

Public Review Draft

Proposed Addendum t to Standard 189.1-2023

Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings

First Public Review (July, 2025)
(Draft Shows Proposed Changes to Current Standard)

This draft has been recommended for public review by the responsible project committee. To submit a comment on this proposed standard, go to the ASHRAE website at www.ashrae.org/standards-research-technology/public-review-drafts and access the online comment database. The draft is subject to modification until it is approved for publication by the Board of Directors and ANSI. Until this time, the current edition of the standard (as modified by any published addenda on the ASHRAE website) remains in effect. The current edition of any standard may be purchased from the ASHRAE Online Store at www.ashrae.org/bookstore or by calling 404-636-8400 or 1-800-727-4723 (for orders in the U.S. or Canada).

This standard is under continuous maintenance. To propose a change to the current standard, use the change submittal form available on the ASHRAE website, www.ashrae.org.

The appearance of any technical data or editorial material in this public review document does not constitute endorsement, warranty, or guaranty by ASHRAE of any product, service, process, procedure, or design, and ASHRAE expressly disclaims such.

© July 20, 2023 ASHRAE. This draft is covered under ASHRAE copyright. Permission to reproduce or redistribute all or any part of this document must be obtained from the ASHRAE Manager of Standards, 180 Technology Pkwy NW, Peachtree Corners, GA 30092. Phone: 404-636-8400, Ext. 1125. Fax: 404-321-5478. E-mail: standards.section@ashrae.org.

ASHRAE, 180 Technology Pkwy NW, Peachtree Corners, GA 30092



© July 20, 2023 ASHRAE

This draft is covered under ASHRAE copyright. The appearance of any technical data or editorial material in this publication document does not constitute endorsement, warranty, or guaranty by ASHRAE of any product, service, process, procedure, design or the like and ASHRAE expressly disclaims such. Permission to republish or redistribute must be obtained from the MOS.

(This foreword is not part of this standard. It is merely informative and does not contain requirements necessary for conformance to the standard. It has not been processed according to the ANSI requirements for a standard and may contain material that has not been subject to public review or a consensus process. Unresolved objectors on informative material are not offered the right to appeal at ASHRAE or ANSI.)

Foreword

This addendum clarifies that certain provisions in Sec. 8 only apply to certain types of construction (e.g. new buildings, additions, etc.). These changes will not negatively affect the cost of construction and in most cases, provides relief from requirements that are difficult to meet or are undesirable for aesthetic reasons for additions or alterations.

*[Note to Reviewers: This addendum makes proposed changes to the current standard. These changes are indicated in the text by underlining (for additions) and ~~strikethrough~~ (for deletions) and **highlighted** to assist the reviewer, except where the reviewer instructions specifically describe some other means of showing the changes. Only these changes to the current standard are open for review and comment at this time. Additional material is provided for context only and is not open for comment except as it relates to the proposed changes.]*

Addendum t to 189.1-2023

Modify Sections 8.8 as shown.

8.8 Soil-Gas Control. ~~Building projects~~ **New buildings and additions** shall be designed to control soil-gas entry in accordance with Sections 8.8.1 or 8.8.2.

Exceptions to 8.8:

1. Buildings or portions thereof that are not routinely occupied, such as warehouses and open parking garages.
2. Ventilated garages that comply with ANSI/ASHRAE Standard 62.1, Sections 5.19 and 6.5.

8.8.1 Soil-Gas Control Systems. ~~Building projects~~ **Projects** shall comply with the design requirements of ANSI/AARST CC-1000, Sections 2 through 13, as modified by Section 8.8.1.1.

8.8.1.1 Soil-Gas Retarders. *Soil-gas retarder* membranes shall comply with ASTM E1745 and shall be installed in accordance with ASTM E1643.

8.8.2 Alternative Methods of Soil-Gas Control. A soil-gas control system shall be provided, and such system shall be clearly identified or otherwise noted on *construction documents* and shall be *approved* by a qualified soil-gas professional and the *building project FPT provider*.

Modify Sections 8.10, 8.10.2 and 8.10.3 as shown. Only the affected sections are shown.

8.10 Daylighting. ~~The building project~~ **New buildings and additions** shall comply with ~~either~~ Sections 8.10.1 through 8.10.3 or with Section 8.10.4.

