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

Public Review Draft

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

First Public Review (November 2024)
(Draft Shows Proposed Changes to Current Standard)

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FOREWORD

The simplified approach is intended to be a more efficient compliance path that also saves energy for simple buildings. How the path is designed is that it is used in lieu of both the mandatory and the prescriptive lighting requirements of the standard.

This proposal includes daylighting requirements for most spaces and also motion sensing controls for parking lot luminaires mounted less than 24 feet above grade.

[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) 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 ao to 90.1-2022

9.3 Simplified Building Method Compliance Path. The Simplified Building Method contains the requirements for interior lighting in Section 9.3.1 and exterior lighting in Section 9.3.2 and shall be allowed to be used where at least 80% of the *floor* area supports either office *buildings*, retail *buildings*, or school *buildings*. The Simplified Building Method shall be allowed ~~used~~ for new *buildings* or tenants improvements of less than 25,000 ft^2. Interior and exterior wattage allowances shall be calculated and complied with separately.

[…]

Revise tables as follows:

Table 9.3.1-1 Simplified Building Method for Office Buildings

~~**Interior Space Type and LPA**~~	~~**Controls**~~
~~**Interior office LPD: 0.56 W/ft^2 (6.0 W/m^2)**~~	
Interior office LPD: 0.53 W/ft^2 (6.0 W/m^2)	
Interior Space Type	**Controls**
All *spaces* in office *buildings*	All lighting shall be *automatically* controlled to turn off when individual *spaces* are either unoccupied or scheduled to be unoccupied. (**Exception:** Lighting load not exceeding 0.02 W/ft^2 multiplied by the gross lighted area of the *space* shall be permitted to operate at all times.)
Office *spaces* ≤150 ft^2, classrooms, conference rooms, meeting rooms, training rooms, storage rooms, and break rooms	These *spaces* shall be controlled by *manual*-ON ~~*occupant*~~ *occupancy sensors*.
Office *spaces* >150 ft^2 and restrooms	These *spaces* shall be controlled by ~~*occupant*~~ *occupancy sensors*.
Stairwells and corridors in office *buildings*	These *spaces* shall be controlled by ~~*occupant*~~ *occupancy sensors* that reduce the lighting power by a minimum of 50% when no activity is detected for not longer than 15 minutes and be controlled to turn off when the *building* is either unoccupied or scheduled to be unoccupied.
All other *spaces* in office *buildings*	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.
Parking garages *LPD*: 0.14 W/ft^2 (1.5 W/m^2) for the interior parking floors. Uncovered floors of a garage shall comply with the requirements of Table 9.3.2 for parking lots.	All lighting shall be controlled by ~~*occupant*~~ *occupancy sensors*. Controls shall reduce the power by a minimum of 50% when no activity is detected for not longer than 15 minutes. No device shall *control* more than 3600 ft^2 (334 m^2). The power to any *luminaire* within 20 ft of perimeter *wall* openings totaling at least 24 ft2 shall be *automatically* reduced through *continuous dimming* in response to available daylight.

Table 9.3.1-2 Simplified Building Method for Retail Buildings

~~**Interior Space Type**~~	~~**Controls**~~
~~**Interior Retail *LPD* 0.70 W/ft² (7.5 W/m²)**~~	
Interior Retail *LPD* 0.66 W/ft² (7.1 W/m²)	
Interior Space Type	**Controls**
All *spaces* in retail *buildings* *except sales areas and parking garages*	All lighting shall be *automatically* controlled to turn off when individual *spaces* are either unoccupied or scheduled to be unoccupied. (**Exception:** Lighting load not exceeding 0.02 W/ft² multiplied by the gross lighted area of the *space* shall be permitted to operate at all times.)
Sales area	These *spaces* shall be *automatically* controlled to • reduce the *general lighting* power by a minimum of 75% during nonbusiness hours, • to turn off all lighting other than *general lighting* during nonbusi- ness hours, and • by *continuous daylight dimming* controls in *spaces* with *toplighting*.
Stock rooms, dressing/fitting rooms, locker rooms, and restrooms	These *spaces* shall be controlled by; auto-ON or *manual*-ON ~~*occupant*~~ *occupancy sensors*, and *continuous daylight dimming* controls in *spaces* with *toplighting*.
Office *spaces*, conference rooms, meeting rooms, training rooms, storage rooms, break rooms, and utility *spaces*	These *spaces* shall be controlled by; *manual*-ON ~~*occupant*~~ *occupancy sensors*, and *continuous daylight dimming* controls in *spaces* with *toplighting*.
Stairwells and corridors in retail *buildings*	These *spaces* shall be controlled by ~~*occupant*~~ *occupancy sensors* that reduce the lighting power by a minimum of 50% when no activity is detected for not longer than 15 minutes and be controlled to turn off when the *building* is either unoccupied or scheduled to be unoccupied.
All other *spaces* in retail *buildings*	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.
Parking garages *LPD*: 0.14 W/ft² (1.5 W/m²) for the interior parking floors. Uncovered floors of a garage shall comply with the requirements of Table 9.3.2 for parking lots.	All lighting shall be controlled by ~~*occupant*~~ *occupancy sensors*. Controls shall reduce the power by a minimum of 50% when no activity is detected for not longer than 15 minutes. No device shall *control* a more than 3600 ft² (334 m²). The power to any *luminaire* within 20 ft of perimeter *wall* openings totaling at least 24 ft2 shall be *automatically* reduced through *continuous dimming* in response to available daylight.

