DOCKETED	
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NLCAA appreciates the opportunity to support with the CEC in the effort to create a synergy between the energy codes and the compliance documents. Having worked with these documents since 2014 we have found that the ATTCPs, ATTs and ATEs can provide an invaluable look into how the these documents are interpreted, misinterpreted, understood or even misused, by many different professionals using the energy codes.

The following are NLCAA's comments:

Page 9, Paragraph 1: *"An on-site audit entails reviewing the construction inspection and functional test of each acceptance test for a project site and correlating that test to the actual installation."*

NLCAA performs an on-site inspection of the ATT performing the construction inspection and the functional testing to verify the actual installation and functional testing procedures are performed in compliance with all requirements of the energy codes and ATTCP requirements. NLCAA has found this method to be very successful, allowing for mentoring while verifying code compliance. Furthermore, this method has had very positive feedback from the ATTs during the field inspection allowing to discuss testing procedures with an industry expert.

Page 9, Paragraph 2: *"Nonunion ATTCPs charge the ATTs for each compliance document that they use."*

This statement is incorrect. NLCAA charges a fee per project (permit number).

Chapter 2 Database Requirement for All ATTCPS: *"Although these requirements may appear to be similar to the requirements for a data registry (Reference Joint Appendix JA7), they in no way should be construed to mean that the database system requirements construes compliance with the requirements in JA7 or that the database system may be referred to as a data registry, which is reserved for those systems that do comply with JA7."*

NLCAA takes the definition above to mean that none of the requirements in JA7 including all references to data formatting, 3rd party security transactions, etc., in JA7 apply to the current requirements for the ATTCP database interface. Further, NLCAA understands that the requirements for the ATTCP database are wholly contained in Section 2.H of Staff Recommendations for the 2022 Energy Code Acceptance Test Technician Certification Provider Program Docketed Date 8/13/20.

New Sections 10-103.1(c)3H and 10-103.2(c)3H.: Section H. (iii): *"Allow the downloading of electronic copies of each completed certificate of acceptance to the ATT that performed the test, the ATE associated with that ATT, or both."*

NLCAA allows the ATT and/or ATE to email the completed certificates of acceptance to themselves. From there, they are able to download the files. Is this acceptable to meet this new requirement?

New Sections 10-103.1(c)3H and 10-103.2(c)3H.:
NLCAA reads the requirement for an ATTCP database, per section H, as calling for two types of downloads:

a. "Completed compliance documents" with logos suitable for printing which implies pdf documents.
b. Data (raw data) used to populate the pdfs above.

New Sections 10-103.1(c)3H and 10-103.2(c)3H.: Section H. (iv): *"Provide a means of verifying any certificate of acceptance to the enforcement agency having jurisdiction as identified on the certificate of acceptance".*

NLCAA currently has a QR Code on all our completed NRCA forms (see attachment A). The QR Code can be scanned to verify the information on the form (project name, number, address, and status) matches the information in the NLCAA database. Does this meet the requirements listed here? If not, what further steps would the CEC like to see to comply?

New Sections 10-103.1(c)3H and 10-103.2(c)3H.: Section H. (v): *"Provide the CEC access to the electronic database with the authority to inspect and securely download all records."*

Can the CEC clarify what is meant by "access"?

NLCAA will provide database access via standard secured data transfer methods and protocols that produces the data via downloading for CEC inspection and other purposes. Such access and data transfer will be via an NLCAA developed API provided to the CEC for this purpose. This provides the CEC with all required data in a manner that does not infringe on the integrity of the internal workings of the NLCAA database.

New Sections 10-103.1(c)3H and 10-103.2(c)3H.: Section H. (vi): *"Provide all summary reports as requested by the CEC."*

NLCAA will provide database access via standard secured data transfer methods and protocols providing the CEC downloads per the date ranges and data requested below via an NLCAA developed API provided to the CEC for this purpose.

- Summary reports shall include all the following elements:
    a. The date range of the summary reports shall be customizable.
    b. The range of specificity of summary reports for authorities having jurisdiction shall be from a single authority to all authorities in California.
    c. The summary reports shall include a range of acceptance tests performed from one acceptance test to all acceptance tests.

Justification: *"To guard against the possibility of a falsified acceptance test compliance document, the AHJ must be allowed to access the ATTCP electronic database to verify the authenticity of the compliance documents."*

NLCAA currently has a QR Code on all our completed NRCA forms (see attachment A). The QR Code can be scanned to verify the information on the form (project name, number, address, and status) matches the information in the NLCAA database. Does this meet the requirements listed here? If not, what further steps would the CEC like to see to comply?

Justification: "*CEC staff must be allowed access to the ATTCP electronic database to review submitted acceptance tests for trends and issues. Furthermore, staff must be able to transfer part or all of the electronic database to allow staff to evaluate the ATTCP program.*"

Can the CEC clarify what is meant by "access"?