8.10.1 Daylighting in Large Spaces Directly under a Roof and Having High Ceilings....

[remainder of Section 8.10.1 remains unchanged]

8.10.2 Minimum Sidelighting Effective Aperture. The spaces listed in Table 8.10.2A shall comply with items (a), (b) and (c).

- a. The north-, south-, and east-facing façades shall have a minimum *sidelighting effective aperture* as prescribed in Table 8.10.2B.
- b. For all façades, the combined width of the *primary sidelighted areas* shall not be less than 75% of the length of the façade wall.
- c. Opaque interior surfaces in *daylight areas* shall have average visible light reflectances greater than or equal to 80% for ceilings, 40% for partitions higher than 60 in. (1.5 m), and 60% for walls.

Exceptions to 8.10.2:

1. Spaces not adjacent to an exterior wall.
2. A space that would have tasks or activities requiring routine dark conditions for more than four daytime hours per day.
3. Spaces covered by and in compliance with Section 8.10.1 without the use of any exception.
4. Daylight areas where the height of existing adjacent structures above the window is not less than twice the distance between the window and the adjacent structures, measured from the top of the glazing.
5. Existing buildings undergoing **addition**, alteration, repair, relocation, or a change in occupancy.

[remaining parts of Section 8.10.2 are unchanged]

8.10.3 [JO] Shading for Offices. For office spaces 250 ft² (23 m²) and larger, each façade shall be designed with a shading *projection factor (PF)*. The PF shall not be less than 0.5 for the first story above grade and 0.25 for other above-grade stories. Shading is allowed to be external or internal using the *interior PF*. Shading devices shall be limited to the following:

- a. Louvers, sun shades, light shelves, and any other permanent device. Any *vertical fenestration* that employs a combination of interior and external shading is allowed to be separated into multiple segments for compliance purposes. Each segment shall comply with the requirements for either external or *interior PF*.
- b. Building self-shading through roof overhangs or recessed windows.

Exception to 8.10.3:

1. Facades facing within 45 degrees of true north in the northern hemisphere or facades facing 45 degrees from true south in the southern hemisphere.
2. Translucent panels and glazing systems with a measured haze value greater than 90% when tested according to ASTM D1003 or other *approved* test method, and that are entirely 8 ft (2.5 m) above the floor do not require external shading devices.
3. Where equivalent shading of the *vertical fenestration* is provided by buildings, structures, geological formations, or permanent exterior projections that are not horizontal, as determined by sun-angle studies at the peak solar altitude on the summer solstice and three hours before and after the peak solar altitude on the summer solstice.
4. *Vertical fenestration* with automatically controlled shading devices in compliance with Section 7.4.2.6, Exception 2.
5. *Vertical fenestration* with automatically controlled *dynamic glazing* in compliance with Section 7.4.2.6, Exception 3.
6. Existing buildings undergoing **addition**, alteration, repair, relocation, or a change in occupancy.

Modify Section 8.11 as shown.

shall comply with **either** Section 8.11.1 or 8.11.2.

[remainder of Section 8.11 remains unchanged]

Modify Section 8.12 as shown.

8.12 Exterior Views. **Not-In new buildings, not** less than 50% of the total combined floor area of each of the *space types* listed in Table 8.12 shall have a direct line-of-sight, originating at a height of not more than 42 in. (1.1 m) above the floor, to *view fenestration* meeting the criteria of this section. The line-of-sight distance to *view fenestration* shall not exceed 40 ft (12.2 m). The glazing area shall not be less than 8% of the floor area required to have exterior views. Qualifying *view fenestration* shall meet the following criteria:

- a. Glazing shall have a haze value less than 3%, as determined in accordance with ASTM D1003.
- b. Center-of-glass visible transmittance (VT) shall be not less than 20%.
- c. The product of the center-of-glass VT and the openness factor of screens, patterned films, and ceramic frits shall be not less than 20%.
- d. Where *dynamic glazing* is provided, glazing shall have a center-of-glass VT of not less than 20% at the highest setting of its VT range.
- e. Where stationary opaque window treatments are provided, such as nonoperable blinds, shades, and louvers, such treatments shall not obstruct more than 40% of the *fenestration* glazing area.