

115.00: continued

G801.2 through 5 Delete subsections.

G901.3 Floodway Encroachment Reserved.

G1001.1 Replace the words "International Building Code" with "this code".

G1001.6 Replace as follows:

G1001.6 Protection of Mechanical and Electrical Systems in a Flood-hazard Zone:
New and replacement electrical, heating, ventilating, air conditioning and other service equipment in a *flood-hazard area* shall either be placed above the *base flood elevation* or protected so as to prevent water from entering or accumulating within the system components during floods up to the *base flood elevation* in accordance with the mechanical code listed in Chapter 1.0. Installation of electrical wiring and outlets, switches, junction boxes and panels below the *base flood elevation* shall conform to the provisions of 527 CMR 12.00: *2008 Massachusetts Electrical Code (Amendments)* listed in Chapter 1.0 for location of such items in wet locations. Duct insulation subject to water damage shall not be installed below the *base flood elevation*.

APPENDIX H: Adopted in its entirety

APPENDIX I: Adopted in its entirety.

APPENDIX J: Amend as follows:

J101.1 At the end of the first sentence add this text:

'when directly associated with the construction, alteration, repair, or demolition of buildings or structures.'

APPENDIX K: ADMINISTRATIVE PROVISIONS Reserved, not adopted.

APPENDIX AA:

APPENDIX AA: STRETCH ENERGY CODE

The Stretch Energy Code is the *International Energy Conservation Code (IECC) 2009* with Massachusetts Amendments (780 CMR 115.AA).

101.1, 101.2, and 101.3 Replace as follows:

101.1 Title. This code shall be known as the Massachusetts Stretch Energy Code and shall be cited as such. It is referred to as "this code."

101.2 Scope. This code applies to new residential buildings, renovations of or additions to existing residential buildings, new commercial buildings, and additions to existing commercial buildings. Renovations of existing commercial buildings, and replacement or reconstruction of existing commercial building components and elements, are not subject to the provisions of this code. Buildings not included in this scope shall comply with Chapter 13 or 34 of the *International Building Code 2009* with Massachusetts Amendments (780 CMR 13.00 or 34.00) or for Single- and Two-family dwellings at 780 CMR 61.00, or 93.00, as applicable.

101.3 Purpose and Intent. The purpose of this code is to provide a more energy efficient alternative to the base code energy for new and existing buildings. A municipality seeking to ensure that construction within its boundaries is designed and built above the energy efficiency requirements of 780 CMR may mandate adherence to this code.

780 CMR 115.AA may be adopted by any municipality in the commonwealth in the manner prescribed by law and rescinded in the same manner it was adopted

If adopted by a municipality, this code, rather than Chapter 13 or 34 of the *International Building Code 2009* with Massachusetts Amendments (780 CMR 13.00 or 34.00) or for Single- and Two-family dwellings at 780 CMR 61.00, or 93.00, as applicable, shall govern.

This code shall regulate the design and construction of buildings to provide flexibility, and, permit the use of innovative approaches and techniques to achieve effective energy use.

101.4.3 Replace Exceptions as follows

Exceptions:

115.00: continued

1. Storm windows installed over existing fenestration.
2. Repairs to an existing sash and frame.
3. Existing ceiling, wall or floor cavities, of the building envelope, exposed or accessible during construction provided that any empty cavities are filled with insulation that meets or exceeds an *R* value of *R* - 3.5/inch.
4. Reroofing or residing over uninsulated roofs or walls where the sheathing is not exposed.
5. Replacement of existing doors that separate conditioned space from the exterior shall not require the installation of a vestibule or revolving door, provided, however, that an existing vestibule that separates a conditioned space from the exterior shall not be removed,
6. Alterations that replace less than 50% of the luminaires in a space, provided that such alterations do not increase the installed interior lighting power.
7. Alterations that replace only the bulb and ballast within the existing luminaires in a space provided that the alteration does not increase the installed interior lighting power.

104.1 Replace as follows:

104.1 General. Construction or work for which a permit is required shall be subject to inspection by the code official or approved inspection agencies.

104.5 Replace as follows:

104.5 Approved Inspection Agencies. The code official is authorized to require or accept reports of approved inspection agencies, provided such agencies satisfy the requirements as to qualifications and reliability.

107, 108 and 109 Delete.

202 Add definitions as follows:

FENESTRATION PRODUCT, FIELD-FABRICATED. A fenestration product including an exterior glass door whose frame is made at the construction site of standard dimensional lumber or other materials that were not previously cut, or otherwise formed with the specific intention of being used to fabricate a fenestration product or exterior door. Field fabricated does not include site-built fenestration with a label certificate or products required to have temporary or permanent labels.

FENESTRATION PRODUCT, SITE-BUILT. Fenestration designed to be field-glazed or field assembled units using specific factory cut or otherwise factory formed framing and glazing units. Examples of site-built fenestration include storefront systems, curtain walls, and atrium roof systems.

FURNACE ELECTRICITY RATIO. The ratio of furnace electricity use to total furnace energy computed as ratio = $(3.412 \cdot \text{EAE}) / (1000 \cdot \text{EF} + 3.412 \cdot \text{EAE})$, where EAE (average annual auxiliary electrical consumption) and EF (average annual fuel energy consumption) are defined in 10 CFR Part 430, Subpart B, Appendix N and EF is expressed in millions of Btu's per year.

