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Introduction

Welcome to the July 2022 OSFM Engineering Newsletter. Since our February 2022 newsletter, there were two regularly scheduled Building Code Council meeting held March 2022 and June 2022. The results of the meetings are posted in the BCC minutes, and the results of the D-items are noted, unofficially, in the Building Code Council Approved Rule Changes article below. Another article concerning the appliance standard increase is posted for the benefit of the readers, it can be viewed next in the Current Topics section.

Current Topics

Appliance standards – DOE

This is an update and a reminder of the scheduled appliance efficiency increase taking effect January 1, 2023. As previously noted in the February 2022 Engineering Newsletter, state energy codes, including NC, cannot preempt federal law, and therefore the minimum efficiency allowed simply follows the federal requirement, including the dates when they go into effect. Designers and contractors are encouraged to plan accordingly, as the effective date is not based on permit date of a project, but rather on the effective date of the standard. The effective date is:

- For straight AC units (split system or package) January 1, 2023, and this is an installed-by date. Equipment not meeting the standard cannot be legally installed in NC but they could be shipped to other areas of the country where the installed-by date is not mandatory.
- For heat pumps (split system or package) January 1, 2023, but it is a manufacturing end date, so products legally manufactured up to that point in time can be installed after that date.
- This efficiency increase is not for commercial units, only to HVAC units subject to the National Appliance and Energy Conservation Act of 1987 (NAECA).

The split-system heat pump requirements for NC are going to be 15 SEER in cooling mode, and 8.8 HSPF in heating. Straight AC split systems will be required to be 15 SEER if capacity if less than 45,000 Btu/hr, and 14.5 SEER if capacity is greater than or equal to 45,000 Btu/hr.

Also, for further reading please refer to the North Carolina Board of Examiners for Plumbing, Heating, and Fire Sprinkler Contractors May 2022 Newsletter for a very good and informative article concerning this standard.

www.nclicensing.org – refer to the Newsletters tab, and click the link for the **May 2022 Newsletter**.

As noted in this referenced article, there has been federal legislation introduced that could make the AC installed-by date a manufacturer cease-date, but there is no way to predict that, and as of this writing it is still only a proposal.

Recurring Articles

Building Code Council Approved Rule Changes

A regularly scheduled quarterly BCC meeting was held on March 14th, 2022 and June 14th, 2022. The full agendas can be read at the links listed below. The link will take you to the BCC Minutes webpage and the reader must then click on the .pdf file to open the agenda file. The minutes for the March meeting are on the website, the June minutes will be available at a later date. However, the unofficial results of the D-items for the June meeting are posted below.

BCC Meeting Agenda-March, 2022

<https://www.ncosfm.gov/bcc-agenda-20220315-march-15-2022>

BCC Meeting Minutes-March 2022

<https://www.ncosfm.gov/bcc-minutes-march-15-2022>

Once the Building Code Council approved D-items are also approved by the Rule Review Commission, (sometimes an amendment gets sent back to Building Code Council for various technical reasons) the adopted rules will be placed on the NCDOT Engineering website. Please refer to the Cumulative Supplements article of this newsletter for the link to the cumulative supplements from past meetings.

The full review of the approved code amendments is left to the reader, but **the titles of each item** are bulleted below. Remember these are not final until they are through the Rules Review process. The approved March and June D-items, if approved by Rules Review Commission, will be effective January 1, 2023 for items pertaining to the Commercial Building Code.

BCC Proposed Amendments-March 2022

- Item D – 1 Request by David Smith representing the NC BCC Residential Ad Hoc Committee to amend the 2018 NC Residential Building Code, Section R404.4 as follows (210914 Item B-1): (Remainder not shown for brevity) – **approved**
- Item D – 2 Request by Carl Martin representing the Department of Insurance to amend the 2018 NC Building Code, Section 116 as follows (210914 Item B-2): (Remainder not shown for brevity) - **approved**
- Item D – 3 Request by Carl Martin representing the Department of Insurance to amend the 2018 Building Code, Section 3006.2 as follows (210914 Item B-3): (Remainder not shown for brevity) – **approved**
- Item D – 4 Request by Carl Martin representing the Department of Insurance to amend the 2018 NC Building Code, Section 3006.3 as follows (210914 Item B-4): (Remainder not shown for brevity) – **approved**
- Item D – 5 Request by Colin Triming representing the NC Fire Code Revision Committee to amend the 2018 NC Fire Code, Section 304.4.2.3 as follows (210914 Item B-5): (Remainder not shown for brevity) – **approved**
- Item D – 6 Request by Carl Martin representing the Department of Insurance to amend the NC Administrative Code, Section 204.3.5 as follows (210608 Item B-1): (Remainder not shown for brevity) – **approved**

