ADDENDA

**ANSI/ASHRAE/IES Addendum e to**
**ANSI/ASHRAE/IES Standard 90.2-2018**

# Energy Efficient Design of Low-Rise Residential Buildings

Approved by ASHRAE and the American National Standards Institute on September 29, 2023, and by the Illuminating Engineering Society on September 25, 2023.

This addendum was approved by a Standing Standard Project Committee (SSPC) for which the Standards Committee has established a documented program for regular publication of addenda or revisions, including procedures for timely, documented, consensus action on requests for change to any part of the standard. Instructions for how to submit a change can be found on the ASHRAE® website (https://www.ashrae.org/continuous-maintenance).

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ASHRAE obtains consensus through participation of its national and international members, associated societies, and public review.

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The Senior Manager of Standards of ASHRAE should be contacted for

a. interpretation of the contents of this Standard,
b. participation in the next review of the Standard,
c. offering constructive criticism for improving the Standard, or
d. permission to reprint portions of the Standard.

**(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

*Addendum e expands and clarifies the requirements for lighting controls in common and public areas. The language in the 2018 edition referred users to Standard 90.1 for common area lighting control requirements. This new language provides the lighting control requirements embedded as part of the standard. The new lighting control requirements are simpler yet more stringent than Standard 90.1-2022, maintaining the energy-efficiency leadership status of Standard 90.2. Lastly, projects can still follow the Standard 90.1-2022 mandatory lighting control requirements as an alternative per the last exception in the addendum.*

***Informative Note:*** In this addendum, changes to the current standard are indicated in the text by underlining (for additions) and ~~strikethrough~~ (for deletions) unless the instructions specifically mention some other means of indicating the changes.

## Addendum e to Standard 90.2-2018

***Modify Section 7.5.4 as shown.***

**7.5.4 Common and Public Areas**

**7.5.4.1 Public and Common Areas of Residential Buildings.** In public and common *spaces* of *residential buildings*, the lighting shall meet the requirements of Section 7.5.4.1.1. ~~ASHRAE/IES Standard 90.1, Table 9.6.1.~~

**7.5.4.1.1 Lighting Controls**

a. **Local control.** Each *space* shall have a manual control device that allows the occupant to reduce lighting power by a minimum of 50% and to turn the lighting off.

b. **Shutoff control.** All lighting shall be automatically controlled to turn off when the *space* is either unoccupied or scheduled to be unoccupied.

**Exception to (b):** Lighting load not exceeding 0.02 W/ft$^2$ (0.22 W/m$^2$) of the *space* shall be permitted to operate at all times.

c. **Occupancy sensor control.** Each *space* less than 300 ft$^2$ (28 m$^2$) shall be controlled by an *occupancy sensor*.

d. **Automatic partial-off control.** Stairwells and corridors shall be controlled by *occupancy sensors* that reduce the lighting power by a minimum of 50% when no activity is detected for 15 minutes or less.

e. **Daylight responsive control.** *Luminaires* that are completely or partially within a horizontal distance of 10 ft (3 m) from the edge of a window or skylight shall be controlled with continuous daylight dimming *controls* that have the capability to adjust lighting levels down to 10% or less of full output and the capability to turn the lighting off.

**Exceptions to (e):**

1. *Space*s where the combined maximum rated lighting power completely or partially within 10 ft (3 m) from windows or skylights is less than 75 W.
2. *Space*s where the top of any existing adjacent structure or natural object is at least twice as high above the windows as its horizontal distance away from the windows.
3. *Space*s where the total glazing area is less than 20 ft$^2$ (1.9 m$^2$).
4. *Luminaires* controlled by astronomical time switches that are programmed to turn off during *daylight hours*.

f. **Parking garage control.** Lighting in *parking garages* shall be controlled by *occupancy sensors* that reduce the power by a minimum of 50% when no activity is detected for 15 minutes or less. No device shall control more than 3600 ft$^2$ (334 m$^2$). *Luminaires* within 20 ft (6.1 m) of a perimeter opening shall be controlled by daylight responsive *controls* that have the capability to adjust lighting levels down to 10% or less of full output and the capability to turn the lighting off.

**Exception to (f):** *Parking garages* serving an individual *dwelling unit.*

g. **Parking lot and other exterior lighting control**

1. *Luminaires* shall be automatically turned off during *daylight hours* or when daylight is present.

2. *Luminaires* serving outdoor *parking lots* that are mounted 25 ft (7.6 m) or less above grade shall be controlled to reduce the power by at least 50% when no activity is detected for 15 minutes or less. No more than 1500 W of lighting power shall be controlled together.

**Exceptions to 7.5.4.1.1:** *Space*s complying with the control requirements of ASHRAE/IES Standard 90.1, Tables 9.5.2.1-1 and 9.5.2.1-2.

# POLICY STATEMENT DEFINING ASHRAE'S CONCERN FOR THE ENVIRONMENTAL IMPACT OF ITS ACTIVITIES

ASHRAE is concerned with the impact of its members' activities on both the indoor and outdoor environment. ASHRAE's members will strive to minimize any possible deleterious effect on the indoor and outdoor environment of the systems and components in their responsibility while maximizing the beneficial effects these systems provide, consistent with accepted Standards and the practical state of the art.

ASHRAE's short-range goal is to ensure that the systems and components within its scope do not impact the indoor and outdoor environment to a greater extent than specified by the Standards and Guidelines as established by itself and other responsible bodies.

As an ongoing goal, ASHRAE will, through its Standards Committee and extensive Technical Committee structure, continue to generate up-to-date Standards and Guidelines where appropriate and adopt, recommend, and promote those new and revised Standards developed by other responsible organizations.

Through its *Handbook*, appropriate chapters will contain up-to-date Standards and design considerations as the material is systematically revised.

ASHRAE will take the lead with respect to dissemination of environmental information of its primary interest and will seek out and disseminate information from other responsible organizations that is pertinent, as guides to updating Standards and Guidelines.

The effects of the design and selection of equipment and systems will be considered within the scope of the system's intended use and expected misuse. The disposal of hazardous materials, if any, will also be considered.

ASHRAE's primary concern for environmental impact will be at the site where equipment within ASHRAE's scope operates. However, energy source selection and the possible environmental impact due to the energy source and energy transportation will be considered where possible. Recommendations concerning energy source selection should be made by its members.

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As an industry leader in research, standards writing, publishing, certification, and continuing education, ASHRAE and its members are dedicated to promoting a healthy and sustainable built environment for all, through strategic partnerships with organizations in the HVAC&R community and across related industries.

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