

**DOCKETED**

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<b>Project Title:</b>	Acceptance and Training Certification
<b>TN #:</b>	260611
<b>Document Title:</b>	Expectations Letter Lighting Controls for CALCTP
<b>Description:</b>	2025 ATTCP UPDATE REPORT GUIDANCE
<b>Filer:</b>	Rinnie Kaur
<b>Organization:</b>	California Energy Commission
<b>Submitter Role:</b>	Commission Staff
<b>Submission Date:</b>	12/12/2024 11:38:00 AM
<b>Docketed Date:</b>	12/12/2024



December 11, 2024

Leslie Nardoni, CALCTP Program Manager  
California Advanced Lighting Control Training Program (CALCTP)  
555 W. Fifth Street, Suite 3100,  
Los Angeles, CA 90013

RE: 2025 ATTCP UPDATE REPORT GUIDANCE

Dear Leslie Nardoni:

In accordance with §10-103.1(d)2 of the 2022 Energy Code, an acceptance test technician certification provider (ATTCP) must submit an update report to the California Energy Commission (CEC) for approval of proposed adjustments to the ATTCP's program to address updates to the Energy Code adopted by the CEC for the 2025 Energy Code cycle. The update report must contain a signed certification that the ATTCP has met all requirements of §10-103.1 and shall be approved through the amendment process in §10-103.1(f). An ATTCP shall be given at least six months after an Energy Code update is adopted to prepare the update report and must submit the update report at least six months before the adopted Energy Code becomes effective.

The CEC adopted the 2025 Energy Code on September 11, 2024, and the updated code is anticipated to take effect on January 1, 2026. Therefore, the 2025 ATTCP update report must be submitted prior to July 1, 2025. However, staff recommends that each ATTCP submit the 2025 update report no later than March 30, 2025, to allow sufficient time for CEC review and approval, and so the ATTCP may begin recertification training in advance of January 1, 2026.

To help facilitate the transition to the new and modified requirements of the 2025 Energy Code cycle, staff identified the most significant changes that will likely require updates to a lighting control ATTCP application.

Changes in the 2025 Energy Code that affect ATTCPs at the organizational level are listed in Attachment 1 to this letter. Changes in the 2025 Energy Code and Reference Appendices that affect the ATT and ATE training curricula are listed in Attachment 2 to this letter. The new recertification training and updates to the full certification

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training must also include changes to the lighting controls acceptance documents, which are summarized in Attachment 3 to this letter.

Staff does not anticipate that the approved lighting controls ATTCPs will need to make substantive application amendments, as defined in §10-103.1(f)1B, for the 2025 changes described in the attachments to this letter. However, it is possible that some of the changes in Attachment 1 may prompt substantive amendments by an ATTCP. An ATTCP may also choose to submit substantive or non-substantive amendments unrelated to the 2025 changes in the update report. If the 2025 update report includes any substantive amendments to the approved ATTCP application, then CEC approval at a business meeting will be required.

As a reminder, any confidential material (i.e., training materials, tests, or proprietary information) that needs updating will require the ATTCP to resubmit an Application for Confidential Designation, available on the CEC website at <https://www.energy.ca.gov/media/3539>, to the CEC Dockets Unit, or contact the CEC to amend the agreement on file.

I look forward to working with you and your staff. If you have any questions, please contact me at [Rinnie.Kaur@energy.ca.gov](mailto:Rinnie.Kaur@energy.ca.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "R. R. A.", with a stylized flourish at the end.

Rinnie Kaur  
Electrical Engineer

Attachments (3)

## Attachment 1: 2025 Changes Affecting the ATTCP Requirements

Section	Description of Change
Section 10-103.1(c)3Bim	The change from “IES Lighting Handbook, 10th Edition, 2011” to “IES Lighting Library” ensures the referenced publication is up to date with the energy code.
Section 10-103.1(c)3Fi	The change adds “ Independent oversight may be demonstrated by accreditation under the ISO/IEC 17024 standard.”
Section 10-103.1(c)3Fiii	This change adds an alternative to allow ATTCP shadow audits of Acceptance Test Technicians (ATTs) to occur at ATTCP training facilities.
Section 10-114, TABLE 10-114-A	This change updates the US Census from 2010 to 2020.