BCC Meeting Agenda-June, 2022

<https://www.ncosfm.gov/bcc-agenda-20220614-june-14-2022>

BCC Meeting Minutes-June 2022

<https://www.ncosfm.gov/bcc-minutes-march-15-2022>

- Item D – 1 Request by Kevin Brinkman representing the National Elevator Industry, Inc. (NEII) to amend 2018 NC Plumbing Code, Section 1003.4 as follows (211214 Item B-5): (Remainder not shown for brevity) – **approved**

- Item D – 2 Request by Jamieson Stapleton representing Southern Energy Management to amend 2018 NC Energy Code, Table 405.5.2(1) as follows (211214 Item B-6): (Remainder not shown for brevity) - **denied**
- Item D – 3 Request from Bryan Holland representing National Electrical Manufacturers Association (NEMA) to amend the 2018 NC Electrical Code, Section 10.1 and 10.2 as follows (211214 Item B-7): (Remainder not shown for brevity) – **Tabled to September Meeting**

Code Officials Qualification Board Updates

The COQB will hold its regular meetings on July 26 2022 Details can be found here: <https://www.ncosfm.gov/licensing-cert/code-officials-qualification-board-coqb/coqb-meeting-dates>.

Minutes

The minutes of the Qualifications Board Meeting Minutes are available at the following link, and see Figure below for image from website:

Meeting Minutes and Agendas

<https://www.ncosfm.gov/licensing-cert/code-officials-qualification-board-coqb/coqb-meeting-dates>

FIGURE 1: IMAGE OF Q'BOARD WEBSITE TABLE OF MINUTES

Minutes

COQB Minutes May 4, 2022 Rules Review Special Committee
COQB Minutes March 30, 2022 Rules Review Special Committee
COQB Minutes - January 25, 2022 Board meeting
COQB Minutes - October 26, 2021 Board Meeting

Department Notes

Engineering Department Personnel Notes

As of September 2021, here is the staff list and respective responsibilities for the NC Building Code:

- Pak Yip: **Building** Code (non-accessibility)
- Charlie Johnson: **Fire** Code (includes Chapter 9 of the NCBC)

- 919-647-0094 charlie.johnson@ncdoi.gov
- Pak Yip: **Residential** Code
919-647-0007 pak.yip@ncdoi.gov
- Jim Rodgers: **Residential** Code (non-structural)
919-647-0056, 919-270-3699 (cell) jim.rodgers@ncdoi.gov
- Pam Schooler: **Existing Building** Code
919-647-0011: pam.schooler@ncdoi.gov
- Tara Barthelmess: **Accessibility**
919-647-0014 tara.barthelmess@ncdoi.gov
- Mark Burns: **Plumbing** Code
919-647-0006 mark.burns@ncdoi.gov
- David Rittlinger: **Mechanical** and **Fuel Gas** Code
919-647-0008 david.rittlinger@ncdoi.gov
- Dan Dittman: **Energy** Code
919-647-0012 dan.dittman@ncdoi.gov

State Electrical Division Contacts

- Danny Thomas: **Electrical** Code – General Electrical Code Questions
919-647-0062 daniel.thomas@ncdoi.gov
- Joe Starling: State **Electrical** Engineer
919-397-6159 joseph.starling@ncdoi.gov

In addition, the following topics will be addressed by:

- **Engineering Manager: Carl Martin** - contact for Statutes, Appeals, Council items (other than meeting minutes and agenda), Engineer Elements and Components,
- **David Rittlinger**: BCC meeting minutes and agenda, Rules Review Commission, Formal interpretations, Administrative Code (non-statute)
919-647-0008 david.rittlinger@ncdoi.gov
- **Sam Whittington**: Investigator, Complaints
919-647-0028 sam.whittington@ncdoi.gov
- **Chris McLamb**: Investigator, Complaints
919-647-0105 christopher.mclamb@ncdoi.gov

Link to New Website Personnel Contacts for Codes and Interpretations

<https://www.ncosfm.gov/codes/contact-codes-and-interpretations>

New Code Interpretations, Guidance Papers, and Appeals Posted

Since the prior newsletter, the following web interpretations, guidance papers, or appeals have been posted. Trades not shown did not have new web interpretations posted.

