



2016 Building Energy Efficiency Standards Lead Commissioner Hearing for 45-Day

SUBCHAPTER 6 - Nonresidential, High-rise Residential, and Hotel/Motel
Section 141(b)2

Additions and Alterations to Existing Buildings



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The track changes are relative to the posted 45-day language:

- I. **Entire Luminaire Alterations.** For each enclosed space, where the following lighting system alterations specified in Subsections i through iii include a sum total of ~~40~~20 percent or more of the existing luminaires, the alterations shall not cause the lighting power allowance in Section 140.6 to be exceeded and the altered luminaires shall meet the applicable requirements in TABLE 141.0-E:
- i. Adding luminaires to the enclosed space; or
 - ii. Replacing entire luminaires in the enclosed space ~~a manner other than the one for one replacements described in Section 141.0(b)2I or Exception 2~~; or
 - iii. In an enclosed space, reinstalling a luminaire removed from the same space or elsewhere, including luminaires which have had their components altered prior to re-installation.

EXCEPTION 1 to Section 141.0(b)2I. Alteration of portable luminaires, luminaires affixed to moveable partitions, or lighting excluded in accordance to Section 140.6(a)3.

EXCEPTION 2 to Section 141.0(b)2I. One for one replacement of luminaires where the new luminaires have at least 20 percent lower ~~or the same~~ power consumption compared to the original luminaires.

EXCEPTION 3 to Section 141.0(b)2I. In an enclosed space where only one luminaire is altered per Subsections ii and iii above.

EXCEPTION 4 to Section 141.0(b)2I. Alterations that would directly cause the disturbance of asbestos, unless the alterations are made in conjunction with asbestos abatement.



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J. **Luminaire Component Alterations.** Where 40 or more existing luminaires are modified as specified in i through ~~iii~~^{iv} below on any single floor of a building, the modifications shall not cause the lighting power allowance in Section 140.6 to be exceeded, shall comply with Subsections 130.1(a) 1, 2, and 3, and shall not prevent or disable the operation of any multi-level, shut-off, or daylighting controls installed to control the luminaires:

- i. Replacing the ballasts or drivers and the associated lamps in the luminaire; or
- ii. Permanently changing the light source of the luminaire; or
- iii. Changing the optical system of the luminaire.

Lamp replacements alone and ballast replacements alone shall not be considered a modification of the luminaire provided that the replacement lamps or ballasts can be installed and powered without modifying the luminaire.

EXCEPTION 1 to Section 141.0(b)2J. Modification of portable luminaires, luminaires affixed to moveable partitions, or lighting excluded in accordance to Section 140.6(a)3.

EXCEPTION 2 to Section 141.0(b)2J. ~~One-for-one~~^RReplacement of luminaire components where the modified luminaires have at least 20 percent lower ~~or the same~~ power consumption compared to the original luminaires.

EXCEPTION 3 to Section 141.0(b)2J. Modifications that would directly cause the disturbance of asbestos, unless the modifications are made in conjunction with asbestos abatement.



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K. **Lighting Wiring Alterations.** For each enclosed space, the following wiring alterations serving permanently installed lighting shall not cause the lighting power allowance in Section 140.6 to be exceeded and the altered circuits and luminaires served by them shall meet the applicable requirements in Sections 130.1(a), (b), (c), and (d):

- i. Adding a circuit feeding luminaires;
- ii. Replacing, modifying, or relocating wiring between a switch or panelboard and luminaires; or
- iii. Replacing lighting control panels, panelboards, or branch circuit wiring.

EXCEPTION to Section 141.0(b)2K. Alterations that would directly cause the disturbance of asbestos, unless the alterations are made in conjunction with asbestos abatement.



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TABLE 141.0-E Control Requirements for Lighting System Alterations

<u>Mandatory eControl requirements that shall be met when 1020% or more of existing luminaires are altered</u>	<u>Resulting lighting power, compared to the lighting power allowance specified in Section 140.6(c)2</u>	
	<u>Lighting power is ≤ 85% of allowance</u>	<u>Lighting power is > 85% to 100% of allowance</u>
Section 130.1(a) <u>1, 2, and 3 Area Controls</u>	<u>Yes</u>	<u>Yes</u>
Section 130.1(b) <u>Multi-Level Lighting Controls – only for alterations to general lighting of enclosed spaces 100 square feet or larger with a connected lighting load that exceeds 0.5 watts per square foot</u>	<u>For each luminaireenclosed space,</u> <u>minimum one step between 30-70 percent regardless of luminaire type, or meet Section 130.1(b)</u>	<u>Yes</u>
Section 130.1(c) <u>Shut-Off Controls</u>	<u>Yes</u>	<u>Yes</u>
Section 130.1(d) <u>Automatic Daylight Controls</u>	<u>Not Required</u>	<u>Yes</u>
Section 130.1(e) <u>Demand Responsive Controls – only for alterations > 10,000 ft² in a single building, and where the alteration changes the area of the space, or occupancy type of the space, or increases the lighting power</u>	<u>Not Required</u>	<u>Yes</u>