## Attachment 2: 2025 Changes Affecting the Training Curricula

Section	Description of Change
Section 100.1(b), definition of "Laboratory"	This change adds the term "Laboratory," defined as a space or room where hazardous materials are used for activities such as testing, analysis, instruction, research, or developmental activities.
Section 100.1(b), definition of "Laboratory Suite"	This change adds the term "Laboratory Suite," defined as a Group L occupancy space within a building or structure, which may include multiple laboratories, offices, storage, equipment rooms, or similar support functions.
Section 100.1(b), definition of "Lighting-Automatic Daylighting Control"	This change deletes the defined term "Automatic Daylight Control". The deleted term is no longer used in Section 130.1(d) and Section 160.5(b)4D.
Section 100.1(b), definition of "Lighting-Daylight Responsive Control"	This change adds a defined term, "Daylight Responsive Control". The newly defined term "Daylight Responsive Control" replaces the previous term "Automatic Daylighting Controls" in Section 130.1(d) and Section 160.5(b)4D.
Section 100.1(b), definition of "Lighting-Multilevel Lighting Control"	This change revises the definition of "Multilevel Lighting Control". Specifically, replaced the word "level" with "intensity" and deleted the words "across multiple levels."
Section 100.1(b), definition of "OpenADR 3.0, Baseline Profile"	This change adds the definition for "Baseline Profile OpenADR 3.0". In Sections 110.12(a)1A 110.12(a)1B, the Baseline Profile OpenADR 3.0 was added as a new option for meeting demand response control requirements. The definition for Baseline Profile OpenADR 3.0 directs users to use the baseline profile described in OpenADR 3.0 specifications made by the OpenADR Alliance.
Section 100.1(b), definition of "Lighting-Temporary Lighting"	This change is to revise the definition of the installation period of temporary lighting and to clarify that temporary lighting does not persist beyond the time constraints specified in California Electrical Code Article 590.
Section 100.1(b), definition of "Virtual End Node"	This change updates the definition for virtual end node (VEN) to include a reference to the Baseline Profile OpenADR 3.0. VEN is an interface that can be an Energy management system or a thermostat that accepts demand response signals through Open Automated Demand Response (OpenADR). The definition has been updated to add a new specification OpenADR 3.0 to existing OpenADR 2.0a or 2.0b.
Section 110.9(b)2	This change renames the previous term "daylighting controls" to "daylight responsive controls" in this section.
Section 110.12(a)1A	Adds an option for certified Baseline Profile OpenADR 3.0. The new Baseline Profile OpenADR 3.0 certification is expected to be used widely by energy storage and renewable energy systems. Including the Baseline Profile OpenADR 3.0 as an option for meeting demand responsive controls ensures that manufacturers will be able to meet requirements in Section 110.12. The Baseline Profile OpenADR 3.0 is designed to be simpler to certify while still providing the functionality needed to meet demand response needs.
Section 110.12(a)1B	This adds an option for equipment certified to respond to a certified Baseline Profile OpenADR 3.0 signal.
Section 110.12(a)2	This change is to replace "pathway" with "protocol" in the term "wired or wireless bidirectional communication," and the change clarifies the demand responsive controls communications requirement.
Section 110.12(a)4	This change is to replace "communication" with "the demand response signal," and clarifies that in the event the demand response signal is disabled or unavailable, the requirement of Section 110.12(a)4 would apply.
Section 110.12(c)	This change is to specify more accurately that the general lighting in the spaces required to meet Sections 130.1(b) and 160.5(b)4B, multilevel lighting controls, shall be controlled with demand-responsive lighting controls and to revise the illuminance uniformity requirements with reference to Sections 130.1(b) and 160.5(b)4B instead of Table 130.1-A.

Section	Description of Change
Section 110.12(e)	Clarifies that demand-responsive controlled receptacles are required in specific building spaces, not necessarily the entire building. Adds references to Sections 130.5(d) and 160.6(d) to specify the spaces where demand-responsive controlled receptacles must be installed.
Section 110.12(e) Exception 1	This change removes Exception 1 from Section 110.12(e).
Section: 130.0(a)	This change is to remove the NOTE or clarity without changing the intent.
Section: 130.0(b)	This change is to remove the NOTE for clarity without changing the intent.
Section 130.1(a)	This change is to delete the word "indoor" from the term "indoor space".
Section 130.1(a)	This change replaces "manual area controls" and "area enclosed by ceiling partitions" with the concise terms: "manual controls" and "each space". The change does not affect the mandatory requirements for providing manual controls in specific locations. It primarily focuses on improving the overall readability and clarity of the Energy Code.
Section 130.1(a)2	This change is to remove the word "display" and to add a word, "the" preceding "status".
Section 130.1(a) Exception, item "2"	This change is to add "during a normal power failure " to the end of the sentence and to revise the other part of the sentence as "The egress lighting controls shall not be controllable by unauthorized personnel ..."
Section 130.1(a)2 Exception 1	This change consolidates Exception 1 and 130.1(a)2 and removes exception 1 for concise language that is easier to read and comprehend. Section 130.1(a)2 already addresses the possibility of locating manual controls outside the controlled space for certain spaces; the exception becomes redundant.
Section 130.1(b)	This change consolidates the controls requirements of Table 130.1-A, Subsections 130.1(b)1 and 130.1(b)2 to Section 130.1(b), removing table 130.1-A. The requirement for continuous dimming from 10-100% for LED lights is retained. The requirements related to fluorescent lamps due to their impending ban are removed. The requirement for maintaining illuminance uniformity is removed (as it's not directly related to multilevel lighting controls and may conflict with IES recommendations).
Section 130.1(b), Exception 1	This change modifies the exception related to enclosed spaces with only one luminaire, stating that multilevel lighting controls are not required in such cases. It clarifies LED light sources are not lamps.
Section 130.1(b): Exception 4	This addition of Exception 4 will provide flexibility in certain lighting applications, allowing for the continued use of HID or induction sources. Exception 4 to Section 130.1(b): The general lighting with light source of HID and induction shall have a minimum of one control step between 30 and 70 percent of full rated power.
Section 130.1(b), Exception 5	This change is to remove Exception 5 to Section 130.1(b). The removal of this exception to classrooms for meeting Section 130.1(b) is necessary as it is determined that it is technically feasible for classrooms to meet the multilevel lighting controls requirements.
Section 130.1(c) Exception 2	This change moves the egress illumination Exception to section 130.1(c). This is a life safety requirement taking precedence to the shut-off controls requirement. It replaces "means of egress illumination" with "continuous illumination" to improve understanding.
Section 130.1(c)1	This change specifies a maximum 20-minute time delay for occupant sensing controls. Replaces "separate controls" with "separate control zones" for spaces exceeding 5,000 square feet.
Section 130.1(c)1 Exception 2	This change updates the list of sections that are exempt from Section 130.1(c)1 requirements to reflect changes in shut-off control regulations. This change removes Section 130.1(c)7 from the exception list and adds Section 130.1(c)6E and lighting in stairwells and common area corridors of hotels/motels in the exceptions list.
Section 130.1(c)1 Exception 3	This change moves the means of egress exception from Section 130.1(c)1 to Section 130.1(c) to apply to all shut-off controls.