A new sort feature was added to assist users in sorting the interpretations. The “Sort by” and “Order” drop down box sorts the interpretations in order of the posting date to the website. There is “Asc” which sorts it in Ascending calendar time, (oldest to newest) and “Desc” sorts it in Descending calendar time, or newest to oldest. We hope this function allows users of this webpage to easily check on the date any particular interpretation was posted, or if anything new was posted since the last time you used it.

Code, Guidance, Appeals link:

<https://www.ncosfm.gov/interpretations>

FIGURE 2: NEW LOOK OF CODE INTERPRETATIONS LANDING PAGE

OSFM » Codes » Code Interpretations

[Code Interpretations](#) - [Appeals](#) - [Formal Interpretations](#) - [Guidance Papers](#)

[Get notified of new code interpretations using RSS feeds](#)

The screenshot shows a search interface with the following elements: a 'Code Type' dropdown menu set to 'Energy Conservation', an 'Edition' dropdown menu set to '2018', an empty 'Search' text box, a 'Sort by' dropdown menu set to 'Date Published', and an 'Order' dropdown menu set to 'Asc'. To the right of these filters are two buttons: 'Apply' and 'Reset'. Two green arrows point downwards from the 'Sort by' and 'Order' dropdowns to the text 'Get notified of new code interpretations using RSS feeds'.

Interpretations

Administrative

No additional since February 2022 newsletter

Building

0101.2 Floating Structures and Buildings

Fire Protection

No additional since February 2022 newsletter

Energy

R101.2 - Floating Structures and Buildings

C101.2 - Floating Structures and Buildings

Plumbing

0101.2 - Floating Structures and Buildings

Residential

1601.1.1 Flexible Air Ducts

0316.5.3 Determining Attic Storage and Use of Spray Foam Insulation with Ignition or Thermal Barriers

Accessibility Interpretations

1107.6.2.2.2 R-2 Type B Dwelling Unit Requirements and Exceptions

Electrical Interpretations

Presently, if you use the main Interpretations site, you need to click on "ALL" edition to view the Electrical interpretations on that site. However, if you go to the main Electrical Division site, there are interpretations for the NC Electrical Code, see following link:

[State Electrical Division | OSFM \(ncosfm.gov\)](#)

State Electrical Division

The State Electrical Division is a department within Engineering's Risk Management Division of the Office of State Fire Marshal. The State Electrical Division works closely with the Codes Division and the Manufactured Building Division by providing the regulatory authority over all classes of electrical systems.

Overview



Codes

- [Code Interpretations](#)
- [Codes - Current and Past](#)
- [Commercial Plan Review](#)
- [Code Book Sales](#)

State Electrical Division

The link should take you to the above webpage, and you should be able to click on the Code Interpretations Link and see the following line items when you scroll down.

OSFM » Codes » Code Interpretations

[Code Interpretations](#) - [Appeals](#) - [Formal Interpretations](#) - [Guidance Papers](#)

[Get notified of new code interpretations using RSS feeds](#)

Code Type: Edition: Search: Sort by: Order:

Interpretation	Code Type	Edition	Published
Section 314.27(C) - Ceiling Boxes for Paddel Fans	Electrical	2020	01/03/2022
Section 210.11(C) - Required v. Non-Required Receptacles	Electrical	2020	01/03/2022

FIGURE 3: MAIN ELECTRICAL CODE INTERPRETATIONS SECTION

Electrical Interpretations

No additional since February 2022 newsletter

Formal Interpretations and Appeals and Guidance Papers

Here are the **Formal Interpretations** and **Appeals** posted since the prior Newsletter:

Formal Interpretations

- 2022-0509 Cluck Design Collaborative 2018 NCPC 405.3.2 Public Lavatories
- 220510 Rheia LLC 2018 NCRC N1103.3.1 and 2018 NCECC R403.3.1 Duct Insulation
- 220513 Town of Clayton Building Inspections 2018 NCMC 602.2.1 Materials within plenums

Appeals

- 20220209 Benton - Life Church NCDI Decision
- 20220512 Williams - Swimming Pool Steps NCDI Decision

Guidance Papers

- GS 160D-1110(c) - Application of Construction Permit Exceptions

Cumulative Supplements

Cumulative code changes and their adoption dates can be found on the DOI website at:

Cumulative code changes link:

<https://www.ncosfm.gov/codes/codes-current-and-past>

Each code volume has a file associated with it. The files range in size from three pages (Fuel Gas) to 64 pages (Residential). If the reader would find a table of contents beneficial for the quick perusal of these documents, please contact Rob Roegner Rob.Roegner@ncdoi.gov or Carl Martin Carl.Martin@ncdoi.gov.

