

BSR/ASHRAE/IES Addendum be to ANSI/ASHRAE/IES Standard 90.1-2022

Public Review Draft

Proposed Addendum be to Standard 90.1-2022, Energy Standard for Sites and Buildings Except Low-Rise Residential Buildings

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

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

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(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 updates Section 9 Lighting scope, exceptions in section 9.3 Simplified Building Method Compliance Path, and exceptions in section 9.4.1.1 lighting controls where lighting is designed to remain on in support of building exit access. It accomplishes the following:

- Adds clarity to lighting power used for illumination that remains on by this exception to lighting control shut OFF requirements found in five locations of Section 9.
- Reduces the exempt lighting power Watts per square foot allowance from 0.02W/ft² to 0.01W/ft² across the gross lighted floor area.
- Defines the purpose and use of the exempt lighting power for exit access.
- Improves alignment of the standard with terminology used by building codes.
- Adds the define term "exit access" that is defined in US building codes for interpretive simplicity and to support international use of the standard.

The exception's lighting power reduction does not increase construction costs and may reduce construction costs when fewer luminaires are used in compliance with the exception. Because there is no increase in construction costs or materials, there is no basis or need for a cost-effective analysis.

[Note to Reviewers: This addendum makes proposed changes to the current standard. These changes are indicated in the text by <u>underlining</u> (for additions) and <u>strikethrough</u> (for deletions) 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.]

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Modify the standard as follows for IP (and SI) units:

3.2 Definitions

exit access: That portion of a means of egress system that leads from any occupied portion of a building or structure to an exit.

[...]

Exceptions to 9.1.1.1:

- 1. Emergency lighting that is *automatically* off during<u>under</u> normal <u>power</u> operation.
- 2. Lighting, including exit signs, that is specifically designated as required by a health or life safety statute, ordinance, or regulation.
- 3. Exit signs.
- 4. Decorative gas *lighting systems*.

[...]

Table 9.3.1-1 Simplified Building Method for Office Buildings

Interior Space Type and LPA	Controls
Interior Office LPD: 0.56 W/ft² (6.0 W/m²)	
All spaces in office buildings.	All lighting shall be <i>automatically</i> controlled to turn off when individual <i>spaces</i> are either unoccupied or scheduled to be unoccupied. (Exception: Lighting powerload serving the <i>exit</i> access and not exceeding 0.012 W/ft² (0.1122 W/m²) multiplied by the gross lighted floor area of the building the space shall be permitted to operate at all times.)

[...]

Table 9.3.1-2 Simplified Building Method for Retail Buildings

Interior Space Type	Controls
Interior Retail LPD: 0.70 W/ft ² (7.5 W/m ²)	
All spaces in retail buildings.	All lighting shall be <i>automatically</i> controlled to turn off when individual <i>spaces</i> are either unoccupied or scheduled to be unoccupied. (Exception: Lighting powerload serving the exit access and not exceeding 0.012 W/ft² (0.1122 W/m²) multiplied by the gross lighted floor area of the building the space shall be permitted to operate at all times.)

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[...]

Table 9.3.1-3 Simplified Building Method for School Buildings

Interior Space Type	Controls
Interior School LPD 0.63 W/ft ² (6.8 W/m ²)	
All spaces in school buildings.	All lighting shall be <i>automatically</i> controlled to turn off when individual <i>spaces</i> are either unoccupied or scheduled to be unoccupied. (Exception: Lighting powerload serving the <i>exit access</i> and not exceeding 0.012 W/ft² (0.1122 W/m²) multiplied by the <i>gross lighted floor</i> area of the <i>building</i> the <i>space</i> shall be permitted to operate at all times.)

 $[\ldots]$

9.4.1.1 Interior Lighting Controls

[...]

h. Automatic full OFF control: All lighting in the *space*, including lighting connected to emergency circuits operating under normal power, shall be *automatically* shut off within 20 minutes of all occupants leaving the *space*. A *control device* meeting this requirement shall control no more than 5000 ft².

Exceptions to 9.4.1.1(h): The following lighting is not required to be *automatically* shut off:

- 1. Lighting required for 24/7 continuous operation.
- 2. Lighting in *spaces* where patient care is rendered.
- 3. General lighting and task lighting in spaces where automatic shutoff would endanger the safety or security of the room or building occupants.
- 4. Lighting powerload serving the exit access and not exceeding $0.0\underline{12}$ W/ft² $(0.\underline{1122}$ W/m²) multiplied by the gross lighted floor area of the building.

 $[\ldots]$

i. Scheduled shutoff: All lighting in the *space*, including lighting connected to emergency circuits <u>operating under normal power</u>, shall be *automatically* shut off during periods when the *space* is scheduled to be unoccupied using either (1) a time-of-day operated *control device* that *automatically* turns the lighting off at specific programmed times or (2) a signal from another *automatic control device* or alarm/security *system*.

The *control device* or *system* shall provide independent control sequences that (1) *control* the lighting for an area of no more than 25,000 ft², (2) include no more than one floor, and (3) shall be programmed to account for weekends and holidays. Any *manual* control installed to provide override of the scheduled shutoff control shall not turn the lighting on for more than two hours per activation during scheduled off periods and shall not *control* more than 5,000 ft².

Exceptions to 9.4.1.1(i): The following lighting is not required to be on scheduled shutoff:

- 1. Lighting required for 24/7 continuous operation.
- 2. Lighting in *spaces* where patient care is rendered.

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- 3. *General lighting* and *task lighting* in *spaces* where *automatic* shutoff would endanger the safety or security of the room or *building* occupants.
- 4. Lighting powerload serving the exit access and not exceeding $0.0\underline{12}$ W/ft² $(0.\underline{1122}$ W/m²) multiplied by the gross lighted floor area of the building.