NLCAA will provide database access via standard secured data transfer methods and protocols that produces the data via downloading for CEC inspection and other purposes. Such access and data transfer will be via an NLCAA developed API provided to the CEC for this purpose. This provides the CEC with all required data in a manner that does not infringe on the integrity of the internal workings of the NLCAA database.

CHAPTER 3: Recommendations for the Lighting Controls Acceptance Testing Requirements

NLCAA would like to recommend a more effective solution which will reduce the amount of effort and time needed to update the Reference Nonresidential Appendix (NA7) in the 2022 energy code and in all future code updates. Remove all the current testing procedures and replace them with the most current version of the NRCAs, format changes may be needed. The NRCAs are thoroughly and extensively reviewed by ATTCPs working with the CEC to ensure that all needed corrections are made prior to the release of approved NRCAs by the CEC. In doing so, NLCAA has found the NRCAs are generally free of any major errors impacting or conflicting with the codes or testing procedures. NLCAA trains all ATT/ATEs on the use of all relevant sections of NA7, but the ATT/ATEs ultimately end up working with the NRCA form procedures (ATTCP software) during the functional process and rarely use the NA7s. NA7 is not reviewed in the same manner and in its current condition, is not in line with the NRCAs which are the actual testing procedures. The NA7s still could contain non-testing information, as an example the sampling methods, but it could easily be updated with a copy of the current NRCA forms each code cycle. NLCAA is not compensated for the time and cost associated with code review, but we do our best to support the CEC by providing extensive review of the NRCAs and the relative BEES codes.

Shut-off Lighting Controls Acceptance Tests

- Further Information Needed
    - A-2. Occupant Sensing Lighting Control Construction Inspection (NA7.6.2.2)
        - Remove (a) and (c) - this is determined during the functional test like Step 1. (b).
        - Remove (e) - is this technology obsolescence?
        - Add from Section 130.0(d) Lighting Controls. "shall be installed in accordance with any applicable manufacturer instructions".
            - Many projects do not have a verification to ensure that the MFG instructions have been followed. Consider allowing the ATT to verify that the MFG installation instructions have been followed. Many times, we find that the installation instructions were NOT followed, the device may past the testing procedures at that time, but later fail to function correctly. As an example, an O/S is installed at an elevation of 14' in a warehouse to maintain forklift clearance, it passed the functional test with the ATT, but at a later time, it failed to function correctly resulting in additional costs to

correct the installation. The MFG in the installation instructions stated a maximum installation height of 10'.

- Relocate the status indicator verification from the functional testing to the construction inspection.
- Add the following per 130.1(c)5:
  - If the occupant sensing device is in the following areas: offices 250 square feet or smaller, multipurpose rooms of less than 1,000 square feet, classrooms of any size, conference rooms of any size, and restrooms of any size and is required by 130.1(b) to have multi-level controls is the occupant sensing device programmed as either:
    - Partial-On occupant sensor capable of automatically activating 50-70 percent of controlled lighting, or
    - Vacancy sensor, where all lighting responds to manual on input only
- Does the control allow lights to be manually shut-off in accordance with Section 130.1(a) regardless of the sensor status? This might be a functional test of the area control, easily done during the construction inspection.

Expand NA7.6.2.3 to Include Acceptance Requirements for Each Type of Occupant Sensing Control

- Issue Statement
  - Remove the term occupant sensor (§130.1(c)5) as an auto-on technology throughout the codes and forms, occupant sensor is too similar to an occupancy sensor which is a device. Auto-ON as a possibility, we recommend asking controls mfgs what they may suggest as the terminology may already be in their instruction manuals. In discussion and clarifications of code it becomes confusing to some people.
- Further Information Needed
  - NLCAA has seen the NRCAs move in a direction of combining tests to simplify the testing and reducing the amount of paper needed (yes, paper is still used). We would like to see what the NRCA form would like before commenting on your recommendations.
  - NA7.6.2.1.2(b)2(c) - Add "Fraction of light output reduction is an acceptable proxy for reduction in lighting power"
    - When the ATT has to verify a 50% reduction or similar amount during a test, there is not a testing procedure for this verification.

Automatic Daylighting Controls Acceptance Test

- Further Information Needed
  - A. Construction Inspection (NA7.6.1.1) (taken from NRCA form)
    - (a) - verified during the functional testing
    - (c) - add similar language from Compliance Manual, 5.4.4.3(A) "Luminaires providing general lighting that are at least 50 percent in the skylit daylit zones or the primary sidelit daylit zones shall be controlled independently by fully functional automatic daylighting controls….." to the energy codes and testing forms to clarify when a luminaire is controlled by a daylight sensor.
    - (d) - NLCAA is not aware of what the intent is of (d), current technology (that we have come across) does not allow more than one photosensor to control the lighting.

- (e) - remove "readily accessible," it is a trade term and conflicts with the rest of the accessibility requirements "including inside a locked case or under a cover that requires a tool for access."