FIGURE 4: TABLE OF APPROVED AMENDMENTS

2018 Administrative 	Approved Amendments
2018 Building 	Approved Amendments
2018 Residential 	Approved Amendments
2018 Energy Conservation 	Approved Amendments
2018 Existing Building 	Approved Amendments
2018 Fire 	Approved Amendments
2018 Fuel Gas 	Approved Amendments
2018 Mechanical 	Approved Amendments
2018 Plumbing 	Approved Amendments
2017 Electrical Code *	Approved Amendments



Remember, refer to NC Administrative Code section **102.4 Effective date of rules**, and **102.5 Interim use of approved rules** for clarification of effective dates and the process for using approved rules prior to the effective date.

Education Section

NC Building Code Training

The most up-to-date training schedule for all building codes are available at the following link:

<https://www.ncosfm.gov/licensing-cert/code-officials-qualification-board-coqb/coqb-code-education>

Once the web page is accessed, click the “**FIND A CLASS**” button to refine your search. Many in-person classes have been reopened. Please check out the available on-line courses, and carefully read the locations and means of course offering. It is suggested that you contact the organization or individual providing the training to verify the locations and means of training before traveling to any given site or registering for a class. As always, please consider the use of Standard Courses for fulfilling Con-Ed requirements, as they are an underutilized tool for that purpose.

Other websites of Inspector Organizations that offer training

<http://www.ncbia.org/> (Building Inspectors Association)

<http://ncpia.us/> (Plumbing Inspectors Association)

<https://www.nc-mia.com/> (Mechanical Inspectors note new website address – formerly www.ncmia.com)

<http://www.ncfma.com/>

(Fire Marshals Association)

<https://nceia.com/>

(Electrical Inspectors, note the new website address)

Reminder: Before signing up for any class, verify the course number. Attendee will not receive credit for courses that they attended within the prior three years. Some courses are taught at multiple sites across multiple years.

Reminders and other Resources

Open Mic

The department (OSFM-Engineering) has been experimenting with better ways to provide updates and outreach to code officials, and one of the methods being given a test-drive is a virtual open – mic Webex meeting. In order to view the times, proceed to the following link, and follow the directions therein:

[COQB - Meeting Dates | OSFM \(ncosfm.gov\)](#)

Please participate as your time allows.

Tentative 2024 NC Code Development Calendar:

The ad hoc process has begun for the 2024 NC Building Codes. The ad hoc committees have begun meeting, or will begin meeting shortly for their respective code volumes. The meeting notices will be published at the following location:

<https://www.ncosfm.gov/codes/building-code-council-bcc/bcc-ad-hoc-committee-meeting-information>

If a January 1, 2024 date is the goal, then the codes should be submitted as B-Items no later than the December 2022 meeting along with the fiscal notes. The schedule would go as follows:

- December 2022 – B-Item
- March 2023 – C-Item
- June 2023 – D-Item
- Rules Review Approval between June 2023 and September 2023.
- Proof reading and submittal to ICC for printing after Rules Review has approved.

The ad-hoc meetings are announced on the following location:

<https://www.ncosfm.gov/codes/building-code-council-bcc/bcc-meeting-dates>

2020 State Electrical Code – Updated Effective Date, NC Residential Code Applicability

The 2020 State Electrical Code went in effect November 1, 2021.

Q-Board testing on 2020 NEC will took effect on March 1, 2022. No amendments are tested. Can only use 2020 NEC. If question is affected by an amendment, the NEC is the governing standard for the exams (same with Electrical Licensing Board).

Link to 2020 State Electrical Code information and interpretations

<https://www.ncosfm.gov/codes/state-electrical-division/state-electrical-code-and-interpretations>

The 2020 State Electrical Code (NEC) is currently not applicable to dwellings and other structures constructed under the 2018 NC Residential Code. The 2017 NEC will remain in effect for such buildings and structures until the 2024 NC Residential Code becomes effective, which can be no earlier than January 1, 2025.