

OCEC Modification – Recommendation # 01

Lighting Alterations

- Committee recommended changes are shown in red

OSSC: 1313.1.1.2 Alterations. The alteration of lighting systems in any building space or exterior area shall comply with the lighting power density (LPD) requirements of Section 1313.4 and 1313.5 applicable to that space or area. Such alteration shall include all luminaires that are added, replaced, or removed. This requirement shall also be met for alterations that involve just the lamps plus ballasts. Alterations do not include routine maintenance or repair.

Exception: Alterations that replace ~~the greater of: less than 50~~ 10 percent of the connected lighting load ~~or ten fixtures~~ in a space or area need not comply with these requirements provided that such alterations do not increase the LPD.

Any new lighting control devices that are installed shall comply with the requirements of Section 1313.3.

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IECC: 101.4.3 Additions , Alterations, renovations or repairs. Additions, alterations, renovations or repairs to an existing building, building system or portion thereof shall conform to the provisions of this code as they relate to new construction without requiring the unaltered portion(s) of the existing building or building system to comply with this code. Additions, alterations, renovations or repairs shall not create an unsafe or hazardous condition or overload existing building systems. An addition shall be deemed to comply with this code if the addition alone complies or if the existing building and addition comply with this code as a single building.

Exception 7. Alterations that replace less than 50 percent of the in a space, provided that such alterations do not increase the installed interior lighting power.

ASRAE 90.1: 9.1.2 Lighting Alterations. The replacement of lighting systems in any building space shall comply with the LPD requirements of Section 9 applicable to that space. Any new control devices as a direct replacement of existing control devices shall comply with the specific requirements of Section 9.4.1.2(b).

Exception: Alterations that replace less than 50% of the luminaires in a space need not comply with these requirements provided that such alterations do not increase the installed lighting power.

OCEC Modification – Recommendation # 02

Lighting Controls

- Committee recommended changes shown in red

OSSC: 1313.3.1.2 Automatic shutoff control. All spaces Buildings greater than 5,000 square feet (465 m²) and office occupancies over 2,000 square feet (186 m²) of contiguous floor area shall be equipped with ~~separate~~ automatic controls to shut off the lighting during unoccupied periods. Automatic controls shall be an occupancy sensor, time switch or other device capable of automatically shutting off lighting that complies with Section 1313.3.1.2.1 or 1313.3.1.2.2.

Offices less than 300 square feet (27.9 m²), meeting and conference rooms, and school classrooms shall be equipped with occupancy sensors that comply with Section 1313.3.1.2.1.

Exceptions:

1. ~~Emergency Egress lighting and pathway lights~~ as required by code **that are automatically off during normal building operation.**
2. ~~Egress lighting and pathway lights that are is normally ON during normal building operation shall, and is either:~~
 - 2.1 ~~during unoccupied periods, be limited to five percent of the installed lighting power density as listed in Table 1313.4.1 or 1313.4.2; or unless~~
 - 2.2 ~~controlled by an occupancy sensor.~~
3. Where the **lighting** system is serving an area that must be continuously lit **for 24-hour operation.**
4. Display and accent lighting, **located within 2 feet of a display window,** including plug-in, track and display case lighting. ~~is exempt. All other display and accent lighting shall be separately controlled have automatic controls separate from the general lighting controls to turn off the lighting after business hours.~~
5. Switching for industrial or manufacturing process facilities as may be required for production.
5. ~~24-hour occupancy areas in Hhospitals and laboratory spaces.~~
6. Areas in which medical or dental tasks are performed.
7. Mechanical and electrical equipment rooms.

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IECC: 505.2.2.2 Automatic lighting shutoff. Buildings larger than 5,000 square feet (465 m²) shall be equipped with an automatic control device to shut off lighting in those areas. This automatic control device shall function on either:

1. A scheduled basis, using time-of-day, with an independent program schedule that controls the interior lighting in areas that do not exceed 25,000 square feet (2323 m²) and are not more than one floor; or
2. An occupant sensor that shall turn lighting off within 30 minutes of an occupant leaving a space; or
3. A signal from another control or alarm system that indicates the area is occupied.