Section	Description of Change
Section 130.1(c)1 Exception 4	This change removes the phrase "connected to an emergency power source or battery supply" from the definition of lighting equipment designated for emergency lighting. This helps to ensure compliance with both the Energy Code and Electrical Code regarding emergency lighting systems.
Section 130.1(c)3 and 4	<p>This change removes the phrase "other than an occupant sensing control" from Sections 130.1(c)3 and 130.1(c)4 to clarify that automatic time-switch controls are always required.</p> <p>Removes subsection 130.1(c)3A, as its requirements are already covered by Section 130.1(a).</p> <p>Exception 1 to Section 130.1(c)4 is rewritten for clarity.</p> <p>Exception 2 is added to Section 130.1(c)4: Areas where occupant sensing controls are installed.</p>
Section 130.1(c)3 Exception 2	This change adds a new exception to the automatic time-switch control requirements for areas equipped with occupant sensing controls.
Section 130.1(c)4 Exception 1	<p>Moves "Automatic holiday shut-off features are not required" to the beginning of the sentence for clarity.</p> <p>Deletes the word "associated" from "associated malls" to ensure the exception applies to all malls.</p> <p>These changes emphasize the exception is about the automatic holiday shut-off features.</p>
Section 130.1(c)4 Exception 2	This change adds a new exception to the automatic time-switch control requirements for areas equipped with occupant sensing controls.
130.1(c)5	<p>This change is to shorten the section heading. Specifically, removed "are required for specified offices, multipurpose rooms, classrooms, conference rooms and restrooms" and converted existing text of "Occupant sensing controls" into a header for the subsection. Additionally, the specific purpose of the change is to remove restrooms from requirements for areas not required to have multilevel lighting controls.</p> <p>Deletes the phrase "of any size" from classrooms, conference rooms, and restrooms to simplify language.</p> <p>Adds "automatic full-on" to the regulation about occupant sensing controls in areas not requiring multi-level lighting controls.</p>
130.1(c)6	<p>This change is to shorten the section heading. Specifically, converted existing text of "Full or partial-OFF occupant sensing controls" into a header for the subsection.</p> <p>Revised the other existing text and added the revised text "For warehouse aisle ways, warehouse open areas, library book stack aisles, corridors, stairwells, offices greater than 250 square feet, parking garages, parking areas, loading areas, and unloading areas, the installed lighting shall meet the following requirements:" succeeding the subsection header.</p> <p>Adds descriptive words like "warehouse" and "open areas" to the heading to specify the types of spaces affected by occupant sensing control requirements.</p> <p>Revised subsection heading to include "parking garages, parking areas, and loading and unloading areas."</p> <p>Deletes the phrase "in addition to complying with Section 130.1(c)1" as it is already a mandatory requirement.</p>
Section 130.1(c)6A Exception 1	<p>This change deletes Exception 1 to Section 130.1(c)6A, as its requirements are already covered by the section itself. (Exception is less relevant for modern warehouse lighting applications).</p> <p>To maintain consistency, the remaining exceptions are renumbered.</p>