Specify That Acceptance Testing Is Required for Automatic Daylighting Controls in Secondary Sidelit Daylit Zones Complying with Section 140.6(d)

- Further Information Needed
  - NLCAA agrees with the proposal change, of the ATTs that have had desk audits, field inspections and the conversations with them they have stated the secondary zone is also tested as a regular practice. Sadly, many required secondary zones are not included in the plans. There should not be any cost impact to add the secondary zone because it will be tested simultaneously with the primary zone.

Demand Responsive Lighting Controls Acceptance Test

- Further Information Needed
  - A. Construction Inspection (NA7.6.3.1) (taken from NRCA form)
    - (b) certified to OADR 2.0a/b: this should clarify in the BEES and the procedures that this part applies to only the ADR device, or
    - (b) certified by the manufacturer to the Energy Commission; should clarify in the BEES and the procedures that this part applies to the third-party device or the lighting controls device that receives the signal, i.e. universal gateway or EMCS. (both as explained to me by the CEC)
    - NLCAA thinks some clarification needs to be done to clean up the language and clarify the codes.
    - (e) may be covered in (b) or it could be included in (b)
  - NA7.6.3.1 uses 2016 energy code requirements.

Outdoor Lighting Controls Acceptance Tests

- Further Information Needed
  - Response to Staff
    - Test motion sensor functionality with automatic scheduling controls to match the NRCA form
    - Some parking areas can have over (100-600) outdoor poles, sampling should remain to prevent the increase of testing fees.
    - Agreed
    - NLCAA finds the testing procedures in the NRCA forms to be the best methods to test the motion sensors and automatic scheduling controls. Again, we recommend copying the testing procedures of the NRCAs into the NA7
  - NLCAA recommends that the NRCA forms and NA7.8 combine all outdoor test into one test for simplicity purposes, see below. This aligns with Section 130.2(c)1, 2, 3 with the mandatory requirement for automatic scheduling controls, a requirement for one of the three options needed to meet the daylight availability while allowing for additional controls to be tested and the option to test motion sensors, if applicable. Currently the NRCA form allows for only testing the automatic scheduling control without meeting the requirement of Section 130.2(c)1 Daylight Availability, this simplistic approach will ensure the full requirements of Section 130.2 are met as they apply to testing procedures.

A-1 Automatic Scheduling Control Construction Inspection
B-1 Automatic Scheduling Control Functional Testing

A-2 Select controls are installed to meet the daylight availability requirements (must select one, select all applicable):
- Photo control
- Astronomical
- Other

B-2 Daylight Availability Functional Testing
- Confirm compliance (Y - yes / N - no) for the control being tested.
    a. During daytime simulation, all controlled outdoor lighting is turned off.
    b. During nighttime simulation, all controlled outdoor lighting is turned on.

Functional Testing Compliance: ◯ Complies ◯ Does Not Comply

A-3 Motion Sensor Construction Inspection (If applicable)
B-3 Motion Sensor Functional Testing (If applicable

Consolidate Astronomical Time Switch Control Sections

- Further Information Needed
    - Response to Staff
        - Yes, Match the NRCA forms
        - No

Simplify the Requirements for Functional Testing During Institutional Tuning

- Further Information Needed
    - We agree with staff.
    - It is so rarely used, NLCAA feels the testing requirement could be removed from the energy code.

Project Status Report – Lighting Controls Acceptance Testing

National Lighting Contractors Association of America
(Revised 04/2020)

PROJECT INFORMATION

Code Cycle:	2019 Energy Code
Project Name:	Redwood Credit Union Central Branch TI
NLCAA Project Number:	2008-00009
Project Address:	3033 Cleveland Avenue, Santa Rosa, CA, 95403
Permit Number:	B20-2122
Enforcement Agency:	City of Santa Rosa
Acceptance Test Employer:	Terry Szalai - ATE-1906-00001
Acceptance Test Technician:	Terry Szalai - ATT-1904-00007

FORMS INCLUDED

- [x] **NRCA-LTI-02-A**
- [ ] **NRCA-LTI-03-A**
- [ ] **NRCA-LTI-04-A**
- [ ] **NRCA-LTI-05-A**
- [ ] **NRCA-LTO-02-A**

TESTED AREAS

FORM	BUILDING	FLOOR	NAME
Occupant Sensing Lighting Controls	1	1	South Corridor
Occupant Sensing Lighting Controls	1	1	Mall 100 Desk
Occupant Sensing Lighting Controls	1	1	WorkRoom 114
Occupant Sensing Lighting Controls	1	1	Office 106
Occupant Sensing Lighting Controls	1	1	Office 105
Occupant Sensing Lighting Controls	1	1	DMV Office

Untested Areas Sheet

National Lighting Contractors Association of America
(Revised 04/2020)

SAMPLE UNTESTED SPACE AREAS

Building: 1, Floor: 1, Space: South Corridor

1	1	Ceiling Sensor 2 of 3	Occupant Sensing Lighting Controls
1	1	Ceiling Sensor 3 of 3	Occupant Sensing Lighting Controls
1	1	Wall Sensor 1 of 1	Occupant Sensing Lighting Controls


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