



## 4 Administration and Enforcement

### 4.1 General

#### 4.1.1 Scope

##### 4.1.1.1 New Buildings

New *buildings* shall comply with the standard as described in Section 4.2.

##### 4.1.1.2 Additions to Existing Buildings

*Additions* to existing *buildings* shall comply with the standard as described in Section 4.2.

##### 4.1.1.3 Alterations of Existing Buildings

*Alterations* of existing *buildings* shall comply with the standard as described in Section 4.2.

##### 4.1.1.4 Replacement of Portions of Existing Buildings

Portions of a *building envelope*, heating, ventilating, air-conditioning, *service water heating*, power, lighting, and other *systems* and *equipment* that are being replaced shall be considered as *alterations* of existing *buildings* and shall comply with the standard as described in Section 4.2.

##### 4.1.1.5 Changes in Space Conditioning

Whenever *unconditioned space* or *semiheated space* in a *building* is converted to a *conditioned space*, such *conditioned space* shall be brought into compliance with all the applicable requirements of this standard that would apply to the *building envelope*, heating, ventilating, air-conditioning, *service water heating*, power, lighting, and other *systems* and *equipment* of the *space* as if the *building* was new.

##### 4.1.1.6 Mixed Occupancy.

Each occupancy in a building more than three stories above grade will be considered separately and meet the applicable provisions of this standard. Where a building is three stories or less in height and includes both I-1, R-1, R-2, R-3, or R-4 occupancies and other occupancies, the I-1, R-1, R-2, R-3, or R-4 occupancies shall comply with Minnesota Rules, chapter 1322, and the other occupancies shall meet the applicable provisions of this standard. For the purposes of this section, fire walls and horizontal assemblies shall not define separate buildings.

#### 4.1.2 Administrative Requirements

Administrative requirements relating to permit requirements, enforcement by the *authority having jurisdiction*, locally adopted *energy* standards, interpretations, claims of exemption, and rights of appeal are specified by the *authority having jurisdiction*.

M  
N  
M  
N  
M  
N  
M  
N  
M  
N  
M  
N  
M  
N  
M

## 4 Administration and Enforcement

### 4.1.3 Alternative Materials, Methods of Construction, or Design

The provisions of this standard are not intended to prevent the use of any material, method of *construction*, design, *equipment*, or *building system* not specifically prescribed herein.

### 4.1.4 Validity

If any term, part, provision, section, paragraph, subdivision, table, chart, or referenced standard of this standard shall be held unconstitutional, invalid, or ineffective, in whole or in part, such determination shall not be deemed to invalidate any remaining term, part, provision, section, paragraph, subdivision, table, chart, or referenced standard of this standard.

### 4.1.5 Other Laws

The provisions of this standard shall not be deemed to nullify any provisions of local, state, or federal law. Where there is a conflict between a requirement of this standard and such other law affecting *construction* of the *building*, precedence shall be determined by the *authority having jurisdiction*.

### 4.1.6 Referenced Standards

The standards referenced in this standard and listed in Section 12 shall be considered part of the requirements of this standard to the prescribed extent of such reference. Where differences occur between the provision of this standard and referenced standards, the provisions of this standard shall apply. Informative references are cited to acknowledge sources and are not part of this standard. They are identified in Informative Appendix E.

### 4.1.7 Normative Appendices

The normative appendices to this standard are considered to be integral parts of the mandatory requirements of this standard, which, for reasons of convenience, are placed apart from all other normative elements.

### 4.1.8 Informative Appendices

The informative appendices to this standard and informative notes located within this standard contain additional information and are not mandatory or part of this standard.

### 4.1.9 Reference Standard Reproduction Annexes

The reference standard reproduction annexes contain material that is cited in this standard but contained in another standard. The reference standard reproduction annexes are not part of this standard but are included in the publication of this standard to facilitate use of this standard.

## 4.2 Compliance

### 4.2.1 Compliance Paths

#### 4.2.1.1 New Buildings

New *buildings* shall comply with Sections 4.2.2 through 4.2.5 and either the provisions of

- a. Section 5, “*Building Envelope*”; Section 6, “*Heating, Ventilating, and Air Conditioning*”; Section 7, “*Service Water Heating*”; Section 8, “*Power*”; Section 9, “*Lighting*”; and Section 10, “*Other Equipment*,” or
- b. Section 11, “*Energy Cost Budget Method*,” or
- c. Normative Appendix G, “*Performance Rating Method*.”

When using Normative Appendix G, the Performance Cost Index (PCI) of new *buildings*, *additions to existing buildings*, and/or *alterations to existing buildings* shall be less than or equal to the Performance Cost Index Target (PCI<sub>T</sub>) when calculated in accordance with the following:

$$PCI_t = [BBUEC + (BPF \times BBREC)] / BBP$$

where

PCI = Performance Cost Index calculated in accordance with Section G1.2.

