

Massachusetts: Mandatory Passive House Certification

Starting in 2023, towns adopting the Massachusetts [opt-in stretch code will require Passive House Certification for large Multifamily buildings](#) for code compliance.

(Note: There is also a Passive House [alternative compliance pathway](#) for low-rise residential.)

Section C407.3 Add Section C407.3 as follows:

C407.3 Passive House. This option requires compliance with Section C407.3.1 and C407.3.2.

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C407.3.1 Compliance. Buildings shall be pre-certified as meeting the Phius CORE 202 or Phius ZERO 2021 Passive Building Standard – North America, or newer, demonstrate using Phius approved software, where Phius Design-Certification is demonstrated by Phius and a Certified Passive House Consultant (CPHC); or, Projects pre-certified as meeting the Certified Passive House standard using the current software and program criteria by the Passive House Institute (PHI), where PHI certification is demonstrated by a Certified Passive House Designer and a Certified Passive House Certifier.

C407.3.2 Documentation. Compliance with Phius or PHI shall be in accordance with C407.3.3.1 or C407.3.3.2

C407.3.2.1 Phius Documentation. When using WUFI Passive or other Phius-approved software:

1. Prior to the issuance of a building permit, the following item(s) must be provided to the Building Official:
 - a. A Phius 2021 (or newer) Verification Report which demonstrates project compliance with Phius 2021 (or newer) performance requirements.
 - b. A statement from the CPHC that the verification report results accurately reflect the plans submitted.
 - c. Evidence of project registration from Phius.

OR

- a. A Design Certification Letter from Phius.

2. Prior to the issuance of a certificate of occupancy, the following items must be provided to the building official:

- a. Design Certification Letter from Phius.
- b. An updated Verification Report by the CPHC which reflects “as-built” conditions and test results that demonstrate project compliance with Phius (blower door and ventilation results).
- c. A statement from the CPHC that the envelope meets the Phius hygrothermal requirements found in Appendix B of the Phius 2021 Certification guidebook
- d. A statement from the Phius Certified Verifier or Rater that the project test results and other Phius verification requirements are met.
- e. A copy of the Phius workbook listing all testing results and as-built conditions.

OR

- a. A Project Certificate demonstrating final certification awarded by Phius.

AND

- f. A statement from the Phius Verifier or Rater of compliance with C405.13: EV ready, and Appendix CB: Solar Ready Provisions.

C407.3.2.2 Passive House International (PHI) Documentation.

1. If using PHI Passive House software, prior to the issuance of a building permit, the following item(s) must be provided to the Building Official:

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- a. A PHPP compliance report which demonstrates project compliance with current PHI performance requirements;
- b. A statement from the Certified Passive House Consultant/Designer (CPHC/D) that the PHPP results and compliance report accurately reflect the plans submitted;
- c. Evidence of project registration from a Certified Passive House Certifier.

OR

- a. A Design Certification Letter from a Certified Passive House Certifier.

2. Prior to the issuance of a certificate of occupancy, the following items must be provided to the building official:

- a. A Design Certification Letter from a Certified Passive House Certifier.
- b. An updated PHPP compliance report which reflects “as-built” conditions and test results (blower door and ventilation results) that demonstrates project compliance with PHI performance requirements;
- c. A copy of the Passive House Verifier’s or Rater’s test results;
- d. A statement from the CPHC that the project test results meet the model performance requirements, all the mandatory limits and any other mandatory requirements.

OR

- a. A Final Certification Letter from a Certified Passive House Certifier

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But they also establish TEDI limits for other uses - *which are quite aggressive!*

C407.1.1.5 Thermal energy demand intensity (TEDI) limits

Performance modeling shall show that the building's heating thermal energy demand intensity and cooling thermal energy demand intensity are less than or equal to the values in Table C407.1.1.5

Table C407.1.1.5 Thermal Energy Demand Intensity (TEDI) Limits

Use Type	Heating TEDI (kBtu/sf-yr)	Cooling TEDI (kBtu/sf-yr)
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Office, fire station, library, police station, post office, town hall $\geq 125,000$ -sf	1.5	23
Office, fire station, library, police station, post office, town hall between 75,000 and 125,000-sf	$4 - 0.00002 * \text{Area (sf)}$	$18 + 0.00004 * \text{Area (sf)}$
Office, fire station, library, police station, post office, town hall $\leq 75,000$ -sf	2.5	21
K-12 School $\geq 125,000$ -sf	2.2	12
K-12 School between 75,000 and 125,000-sf	$2.7 - 0.000004 * \text{Area (sf)}$	$32 - 0.00016 * \text{Area (sf)}$
K-12 School $\leq 75,000$ -sf	2.4	20
Residential multifamily and dormitory $\geq 125,000$ -sf	2.8	22
Residential multifamily and dormitory between 75,000 and 125,000-sf	$3.8 - 0.000008 * \text{Area (sf)}$	$4.5 + 0.00014 * \text{Area (sf)}$
Residential multifamily and dormitory $\leq 75,000$ -sf	3.2	15
All other $\geq 125,000$ -sf	1.5	23
All other between 75,000 and 125,000-sf	$4 - 0.00002 * \text{Area (sf)}$	$18 + 0.00004 * \text{Area (sf)}$
All other $\leq 75,000$ -sf	2.5	21