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)~~	
Interior School *LPD*: 0.60 All W/ft^2 (6.5 W/m^2)	
Interior Space Type	**Control*s***
All *spaces* in school *buildings* except parking garages	All lighting shall be *automatically* controlled to turn off when individual *spaces* are either unoccupied or scheduled to be unoccupied. (**Exception:** Lighting load not exceeding 0.02 W/ft^2 multiplied by the gross lighted area of the *space* shall be permitted to operate at all times.)
Classrooms, offices *spaces*, conference rooms, meeting rooms, library, storage rooms, and break rooms	These *spaces* shall be controlled by *manual*-ON ~~*occupant*~~ *occupancy sensors*.
Gymnasiums and cafeterias	These *spaces* shall be controlled by ~~*occupant*~~ *occupancy sensors*.
Restrooms	These *spaces* shall be controlled by ~~*occupant*~~ *occupancy sensors*.
All other *spaces* in school *buildings*	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.
Stairwells and corridors in school *buildings* and parking garages	These *spaces* shall be controlled by ~~*occupant*~~ *occupancy sensors* that reduce the lighting power by a minimum of 50% when no activity is detected for not longer than 15 minutes and be controlled to turn off when the *building* is either unoccupied or scheduled to be unoccupied.
Parking Garages *LPD*: 0.14 W/ft^2 (1.5 W/m^2) for the interior parking floors. Uncovered floors of a garage shall comply with the requirements of Table 9.3.2 for parking lots.	All lighting shall be controlled by ~~*occupant*~~ *occupancy sensors*. Controls shall reduce the power by a minimum of 50% when no activity is detected for not longer than 15 minutes. No device shall *control* a more than 3600 ft^2 (334 m^2). The power to any *luminaire* within 20 ft (6 m) of perimeter *wall* openings totaling at least 24 ft^2 (2.2 m^2)shall be *automatically* reduced through *continuous dimming* in response to available daylight.

Add exterior application "parking lots with canopies" to clarify that parking lot areas have the same LPD and controls requirements regardless of the presence of canopies

Table 9.3.2 Simplified Building Method for Building Exteriors

Exterior Area Type	Exterior Lighting Power ~~Allowance~~ Density [a]	Controls
All exterior areas		All lighting shall be *automatically* controlled to shut off the lighting when daylight is available.
Base allowance of 200 W which may be used in any exterior area in addition to the *exterior lighting power allowance*		*Luminaires* shall be turned off or the power reduced by a minimum of 75% during nonoperating hours.
Façade lighting	~~0.10~~ 0.11 W/ft^2 (1.18 W/m^2)	*Luminaires* shall be turned off or the power reduced by a minimum of 75% during nonoperating hours.
Roof terraces, special feature areas, walkways, plazas and ramps	0.07 W/ft^2 (0.75 W/m^2)	*Luminaires* shall be turned off or the power reduced by a minimum of 75% during nonoperating hours.
Landscape	~~0.036~~ 0.028 W/ft^2 (0.30 W/m^2)	*Luminaires* shall be turned off or the power reduced by a minimum of 75% during nonoperating hours.
Entry doors	~~14~~ 10 W/linear ft (31 W/m)	*Luminaires* shall be turned off or the power reduced by a minimum of 75% during nonoperating hours.
Stairs	Exempt	No additional controls required.
~~Parking lots and drives~~	~~0.037 0.028 W/ft^2 (0.30 W/m^2)~~	~~*Luminaires* mounted 25 ft or less above *grade* shall be controlled to reduce the power by at least 50% when no activity is detected for not longer than 15 minutes.~~
Parking lots with canopies Parking lots without canopies and drives	~~0.037~~ 0.028 W/ft^2 (0.30 W/m^2)	*Luminaires* mounted 25 ft or less above *grade* shall be controlled to reduce the power by at least 50% when no activity is detected for not longer than 15 minutes. All other *luminaires* shall be turned off or the power reduced by a minimum of 75% during nonoperating hours.
All other areas not listed	~~0.020~~ 0.010 W/ft^2 (0.11 W/m^2)	*Luminaires* shall be turned off or the power reduced by a minimum of 75% during nonoperating hours.