BBUEC = baseline *building* unregulated *energy* cost, the portion of the annual *energy* cost of a *baseline building design* that is due to *unregulated energy use*.

- BBREC = baseline *building* regulated *energy* cost, the portion of the annual *energy* cost of a *baseline building design* that is due to *regulated energy use*.
- BPF = *building* performance factor from Table 4.2.1.1. For *building* area types not listed in Table 4.2.1.1 use “All others.” Where a *building* has multiple *building* area types, the required BPF shall be equal to the area-weighted average of the *building* area types based on their *gross floor area*.
- BBP = *baseline building performance*.

M  
N

**Table 4.2.1.1 Building Performance Factor (BPF)**

Building Area Type	Climate Zone																
	0A and 1A	0B and 1B	2A	2B	3A	3B	3C	4A	4B	4C	5A	5B	5C	6A	6B	7	8
Multifamily	0.68	0.70	0.66	0.66	0.69	0.68	0.59	0.74	0.76	0.74	0.70	0.73	0.75	0.68	0.71	0.68	0.72
Healthcare/hospital	0.60	0.60	0.58	0.54	0.56	0.55	0.55	0.55	0.54	0.54	0.57	0.52	0.54	0.57	0.52	0.57	0.57
Hotel/motel	0.55	0.53	0.53	0.52	0.53	0.54	0.54	0.53	0.53	0.52	0.50	0.51	0.51	0.50	0.51	0.50	0.50
Office	0.52	0.57	0.50	0.56	0.53	0.56	0.48	0.51	0.52	0.49	0.51	0.51	0.49	0.52	0.51	0.49	0.51
Restaurant	0.63	0.64	0.60	0.60	0.60	0.61	0.58	0.62	0.57	0.61	0.63	0.60	0.64	0.65	0.62	0.67	0.70
Retail	0.51	0.54	0.49	0.55	0.51	0.55	0.53	0.51	0.55	0.54	0.50	0.54	0.55	0.50	0.51	0.48	0.50
School	0.39	0.47	0.38	0.43	0.38	0.42	0.40	0.37	0.40	0.38	0.36	0.40	0.36	0.36	0.37	0.36	0.37
Warehouse	0.38	0.42	0.40	0.42	0.43	0.44	0.43	0.44	0.43	0.46	0.49	0.47	0.48	0.54	0.51	0.57	0.57
All others	0.56	0.57	0.50	0.52	0.50	0.54	0.53	0.53	0.52	0.54	0.51	0.51	0.50	0.50	0.50	0.50	0.46

- PNA = proposed renewable energy contribution not allowed for compliance.
- PBP = *proposed building performance*, including the reduced, annual purchased energy cost associated with all *on-site renewable energy* generation systems.
- PBP<sub>nre</sub> = *proposed building performance* without any credit for reduced annual energy costs from on-site renewable energy generation systems.

When  $(PBP_{nre} - PBP)/BBP > 0.05$ , new *buildings*, *additions* to existing *buildings*, and/or *alterations* to existing *buildings* shall comply with the following:

$$PCI + [(PBP_{nre} - PBP)/BBP] - 0.05 < PCI_t$$

Regulated *energy* cost shall be calculated by multiplying the total *energy* cost by the ratio of *regulated energy use* to total *energy* use for each *fuel* type. Unregulated *energy* cost shall be calculated by subtracting regulated *energy* cost from total *energy* cost.

**4.2.1.2 Additions to Existing Buildings**

*Additions* to existing *buildings* shall comply with the provisions of Sections 4.2.2 through 4.2.5 and one of the following:

- a. Section 5, “*Building Envelope*”; Section 6, “*Heating, Ventilating, and Air Conditioning*”; Section 7, “*Service Water Heating*”; Section 8, “*Power*”; Section 9, “*Lighting*”; and Section 10, “*Other Equipment*,” or
- b. Section 11, “*Energy Cost Budget Method*,” or
- c. Normative Appendix G, “*Performance Rating Method*.”

in accordance with Section 4.2.1.1.

**4.2.1.2.1**

When an *addition* to an existing *building* cannot comply by itself, trade-offs will be allowed by modification to one or more of the existing components of the *existing building*. Model-

ing of the modified components of the *existing building* and *addition* shall employ the procedures of Section 11 or Normative Appendix G; the *addition* shall not increase the *energy* consumption of the *existing building* plus the *addition* beyond the *energy* that would be consumed by the *existing building* plus the *addition* if the *addition* alone did comply.

**4.2.1.3 Alterations of Existing Buildings**

Alterations of an existing building, building system, or portion thereof shall conform to this standard as related to new construction without requiring the unaltered portion(s) of the existing building or building system to comply with this standard. Alterations shall not create an unsafe or hazardous condition or overload existing building systems. *Alterations of existing buildings* shall comply with the provisions of Sections 4.2.2 through 4.2.5 and one of the following:

- a. Section 5, “*Building Envelope*”; Section 6, “Heating, Ventilating, and Air Conditioning”; Section 7, “*Service Water Heating*”; Section 8, “Power”; Section 9, “Lighting”; and Section 10, “*Other Equipment*”;
- b. Section 11, “Energy Cost Budget Method”; or
- c. Normative Appendix G, “Performance Rating Method” in accordance with Section 4.2.1.1.