Exception: The following shall not require an automatic control device:

1. Sleeping unit (see Section 505.2.3)
2. Lighting in spaces where patient care is directly provided.
3. Spaces where an automatic shutoff would endanger occupant safety or security.

ASHRAE 90.1: 9.4.1.1 Automatic Lighting Shutoff. Interior lighting in buildings larger than 5,000 ft² shall be controlled with an automatic control device to shut off building lighting in all spaces. This automatic control device shall function on either:

- a. A scheduled basis using a time-of-day operated control device that turns lighting off at specific programmed times – an independent program schedule shall be provided for areas of no more than 5,000 ft² but no more than one floor – or
- b. An occupant sensor that shall turn lighting off within 30 minutes of an occupant leaving a space or
- c. A signal from another control or alarm system that indicates the area is unoccupied.

Exceptions: The following shall not require automatic control device:

- a. Lighting intended for 24-hour operation.
- b. Lighting in spaces where patient care is rendered.
- c. Lighting in spaces where an automatic shutoff would endanger the safety or security of the room or building occupant(s)

OCEC Modification – Recommendation # 03

Lighting Controls

- Committee recommended changes are shown in red

OSSC: 1313.3.1.3.1 Daylighting requirements for windows. Classrooms and atriums with a window to exterior wall ratio of 50 percent or greater shall use automatic daylight sensing controls for all permanently installed luminaries. **Daylighting Controls shall be located within a distance equal to the ceiling height** ~~15 feet (4572 mm)~~ inward and **from the wall that the window is located** ~~within and~~ **5 feet (1524 mm)** on each side of the windows. For the purpose of this section, the window-to-wall ratio is measured on the inside room of the exterior walls.

1313.3.1.3.2 Daylighting requirements for skylights. In **all areas** ~~classrooms and atriums~~ with skylights, monitors or other fenestration at or above ceiling level, all permanent luminaries within an area equal to the footprint of the ceiling opening plus **70 percent of** the floor-to-ceiling height in each direction **outward from the edge** of the opening, shall be controlled by automatic daylight sensing controls.

Exception: Daylight spaces enclosed by walls or ceiling height partitions and containing two or fewer light fixtures are not required to have daylighting controls for general area lighting.

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IECC: 505.2.2.3 Daylight zone control. Daylight zones, as defined by this code, shall be provided with individual controls that control the lights independent of general area lighting. Contiguous daylight zones adjacent to vertical fenestration are allowed to be controlled by a single controlling device provided that they do not include zones facing more than two adjacent cardinal orientations (i.e., north, east, south, west). Daylight zones under skylights more than 15 feet (4572 mm) from the perimeter shall be controlled separately from daylight zones adjacent to vertical fenestration.

Exception: Daylight spaces enclosed by walls or ceiling height partitions and containing two or fewer light fixtures are not required to have a separate switch for general area lighting.

(Definition) - Daylight zone.

1. **Under skylights.** The area under skylights whose horizontal dimension, in each direction, is equal to the skylight dimension in that direction plus either the floor-to-ceiling height or the dimension to a ceiling height opaque partition, or one-half the distance to adjacent skylights or vertical fenestration, whichever is least.
2. **Adjacent to vertical fenestration.** The area adjacent to vertical fenestration which receives daylight through the fenestration. For purposes of this definition and unless more

detailed analysis is provided, the daylight zone depth is assumed to extend into the space a distance of 15 feet (4572 mm) or to the nearest ceiling height opaque partition, whichever is less. The daylight zone width is assumed to be the width of the window plus 2 feet (610 mm) on each side, or the window width plus one-half the distance to adjacent skylight or vertical fenestration, whichever is least.

ASHRAE 90.1: Unavailable