and doors, shall be visually inspected to verify that they are properly sealed.	As required during construction	Approved construction documents	802.3.3, 802.3.5, 802.3.6, 802.3.7; ASHRAE 90.1 – 5.4.3.1, 5.4.3.3 5.4.3.4
IIA7	Projection factors: Where the energy analysis utilized a projection factor > 0, the projection dimensions of overhangs, eaves or permanently attached shading devices shall be verified against approved plans by visual inspection.	Prior to final inspection	Approved construction documents, including energy analysis	Tables 802.2; 802.2.3
IIA8	Moisture control, vapor retarder: Framed walls, floors and ceilings that are not ventilated to allow moisture to escape, shall be visually inspected for installation of a vapor retarder for moisture control.	As required during construction of envelope and prior to covering vapor barrier	Approved construction documents; ASTM E96 Procedure A	802.1.2
IIB Mechanical and Service Water Heating Inspections				
IIB1	Fireplaces: Provision of combustion air and tight-fitting fireplace doors shall be verified by visual inspection.	Prior to final inspection	Approved construction documents; ANSI Z21.60 (see also MC 904), ANSI Z21.50	102.5; BC 2111; MC Chapters 7, 9; FGC Chapter 6
IIB2	Dampers integral to the building thermal envelope: Dampers shall be visually inspected to verify that such openings are equipped with motorized dampers that have been tested and listed or labeled. If such dampers are not listed or labeled, they shall be tested and shall meet the requirements to the satisfaction of the progress inspector.	As required during installation	Approved construction documents; AMCA 500	802.3.4; ASHRAE 90.1 – 6.4.3.4.4
IIB3	HVAC and service water heating equipment performance: Equipment efficiencies and other performance factors of all major equipment units, as determined by the applicant of record, and no less than 15% of minor	Prior to final inspection	Approved construction documents	803.2.2, Tables 803.2.2; 803.3.2, Tables 803.3.2;

	equipment units, shall be verified by visual inspection and, where necessary, review of manufacturer's data.			804.2, Table 804.2; ASHRAE 90.1 – 6.1, 6.3, 6.4.1, 6.8, Tables 6.8.1; 7.4.2, Table 7.8
IIB4	<p>HVAC system controls and economizers and service hot water system controls: No less than 20% of each type of required controls and economizers shall be verified by visual inspection and tested for functionality and proper operation. Such controls shall include, but are not limited to, Thermostatic; Set point overlap restriction; Off-hour; Shutoff damper; Economizers; Variable air volume fan; Hydronic systems; Heat rejection equipment fan speed; Complex mechanical systems serving multiple zones; Ventilation; Energy recovery systems; Service water heating; Hot water system; Exhaust hoods; Radiant heating systems; and Hot gas bypass systems.</p> <p>Controls with seasonally dependent functionality: Controls whose complete operation cannot be demonstrated due to prevailing weather conditions typical of the season during which progress inspections will be performed shall be permitted to be signed off for the purpose of a Temporary Certificate of Occupancy with only a visual inspection, provided, however, that the progress inspector shall perform a supplemental inspection where the controls are visually inspected and tested for functionality and proper operation during the next immediate season thereafter. The owner shall provide full access to the progress inspector within two weeks of the progress inspector's request for such access to perform the progress inspection. For such supplemental inspections, the Department shall be notified by the progress inspection approved agency of any unresolved deficiencies in the installed work within 180 days of such supplemental</p>	After installation and before final inspection, except that for controls with seasonally dependent functionality, such testing shall be performed before sign-off or issuance of a Final Certificate of Occupancy	Approved construction documents, including control system narratives; ASHRAE Guideline 1: The HVAC Commissioning Process where applicable	803.2.3, 803.2.4, 803.2.5, 803.2.6, 803.2.7, 803.3.3, 803.3.4, 803.3.5, 803.3.9, 804.3, 804.6; ASHRAE 90.1 – 6.3, 6.4.3, 6.5, 6.7.2.4, 7.4.4, Appendix E ; 1RCNY 5000-01(g)(2)