---

**Exception to 4.2.1.3**

A historical *building* shall comply with this standard to the greatest extent possible without requiring alteration of elements or features determined to be historic by the historic authority having jurisdiction. Exempted components, elements, or systems shall be specifically identified on the construction documents by the designer as historic and exempt.

---

**4.2.1.4 Change of Occupancy or Use**

All spaces undergoing a change in occupancy shall comply with lighting requirements of section 9 as for new construction. Spaces undergoing a change in occupancy that result in an increase in demand for either fossil fuel or electrical energy shall comply with this standard.

---

**Exceptions to 4.2.1.4:**

- 1. A historical building shall comply with this standard to the greatest extent possible without requiring alteration of elements or features determined to be historic by the historic authority having jurisdiction. Exempted components, elements, or systems shall be specifically identified by the designer as historic and exempt.
  - 2. Change of occupancy requirements associated with a tenant space within a multi-tenant building shall not be required to modify equipment common to multiple tenants or a building envelope located beyond the tenant space.
- 

**4.2.2 Compliance Documentation**

**4.2.2.1 Construction Details**

Compliance documents shall show all the pertinent data and features of the *building, equipment, and systems* in sufficient detail to permit a determination of compliance by the *building official* and to indicate compliance with the requirements of this standard.

**4.2.2.2 Supplemental Information**

Supplemental information necessary to verify compliance with this standard, such as calculations, worksheets, compliance forms, vendor literature, or other data, shall be made available when required by the *building official*.

**4.2.2.3 Manuals**

Operating and maintenance information shall be provided to the *building* owner. This information shall include, but not be limited to, the information specified in Sections 5.7.3.2, 6.7.3.2, 7.7.3.2, 8.7.3.2, 9.7.3.2, and 10.7.3.2.





- c. The *commissioning provider* shall submit the design review report to the owner.
- d. *Construction phase commissioning* requirements shall be incorporated into *construction documents*.

#### 4.2.5.2.2 Project Commissioning Documents

Project *commissioning* documents shall comply with ASHRAE/IES Standard 202 or other *generally accepted engineering standards* acceptable to the *building official*. The *commissioning provider* shall certify completion of the required *commissioning process* and provide the following documents to the owner and design teams:

- a. **Commissioning Plan.** Identify *FPT* or verification procedures for all systems to be verified, commissioned, or tested.
- b. **Design Review Report.** Detail compliance of the design with the Owner's Project Requirements and provisions of this standard. This *commissioning* design review shall not be considered a design peer review or a code or regulatory review.
- c. **Preliminary Commissioning Report.** The preliminary *commissioning* report shall include the following:
  1. Required performance of commissioned *equipment, systems*, and assemblies, and results of *FPT* and verification
  2. Summary of compliance of the *building* and its components, assemblies, controls, and *systems* with required provisions of this standard
  3. Issues and resolution logs, including itemization of deficiencies found during verification, testing, and *commissioning* that have not been corrected at the time of report preparation
  4. Deferred tests that cannot be performed at the time of report preparation
  5. Documentation of the training of operating personnel and *building* occupants on commissioned *systems*, and a plan for the completion of any deferred trainings not completed at the time of report preparation
  6. A plan for the completion of *commissioning* and training, including climatic and other conditions required for performance of the deferred tests
- d. **Final Commissioning Report.** The *construction documents* shall require the *commissioning provider* to provide a final *commissioning* report to the owner before completion of the contractor's general warranty period.

#### 4.2.5.3 Activities Prior to Building Occupancy

Before issuance of a certificate of occupancy, the *V&T providers* or *commissioning provider* shall complete the following activities:

- a. Verification and *FPT* of the *systems* specified in Section 4.2.5.1.1 shall be completed and documented.

---

##### Exception to 4.2.5.3(a):

*Systems* for which operation is seasonally dependent and which cannot be fully verified or tested at the time of occupancy, shall be functionally tested or commissioned when allowed for by post-occupancy operating conditions as determined by the *commissioning* or *V&T providers*.

---

- b. The owner shall be provided with the verification and *FPT* documentation as provided for in Section 4.2.5.1.2, or a preliminary *commissioning* report as provided for in Section 4.2.5.2.2.
- c. The owner shall provide the *building official* with one of the following:
  1. A letter of transmittal acknowledging that the *building* owner or owner's authorized agent has received and accepted all required verification documentation, *FPT* documentation, and required preliminary *commissioning* report
  2. A copy of the reports listed in Section 4.2.5.3(b), if requested by the *building official*