Section	Description of Change
Section 130.1(c)6C	<p>This change combines Sections 130.1(c)6C and 130.1(c)7A into a single subsection.</p> <p>Adds "lighting in stairwells and common area corridors that provide access to guestrooms of hotel/motels" to Section 130.1(c)6C.</p> <p>The lighting in these areas complies with the requirements of Section 130.1(c)6C instead of Section 130.1(c)1.</p> <p>Removes Section 130.1(c)7A to streamline the code.</p>
Section 130.1(c)6D	<p>This change adds a requirement to show occupancy sensor control zones on plans for offices greater than 250 square feet.</p> <p>Clarifies the lighting power reduction level to "no more than 20 percent" instead of "by at least 80 percent".</p>
Section 130.1(C)6E, Section 130.1(c)7B, and Section 130.1(c)7	<p>This change moves the occupant sensing requirements for parking garages, parking areas, and loading and unloading areas to a new subsection, 130.1(c)6E.</p> <p>Retains the exemption from Section 130.1(c)1 for parking spaces that meet the requirements of Section 130.1(c)6E.</p> <p>Adds a clarification in Section 130.1(c)6E regarding the classification of indoor and outdoor lighting for parking garages and parking areas on roofs.</p> <p>Deletes Sections 130.1(c)7B and 130.1(c)7.</p>
Section 130.1(c)8 Exception	<p>This change is to update the referenced section to Section 150.0(k)1A (was Table 150.0-A). Also, to make editorial changes for better flow of wordings and grammatical corrections.</p>
Section 130.1(d)	<p>This change replaces "automatic daylighting controls" with "daylight responsive controls" throughout Section 130.1(d) and related sections.</p> <p>Lowere the general lighting wattage trigger thresholds for daylight responsive controls in skylit, primary sidelit, and secondary sidelit zones.</p> <p>Revises Exception 3 to specify the wattage level of general lighting luminaires in secondary sidelit zones where daylight responsive controls are not required.</p> <p>Moves the daylight responsive control requirement for parking garages to the main body of Section 130.1(d).</p> <p>Specifies that long general lighting luminaires (over 8 feet) should be controlled in segments of 8 feet or less.</p> <p>Clarifies that daylight responsive controls should adjust lighting through continuous dimming.</p> <p>Adds a new subsection, 130.1(d)2G, to address interactions between daylight responsive controls and other lighting controls.</p>



Section	Description of Change
Section 130.1(d)2Biii Exception	This change is to add the word "segment" succeeding "the luminaire". The addition of the word "segment" is necessary to clarify it is the luminaire segment that is allowed to be controlled according to the type of the daylight zone in which the segment is primarily located. The inclusion of the word "segment" is also to avoid any confusion arising from the misinterpretation of this exception that it is allowable under this exception for the luminaire or the entire luminaire to be controlled as one – for the scenario that the luminaire is located in overlapping daylight zones and where the luminaire contains a factory assembled housing and light source as an integral unit in segments longer than 8 feet.
Section 130.1(f)	<p>This change removes the language in Section 130.1(f) that provides clarifications about lighting control interactions, as these requirements are already covered in Sections 130.1 and 110.9.</p> <p>Moves the language related to daylight responsive control interactions to the relevant section (Section 130.1(d)).</p> <p>The language related to occupancy sensing controls interacting with space-conditioning systems within Section 130.1(f) is unchanged.</p> <p>Renames Section 130.1(f) to "Occupancy Sensing Controls Interactions with Space-Conditioning Systems" to reflect its focused content.</p> <p>Deletes the subsection numbering within Section 130.1(f) as it is no longer necessary.</p>
Section, TABLE 130.1-A	This change removes TABLE 130.1-A, as its requirements are already covered in Section 130.1(b).
Section 130.2(b) Exception 8	<p>This change adds a new exception for luminaires that qualify as exceptions in Part 11 of Title 24 and in Section 140.7(a).</p> <p>This is to harmonize the exceptions of the two codes, Part 6 and Part 11 of Title 24.</p>
Section 130.2(c)2B	This change adds the word "partially" before "reducing the outdoor lighting power" and revises the reduction level to "by 50 to 90 percent."
Section 130.2(c)3A	<p>This change combines the content of subsection i into the main body of Section 130.2(c)3A.</p> <p>Adds a list of outdoor locations that require motion sensing controls, including general and vehicle service station hardscape, parking lots, outdoor sales lots, and various canopies.</p> <p>Adds that motion sensing controls are required for luminaires mounted 24 feet above grade or lower.</p> <p>Removes the language allowing motion sensing controls to be installed in combination with other outdoor lighting controls.</p>
Section 130.2(c)3B	This change adds the word "partially" before "reducing the outdoor lighting power" and revises the reduction level to "50 to 90 percent."
Section 130.2(c)3 - Exception 2	This change adds "luminaires providing lighting for building facade, ornamental hardscape, or outdoor dining" to Exception 2 of Section 130.2(c)3.
Section 130.4(a)	This change adds a reference to Section 120.6(h)5B in Section 130.4(a) to ensure that indoor and outdoor lighting controls serving the building, area, or site comply with the section's requirements and meet the acceptance requirements specified in Reference Nonresidential Appendix NA7.6 and NA7.8.
Section 130.4(a)3	This change is to replace "Automatic daylight" with "Daylight responsive" in the section.
Section 130.5(d)	Moves the requirement prohibiting the use of plug-in strips and plug-in devices to comply with Section 130.5(d) to the beginning of the section.