ON-SITE RENEWABLE ENERGY. Includes solar photovoltaic; active solar thermal that employs collection panels, heat transfer mechanical components and a defined heat storage system; wind; small hydro; tidal; wave energy; geothermal (core earth); biomass energy systems; landfill gas and bio-fuel based electrical production. Onsite energy shall be generated on or adjacent to the project site and shall not be delivered to the project through the utility service.

301.1 through 301.3 Replace as follows:

301.1 General. Climate Zone 5 and moisture regime A (Moist) shall be used in determining the applicable requirements from Chapters 4 and 5 for locations in Massachusetts.

401 Replace as follows:

401.1 Scope. Chapter 4 applies to residential buildings.

401.2 New Construction. New low-rise (three stories or less) residential buildings including townhouses shall require a HERS (Home Energy Rating System) index rating as verified by a RESNET (Residential Energy Services Network) certified HERS rater.

1. For units equal to or greater than 3,000 sq. ft. in conditioned floor space, a HERS rating of 65 or less is required.
2. For units less than 3,000 sq. ft., a HERS rating of 70 or less is required.
3. In addition, all new construction shall demonstrate compliance with the Energy Star Qualified Homes Thermal Bypass Inspection Checklist¹

115.00: continued

TABLE 505.5.2 - INTERIOR LIGHTING POWER ALLOWANCES - continued

LIGHTING POWER DENSITY		
Building Area Type^a	Whole Building	Space by Space
	(W/ft²)	
Patient Room		0.7
Pharmacy		1.2
Hospital/Radiology		0.4
Operating Room		2.2
Recovery		0.8
Active storage		0.9
Laundry-Washing		0.6
Hospital	1.2	
Hotel	1.0	
Dining Area		1.3
Guest quarters		1.0
Reception/Waiting		2.5
Lobby		1.1
Library	1.3	
Library-Audio Visual		0.7
Stacks		1.7
Card File & Cataloging		1.1
Reading Area		1.2
Manufacturing Facility	1.3	
Low bay (<25 ft Floor to Ceiling Height)		1.2
High bay (>25 ft Floor to Ceiling Height)		1.7
Detailed Manufacturing		2.1
Equipment Room		1.2
Control Room		0.5
Motel	1.0	
Dining Area		1.2
Guest quarters		1.0
Reception/Waiting		2.1
Motion Picture Theater	1.2	
Audience/Seating Area		1.2
Lobby		1.0
Multi-Family	0.7	
Museum	1.1	
Active Storage		0.8
General exhibition		1.0
Restoration		1.7
Bank/Office - banking activity area		1.5
Office	0.9	
Enclosed		0.9
Open Plan		0.9
Parking Garage	0.3	
Penitentiary	1.0	
Performing Arts Theater	1.6	
Audience/Seating Area		2.6
Lobby		3.3
Dressing/Locker/Fitting Room		1.1
Police Stations	1.0	
Fire Stations	0.8	
Fire Station Engine Room		0.8
Sleeping Quarters		0.3
Audience/Seating Area		0.8
Police Station Laboratory		1.4

115.00: continued

TABLE 505.5.2 - INTERIOR LIGHTING POWER ALLOWANCES - continued

LIGHTING POWER DENSITY		
Building Area Type^a	Whole Building	Space by Space
	(W/ft²)	
Post Office	1.1	
Sorting Area		1.2
Lobby		1.0
Religious Buildings	1.3	
Lobby		1.7
Worship/Pulpit/Choir		2.4
Retail^b	1.3	
Department Store Sales Area		1.3
Specialty Store Sales Area		1.8
Fine Merchandise Sales Area		2.9
Supermarket Sales Area		1.3
Personal Services Sales Area		1.3
Mass Merchandising Sales Area		1.3
Mall Concourse		1.7
School/University	1.2	
Classroom		1.3
Audience		0.7
Dining		1.1
Office		1.1
Corridor		0.5
Storage		0.5
Laboratory		1.1
Sports Arena	1.1	
Ring Sports Arena		2.7
Court Sports Arena		2.3
Indoor Playing Field Arena		1.4
Town Hall	1.1	
Transportation	1.0	
Dining Area		2.1
Baggage Area		1.0
Airport - Concourse		0.6
Terminal - Ticket Counter		1.5
Reception/Waiting		0.5
Warehouse	0.8	
Fine Material		1.4
Medium/Bulky Material		0.8
Workshop	1.4	

506 Replace as follows:

SECTION 506: TOTAL BUILDING PERFORMANCE

As referenced in section 501.1, buildings establishing compliance with this code through total building performance shall be designed to achieve energy use per square foot equal to at least 20% below the energy requirements of *ASHRAE/IESNA Standard 90.1-2007, Energy Standard for Buildings Except for Low-Rise Residential Buildings*, Appendix G, measured by industry-accepted energy modeling.

507 Add section as follows:

SECTION 507: ALTERNATIVE PRESCRIPTIVE COMPLIANCE PACKAGES

507.1 Requirements. Buildings complying with the prescriptive option of section 501.4.1 shall meet the requirements of any one of the following sections:

- a. 507.2.1 Efficient Mechanical Equipment, or the Efficient HVAC Performance in accordance with section C406.2 of the *International Energy Conservation Code 2012*.
- b. 507.2.2 Reduced Lighting Power Density
- c. 507.2.3 On-Site Supply of Renewable Energy