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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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 <u>underlining</u> (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 <u>Section 7.5.4.1.1</u>. <u>ASHRAE/IES Standard 90.1</u>, 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/ft² (0.22 W/m²) of the *space* shall be permitted to operate at all times.

- c. Occupancy sensor control. Each *space* less than 300 ft² (28 m²) shall be controlled by an *occupancy* <u>sensor</u>.
- d. <u>Automatic partial-off control.</u> 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. Spaces 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. Spaces 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. Spaces where the total glazing area is less than 20 ft² (1.9 m²).
- 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 ft² (334 m²). *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.

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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: Spaces complying with the control requirements of ASHRAE/IES Standard 90.1, Tables 9.5.2.1-1 and 9.5.2.1-2.

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

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