Section	Description of Change
Section 130.5(d)2	This change replaces the term "splitwired" with "multiple" in the phrase "splitwired receptacle," clarifying the placement of controlled and uncontrolled receptacles at the same location.
Section 130.5(d)3	This change removes the word "durable" from the marking requirements for controlled receptacles.
Section 130.5(d)4	This change decreases the time-out period for controlled receptacles from 30 minutes to 20 minutes.
Section 140.6(a) Exception	This change deletes the existing exception for portable lighting in office areas. Table 140.6-C already includes a provision for portable lighting in offices.
Section 140.6(a)2lv	Adds a new subsection, requiring that occupancy sensor control zones in offices greater than 250 square feet be shown on plans.
Section 140.6(a)2Kii	This change replaces: "uniform level of illumination requirements in Table 130.1," with: "the requirements of Section 130.1(b)."
Section 140.6(a), 140.6(b), 140.6(c) and TABLES 140.6-D through G	Removes Tailored Method from Section 140.6(a), 140.6(b), and 140.6(c).  Deletes associated Sections and Tables in Sections 140.6(a)4C, 140.6(b)3C, 140.6(b)3D, 140.6(b)4B, 140.6(c)3, and TABLES 140.6-D through G. Retains additional lighting power allowances for specific applications by incorporating them into the Area Category Method.
Section 140.6(a)2, TABLES 140.6-A and B	This change reorganizes and moves TABLES 140.6-A and B.
Section 140.6(b)4	Adds Lighting Types (wall display, floor display; task, or very valuable display case) to the list of lighting power allotments that cannot be increased or traded off.  Removes "and feature" from the phrase "display and feature" to align with TABLE 140.6-C.
Section 140.6(c)2Gviii	Specifies that floor display lighting does not qualify for wall display lighting power allowances
Section 140.6(c)2Gix	Retains the criteria for wall lighting that can qualify for wall display lighting allowances, which were previously specified under the Tailored Method.
Section 140.6(c)2Gx	Adds criteria for wall lighting that can qualify for wall display lighting allowances.  Adds how to determine the length of display walls and permanent full height interior partitions.
Section 140.6(c)2Gxi	Provides a method for determining the mounting height of luminaires that qualify for additional lighting power allowances in TABLE 140.6-C.
Section 140.6, TABLE 140.6-C	This change is to replace the "NA" entry in TABLE 140.6-C with the lighting power density values.
Section 140.6, TABLE 140.6-C	The modifications made to TABLE 140.6-C retain the additional lighting power allowances of the Tailored Method by adding comparable allowances for lighting applications to the "Area Category Method". This change adds additional lighting power allowances under TABLE 140.6-C.  The additional lighting allowances added to the "qualified lighting systems" column of TABLE 140.6-C includes various lighting applications, new building type/use, and primary function areas.
Section 140.6, TABLE 140.6-C	This change adds Footnote 3 to TABLE 140.6-C to clarify that "MH" refers to the mounting height of the lighting systems.
Section 140.7(a), Exception	"Be exempt from" rewritten as "Not be required to comply with" for clarity.
Section 140.7, TABLE 140.7-B	Adds guidance notes to TABLE 140.7-B specifying whether additional lighting power allowances for outdoor lighting should be applied per application or per site.  Introduces area-based allowance.

Section	Description of Change
Section 141.0(b)2I	This change is to delete the referenced section, Section 130.1(c)1D. To delete the referenced section is necessary as there is no Section 130.1(c)1D in the Energy Code. The changes improve the general clarity and internal consistency of the Energy Code.
Section 141.0(b)2Lii	This change removes the semicolon and "and" from subsection b. Adds "and" to the end of subsection a.
Section 141.0, TABLE 141.0-F	The specific purpose of this change is to replace the word "daylighting" to "daylight responsive" in the Table.  Removes the reference to Section 130.1(c)1D from Table 141.0-F, as this section does not exist in the Energy Code.  Removes the reference to Section 130.1(c)7 from Table 141.0-F, as this section is no longer used as requirements in the Energy Code.
Section: 160.5(b)1Aii, Exception	Fixed the wrong section numbering. Should be Section 160.5(b)1Aii and not Section 160.3(b)1Aii. This is a typographical clerical error that renders the sentence nonsensical and therefore could lead to confusion if not corrected.
Section: 160.5(b)4A	This change replaces "manual area controls" and "area enclosed by ceiling partitions" with the concise terms: "manual controls" and "spaces". The change does not affect the mandatory requirements for providing manual controls in specific locations. It primarily focuses on improving the overall readability and clarity of the Energy Code.
Section 160.5(b)4Aii	This change is to replace the word "area" with "space". These changes are to align with the text about the manual controls in the nonresidential section. The other change is to replace the words "status display" with "the status". The changes are to align with the text about the manual controls in the nonresidential section.  Consolidates Exception and Section 160.5(b)4Aii for concise language that is easier to read and comprehend. Section 160.5(b)4Aii already addresses the possibility of locating manual controls outside the controlled space for certain spaces, the exception becomes redundant.
Section 160.5(b)4A, Exception	This change is to replace "area" with "space". The specific purpose of the other change is to replace "accessible" with "controllable".  Added "during a normal power failure" to Exception item ii to Section 160.5(b)4A and rearranged the wording as "The egress lighting controls shall not be accessible by unauthorized personnel during a normal power failure." The changes are to align with the text about the manual controls in the nonresidential section.
Section 160.5(b)4B	This change is to add "with a size of" and "and" to the first sentence of Section 160.5(b)4B. The specific purpose of another change is to replace "provide" with "be provided with" and to delete "to achieve illuminance uniformity" from the second sentence.
Section 160.5(b)4B Exception 1, Exception 3	This change is to replace the word "enclosed" with "indoor space". The change is to align with the text of the multilevel lighting controls requirements in the nonresidential section.  This change is to add Exception 3: "The general lighting with light source of HID and induction shall have a minimum of one control step between 30 and 70 percent of full rated power."
Section: 160.5(b)4C	This change is to update section heading from Automatic shut-OFF controls to Shut-OFF controls.