	inspection.			
IIB5	Duct, plenum and piping insulation and sealing: Installed duct and piping insulation shall be visually inspected to verify proper insulation placement and values. Joints, longitudinal and transverse seams and connections in ductwork shall be visually inspected for proper sealing.	After installation and prior to closing shafts, ceilings and walls	Approved construction documents; SMACNA Duct Construction Standards, Metal and Flexible; UL 181A or UL 181B	803.2.8, 803.2.9, 803.3.6, 803.3.7, 804.5; ASHRAE 90.1 – 6.3, 6.4.4.1, 6.4.4.2.1, Tables 6.8.2 and 6.8.3; 7.4.3
IIB6	Air leakage testing for duct systems designed to operate at static pressures in excess of 3 inches w.g. (746 Pa): Representative sections totaling at least 25% of the duct area, per ECC 803.3.6, shall be tested to verify that actual air leakage is below allowable amounts.	After installation and sealing and prior to closing shafts, ceilings and walls	Approved construction documents; SMACNA HVAC Air Duct Leakage Test Manual	803.2.8.1.1, 803.3.6; ASHRAE 90.1 – 6.4.4.2.2
IIC	Electrical Power and Lighting Systems			
IIC1	Electrical metering: The presence and operation of individual meters or other means of monitoring individual apartments shall be verified by visual inspection for all apartments.	Prior to final inspection	Approved construction documents	102.4; 805.8
IIC2	Transformers: Single-phase and three phase dry-type and liquid-filled distribution transformers shall be visually inspected to ensure that the installed transformers are listed and labeled to the referenced standard, or that associated product literature confirms that the transformers meet the referenced standard.	Prior to final inspection	Approved construction documents; NEMA TP1	102.6, 805.7
IIC3	Electric motors: Where required by the construction documents for energy code compliance, motor listing or labels shall be visually inspected to verify that they comply with the respective energy requirements in the construction documents.	Prior to final inspection	Approved construction documents	ASHRAE 90.1 – 10.4.1
IIC4	Lighting controls: Not less than 15% of each type of required lighting controls, including manual interior lighting controls, light-reduction controls, automatic lighting shut-off, guestroom controls, exterior building lighting controls and exterior grounds lighting controls, shall be verified by visual inspection and tested for functionality and proper operation.	Prior to final inspection	Approved construction documents, including control system narratives	805.2; ASHRAE 90.1 – 9.1, 9.4.1; IRCNY 5000-01(g)(3)
IIC5	Tandem wiring: Tandem wiring shall	Prior to final	Approved construction	805.3;

	be tested for functionality.	inspection	documents	ASHRAE 90.1 – 9.4.2
IIC6	Exit signs: Installed exit signs shall be visually inspected to verify that the label indicates that they do not exceed maximum permitted wattage.	Prior to final inspection	Approved construction documents	805.4; ASHRAE 90.1 – 9.4.3
IIC7	Interior lighting power: Installed lighting shall be verified for compliance with the lighting power allowance by visual inspection of fixtures, lamps, ballasts and relevant transformers.	Prior to final inspection	Approved construction documents	805.5; ASHRAE 90.1 – 9.1.3, 9.1.4, 9.2.1, 9.5, 9.6; IRCNY 5000-01(i)
IIC8	Exterior lighting power: Installed lighting shall be verified for compliance with source efficacy and/or the lighting power allowance by visual inspection of fixtures, lamps, ballasts and relevant transformers.	Prior to final inspection	Approved construction documents	805.6; ASHRAE 90.1 – 9.1.1, 9.4.4, 9.4.5
IID	Other			
IID1	Maintenance information: Maintenance manuals for equipment and systems requiring preventive maintenance shall be reviewed for applicability to installed equipment and systems before such manuals are provided to the owner. Labels required for such equipment or systems shall be inspected for accuracy and completeness and for compliance with ECC 102.3.	Prior to sign-off or issuance of Final Certificate of Occupancy	Approved construction documents, including electrical drawings; ASHRAE Guideline 4: Preparation of Operating and Maintenance Documentation for Building Systems	102.3; 803.3.8.3; ASHRAE 90.1 – 6.7.2.2, 8.7.2

(i) Energy Analysis of Constructed Conditions. In accordance with Section 28-104.3 of the Administrative Code, if constructed work differs from the last-approved full energy analysis, an as-built energy analysis shall be submitted as a post-approval amendment, listing the actual values used in the building for all applicable Energy Code-regulated items and demonstrating that the building complies with the Energy Code. Such energy analysis shall be signed and sealed by a registered design professional, who shall certify that to the best of his or her knowledge and belief the building as built complies with the Energy Code; where no trade-offs have been used among disciplines, more than one registered design professional may sign and seal the energy analysis. The energy analysis shall be approved by the Department prior to sign-off or issuance of the certificate of occupancy.