Section	Description of Change
Section: 160.5(b)4C, Exception	Adds new exception: "Continuous illumination of up to 0.1 watts per square foot of lighting is allowed to be in any area designated for egress within a building, provided that the area is indicated on the plans and specifications submitted to the enforcement agency under Section 10-103(a)2 of Part 1. Lighting providing means of egress illumination, as defined in the California Building Code, shall be configured to provide no less than the illumination required by California Building Code Section 1008 while in the partial-off mode."
Section: 160.5(b)4Ci	<p>This change replaces "In addition to lighting controls installed to comply with Sections 160.5(b)4A and B, all" with "All" for concise language.</p> <p>This change in requirement "a" adds "set no more than a 20-minute time delay."</p> <p>This change in requirement "c" replaces "control" with "controls zones."</p>
Section: 160.5(b)4Ci, Exception 2, Exception 3, Exception 5	<p>This change in Exception 2, updates reference to subsection "vii" with "Section 160.5(b)4Cvic."</p> <p>This change in Exception 3, removes the exception and renumbers the remaining exceptions.</p> <p>This change in Exception 5, renames Exception to Exception 4 and removes "connected to an emergency power source or battery supply."</p>
Section: 160.5(b)4Ciii	<p>This change removes "other than an occupant sensing control."</p> <p>This change consolidates subsection "a" and "b" to subsection "iii."</p> <p>This change adds Exception to subsection "iii": "Areas where occupant sensing controls are installed."</p>
Section: 160.5(b)4Civ	<p>This change removes "other than an occupant sensing control."</p> <p>This change adds Exception 1: "Automatic holiday shut-OFF features are not required in restaurants."</p> <p>This change adds Exception 2: "Areas where occupant sensing controls are installed."</p>
Section: 160.5(b)4Cv	This change is to shorten the section heading. Specifically, removed "are required for specified offices, multipurpose rooms, classrooms, conference rooms and restrooms" and converted existing text of "Occupant sensing controls" into a header for the subsection. Additionally, the specific purpose of the change is to remove restrooms from requirements for areas not required to have multilevel lighting controls.
Section 160.5(b)4Cvi	<p>This change is to shorten the section heading. Specifically, converted existing text of "Full or partial-OFF occupant sensing controls" into a header for the subsection.</p> <p>Revised the other existing text and added the revised text "For corridors, stairwells, offices greater than 250 square feet, parking garages, parking areas, loading areas, and unloading areas, the installed lighting shall meet the following requirements".</p>
Section: 160.5(b)4Cvibl	<p>This change removes "For luminaires with an embedded occupancy sensor that are capable of reducing power independently from other luminaires, each luminaires can be considered its own control zone."</p> <p>This change adds "All control zones in offices greater than 250 square feet shall be shown on the plans."</p>
Section: 160.5(b)4CviblI	This change replaces "by at least 80" with "more than 20 percent."

Section	Description of Change
Section 160.5(b)4Cvib, Exception	Added "b" to the end of "Exception to Section 160.5(b)4Cvi".
Section: 160.5(b)4Cvic	This change adds new subsection "c" to "vi," for occupant sensing controls requirements instead of complying with Section 160.5(b)4Ci.
Section 160.5(b)4Dviii	The specific purpose of this change is to modify the language to ensure internal consistency with nonresidential changes in 130.1(d)2C. This change removed Section 160.5(b)4Dviii language and is necessary to mirror the text of the daylight responsive controls in the nonresidential section. The changes improve the general clarity and internal consistency of the Energy Code.
Section 160.5(b)4Dxi	This change is to change "daylighting" to daylight responsive" in Section 160.5(b)4Dxia (now 160.5(b)4Dxi). Also this change is to delete the subsection numbering "a".
Section 160.5(b)4Dxib	This change is to delete the entire subsection of Section 160.5(b)4Dxib. Also this change is to remove the subsection numbering "b".
Section 160.5(b)4D, Exception 6	This change is to revise the language of Exception 6 to Section 160.5(b)4D to match to the language of the Nonresidential section (Exception 6 to Section 130.1(d)). Specifically, deleted "and luminaires for only dedicated ramps. Daylight adaptation zone and dedicated ramps are defined in Section 100.1".
Section 160.5(b)4Dxi	This change is to retain the text language of the "interaction with other lighting controls (manual controls and daylighting controls)" of the 2022 Energy Code. This change is necessary to still provide a clarification for the scenario in which both manual controls and daylighting controls are installed.
Section: 160.5(b)4F	This change replaces existing section "4F:" Control Interactions, with a new and condensed section "4F:" Occupancy Sensing Controls interactions with Space-conditioning System.
Section 160.5(c)2Bii	The qualifying word "partially" is unnecessary as the sentence is sufficient in specifying the requirement and the qualifying word is redundant and adds little additional meaning to the requirement.  This change, for clarity, rewrites outdoor lighting power thresholds requirement as "by 50 to 90 percent."
Section: 160.5(c)2Ci	This change adds specific outdoor areas to the Motion sensing controls requirement: "...providing lighting for general hardscape, parking lots, and outdoor canopies, where the bottom of the luminaire is mounted 24 feet above grade or lower."
Section 160.5(c)2Cii	This change is to remove the word "partially" preceding "reducing."  The removal of the qualifying word "partially" is necessary as the sentence is sufficient in specifying the requirement and the qualifying word is redundant and adds little additional meaning to the requirement.
Section: 160.5(c)2Cii, Exception 2	This change adds to the exception: "and luminaires providing lighting for building façade, ornamental hardscape or outdoor dining."
Section 160.5(e)1C	This change is to replace "Automatic daylight" with "Daylight responsive" in the section. The change of the term is necessary to reflect the term "daylight responsive controls" is used instead of "Automatic daylight controls" in Section 160.5(b)4D for the 2025 California Energy Code.

Section	Description of Change
Section 160.6(d)	Deletes the NOTE previously located in Section 160.6(d).  Adds language explicitly stating that plug-in strips and other plug-in devices cannot be used to comply with the requirements of Section 160.6(d).
Section 160.6(d)2	Replaces "split wired receptacle" with "multiple receptacle outlet".
Section 160.6(d)3	Deletes the word "durable" from the marking requirements for controlled receptacles.
Section 160.6(e)	This change adds "including demand responsive controls for controlled receptacles" to Demand responsive controls and equipment.
Section 170.2(e)1	This change is to revise the referenced "Item i" to "Item A". The change to revise the referenced item is necessary to correct the referenced item numbering.
Section 170.2(e)2B	This change adds a new subsection requiring plans to show occupancy sensor control zones in offices greater than 250 square feet.  Adds a clarifying statement regarding PAF availability for mandated demand responsive controls in reference to the illuminance uniformity requirement.  The section numbering for the PAF requirements related to clerestory fenestration, horizontal slats, and light shelves are revised accordingly.
Section 170.2(e)2Biiie	This change is to revise the referenced section to Section 170.2(e)2B. The change to revise the referenced item is necessary to correct the referenced section, Section 170.2(e)1Aii, which does not exist.
Sections 170.2(e)2, 170.2(e)3, and 170.2(e)4	Removes the Tailored Method from Sections 170.2(e)2, 3, and 4, and deletes related sections and tables.  Adds comparable additional lighting power allowances for specific lighting applications to the Area Category method.  Area Category method replaces the Tailored Method.  Moves Table 170.2-L and Table 170.2-M.
Section 170.2, TABLES 170.2-N, O, P, and Q	Deletes TABLES 170.2-N, O, P, and Q, which are associated with the Tailored Method.
Section 170.2(e)2Bix	This change replaces the term "large office" instead of "open plan office" to align with Section 140.6(a)2I.
Section 170.2(e)2Bixa	Removes reference to "open plan" to be consistent with Section 140.6(a)2I.
Section 170.2(e)2Bvi	This change is to revise the referenced section to Section 170.2(e)2B. The change to revise the referenced item is necessary to correct the referenced section, Section 170.2(e)1Aii, which does not exist.
Section 170.2(e)2Diii	Deletes the Tailored Method display lighting mounting height lighting power adjustment.
Section 170.2(e)3Ci	This change updates the section reference from Section 170.2(e)1Ci to Section 170.2(e)4A.
Section 170.2(e)3D	This change deletes existing language about the Tailored Method of Section 170.2(e)3D.  This change specifies that additional allowances cannot be used for general lighting unless explicitly designated. Prohibits increasing allowances for display, decorative, wall display, floor display, or task lighting by decreasing other lighting power allotments.
Section 170.2(e)4	Deletes Section 170.2(e)4Ave and 170.2(e)4B related to the Tailored Method.
Section 170.2(e)4Aii	This change updates the section references, changing Section 170.2(e)1Ci to Section 170.2(e)4A.
Section 170.2(e)4Av	This change updates the section references, changing "Section 170.2(e)1Cia through f" to "Sections 170.2(e)4Ai through iv."

Section	Description of Change
Section 170.2(e)4AvG	Specifies and retains the requirement about floor display lighting in a new subsection that floor display lighting shall not qualify for wall display lighting power allowances.
Section 170.2(e)4Avh	Specifies the requirement in a new subsection about the criteria for wall lighting that can be eligible for wall display lighting allowance. The criteria are the same criteria for wall lighting eligible under the Tailored Method for wall lighting.
Section 170.2(e)4Avi	Specifies determination of mounting height of the luminaires based on whether the mounting height is the same for all qualified luminaires or of various mounting height of the qualified luminaires.
Section 170.2, TABLE 170.2-M	<p>Corrects values in TABLE 170.2-M adjusting the allowed lighting power density values for storage, healthcare/assisted living spaces, and conference/multipurpose areas to match the corresponding values in TABLE 140.6-C.</p> <p>Adds Footnote to TABLE 170.2-M explaining that "MH" refers to the mounting height of the lighting systems.</p> <p>"NA" entry replaced in the table with the lighting power density values for general lighting.</p>
Section 170.2(e)6, TABLE 170.2-S	<p>Adds guidance notes to TABLE 170.2-S specifying whether additional lighting power allowances for outdoor lighting should be applied per application or per site.</p> <p>Introduces area-based allowance for security cameras and special security lighting, providing an option to apply the allowance per site based on the illuminated hardscape area.</p>
Section 170.2(e)7	Removes legacy light sources (high-pressure sodium lamps, metal halide lamps, fluorescent lamps, and compact fluorescent lamps) from subsections 170.2(e)7Bi, ii, iv, and vi.
Section 170.2(e)7 Exception 3	Adds an exception for traffic signs not to be obligated to comply with the prescriptive requirements for signs of Section 170.2(e)7.
Section 180.2(b)4Bivc	This change is to delete the referenced section, Section 160.5(b)4Cid.
Section 180.2, TABLE 180.2-E	<p>This change revises reference code sections for demand responsive controls to improve accuracy and clarity. Adds references to 110.12(a) and 110.12(b).</p> <p>Removes reference to 160.5(b)4E.</p> <p>Adds "except for 160.5(b)4Cvi.b" to the row of "Automatic Shut Off Controls 160.5(b)4Cvi" to align with TABLE 141.0-F.</p> <p>Revised "Daylighting" to "Daylight Responsive" in TABLE 180.2-E.</p>
Section NA7.6.1	This change revises the term to "Daylight Responsive Controls Acceptance Tests" from the term "Automatic Daylighting Responsive Controls Acceptance Tests".
Sections NA7.6.1.1(b), (c) and NA7.6.1.4(b)2	This change is to replace the term "automatic daylighting controls" with the new term "daylighting responsive controls".
Section: NA7.6.1.1	The specific purpose of the change to this section is to make non substantive formatting changes and subdivision heading changes necessary to effectively communicate the requirements and standards in a precise and clear manner
Section: NA7.6.1.4(e)	The specific purpose of this change is to remove the word "aforementioned" to improve readability.
Section NA7.6.2.5(d)	The specific purpose of this change is to correct a minor grammatical error to improve readability; it should read as "are" instead of "is"

Section	Description of Change
Section NA7.6.2.6(b)	Replaced "exempt" with "that are not required to comply", clarifying that certain areas are not subject to automatic time switch lighting controls functional testing.
Section NA7.6.3.1	The specific purpose of the change to this section is to make non substantive grammatical changes necessary to effectively communicate the requirements and standards in a precise and clear manner.
Section NA7.6.5.1	This change updates the construction inspection requirements for demand responsive controlled receptacles to match those for demand responsive lighting controls in NA7.6.3.1.
Section NA7.6.5.2	Replaces "lighting controls" with "controlled receptacles."



### **Attachment 3: 2025 Changes to Lighting Controls Acceptance Documents**

#### Expected changes to reflect the 2025 Energy Standards and Reference Appendices:

- NRCA-LTI-02-A
  - Update form to reflect changes to Sections 130.1(c), 160.5(b), 160.5(e), and NA7.6.2 which include clean-up to address minor issues with the grammar, punctuation, structure, consistency, and wording of the procedures in NA7.6.2.
- NRCA-LTI-03-A
  - Update form to reflect changes to Sections 130.1(d), 160.5(b), 160.5(e), and NA7.6.1 which include clean-up to address minor issues with the grammar, punctuation, structure, consistency, and wording of the procedures in NA7.6.1.
- NRCA-LTI-04-A
  - Update form to reflect changes to Sections 110.12, 160.5(e), and NA7.6.3 which include clean-up to address minor issues with the grammar, punctuation, structure, subdivision headings, section references, formatting, consistency, and wording of the procedures in NA7.6.3.
  - Updated the demand responsive controlled receptacle construction inspection requirements to be consistent with the construction inspection requirements for demand responsive lighting controls.
- NRCA-LTI-05-A
  - No changes expected.
- NRCA-LTO-02-A
  - Update form to reflect changes to Sections 130.2, 160.5(c), 160.5(e), and NA7.8 which include clean-up to address minor issues with the grammar, punctuation, structure, consistency, and wording of the procedures in NA7.8.