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Introduction

Feature Articles

Codes Update – Ad Hoc Meetings

The 2019 NC State Building Codes are currently under development with a *tentative* 1/1/2019 effective date. The ad Hoc Committees for the various codes are either set up and meeting dates are available at the following link:

Ad Hoc Link: (press the “MEETING DATES” button after you open the following link)

[http://www.ncdoi.com/OSFM/Engineering_and_Codes/Default.aspx?field1=BCC -
_Ad_Hoc_Committee_Meeting_Information&user=Building_Code_Council&sub=BCC_Committees](http://www.ncdoi.com/OSFM/Engineering_and_Codes/Default.aspx?field1=BCC_-_Ad_Hoc_Committee_Meeting_Information&user=Building_Code_Council&sub=BCC_Committees)

The 2012 NC Codes remain in effect until the 2019 codes have gone through the Ad Hoc and Building Code Council process. Cumulative amendments to the 2012 NC Codes may be downloaded at the following link. Please note we added an interactive table of contents to facilitate easier navigation of the posted document. The table of contents starts on the third page, and the amendments are categorized by their respective code book. You can use your normal keyboard shortcuts, such as “ctrl-home” (top of document), “ctrl-end”(end of document), and “pageup” and “pagedown” to navigate document.

2012-2016 Approved Cumulative Amendments:

http://www.ncdoi.com/OSFM/Engineering_and_Codes/Documents/2012_NCBuildingCode_amendments/2012-2016ApprovedCumulativeTest1Format.pdf

2015-2017 Approved Cumulative Amendments:

http://www.ncdoi.com/OSFM/Engineering_and_Codes/Documents/2012_NCBuildingCode_amendments/2015-2017ApprovedCumulative.pdf

There are approximately 30 pages of approved amendments in the 2015-2017 document, and these primarily will have an effective date of January 1, 2017, but can be used prior to that date per NC Administrative Code Section 102.5

2014 NC Electrical Code Reminder

The 2014 NEC with North Carolina Amendments has been in effect since 4/1/2016. Remember, **effective** date means it **shall** be used on and after that date. The amendments made by North Carolina to the 2014 NEC may be downloaded at the following link. There are only six pages of amendments. The 2014 NEC can be purchased and these six pages downloaded for free and inserted by the user. **The six pages of NC Amendments DO NOT come from NFPA.**

NEC 2014 NC Amendments link:

[http://www.ncdoi.com/OSFM/Engineering_and_Codes/Documents/2014%20Edition%20-
%20Effective%20April%201%202016.pdf](http://www.ncdoi.com/OSFM/Engineering_and_Codes/Documents/2014%20Edition%20-%20Effective%20April%201%202016.pdf)

Places to purchase 2014 NEC:

The 2014 NEC can be purchased directly from NFPA, (NFPA 70: National Electrical Code (NEC), 2014 Edition), at www.NFPA.org, or it is available at the walk-in desk at the OSFM Chapanoke Road office. The price at the desk is \$97. This is not an ICC document, so it is not available on the on-line DOI code sales website.

Building Code Council Approved Rule Changes

At the December 2015 Building Code Council meeting, there were 8 D-Items, and 8 of these were adopted in December. At the March 2016 meeting, there were 4 D-Items, and 4 of these were adopted in March. Please refer to the following link to review the list of D-Items from the December 2015 and March 2016 Building Code Council Meeting:

BCC Meeting Minutes-December 2015

http://www.ncdoi.com/OSFM/Engineering_and_Codes/Documents/BCC_Minutes/2015%2012%2015~December%2015,%202015_.pdf

BCC Meeting Minutes-March 2016

http://www.ncdoi.com/OSFM/Engineering_and_Codes/Documents/BCC_Minutes/2016%2003%2016~March%2016,%202016_.pdf

Assuming the BCC-approved D-Items are approved by the Rule Review Commission, the adopted rules will be placed on the NCDOT Engineering website. The compilation of previously approved rules is located in the document “**Accumulative Supplement to the 2012 NC Building Code**”. This document is changing somewhat, in that all amendments from 2012, 2013, 2014, and 2015 are being posted in this single document. Approved amendments with an effective date of Jan 1, 2017 are still located in a different document as discussed in the Codes Update section above.

Accumulative Supplement to the 2012 NC Building Code links:

http://www.ncdoi.com/OSFM/Engineering_and_Codes/Documents/2012_NCBuildingCode_amendments/2012-2016ApprovedCumulativeTest1Format.pdf

http://www.ncdoi.com/OSFM/Engineering_and_Codes/Documents/2012_NCBuildingCode_amendments/2015-2017ApprovedCumulative.pdf

The full review of the 8 December-approved code amendments is left to the reader, but the titles of each item are bulleted below.

- **Item D – 1 Request by Michael A. Segala, Jr., representing Aquatherm, to amend the 2012 NC Plumbing Code, Section 605.4. (Adopted)**
- **Item D-2 Request by Jeff Tiller, Appalachian State University and North Carolina Energy Efficiency Alliance, to amend the 2012 NC Energy and Conservation Code, Table 502.1.2. (Adopted)**
- **Item D-3 Request by Wayne Hamilton, representing the NC Fire Service Code Revision Committee, to amend the 2012 NC Fire Code, Section 505.1.1. (Adopted)**
- **Item D – 4 Request by Wayne Hamilton, representing the NC Fire Service Code Revision Committee, to amend the 2012 NC Fire Code, Section 902.1. (Adopted)**
- **Item D – 5 Request by Robert Privott, representing the NC Home Builders Association, to amend the 2012 NC Mechanical Code, Section 312.1. (Adopted)**
- **Item D – 6 Request by Cindy Register, representing the NC Building Code Council, Electrical Committee, to adopt the 2014 NEC with the following amendments. (Adopted)**
- **Item D – 7 Request by Lon McSwain, representing the NC BCC, to amend the 2012 NC Building Code, Sections 712.4 and 1018.1 and Table 1018.1, and the 2012 NC Fire Code Section 1018.1 and Table 1018.1. (Adopted)**

- **Item D-8 Request by Tom Brown, Jeff Griffin, Mark Matheny and Reggie Hucks, representing the NC BIA, to amend the 2012 NC Building Code, Section 1008.1.10. (Adopted)**

The full review of the 4 March-approved code amendments is left to the reader, but the titles of each item are bulleted below.

- **Item D – 1 Request by Leon Skinner, representing the NC Existing Building Code Ad Hoc Committee, to amend the 2015 NC Existing Building Code, Section 101. (Adopted)**
- **Item D – 2 Request by Leon Skinner, representing the NC Existing Building Code Ad Hoc Committee, to amend the 2015 NC Existing Building Code, Section 407. (Adopted)**
- **Item D – 3 Request by Barry Gupton, Staff, to advertise the modified amendment to the 2014 NC Electrical Code, Article 300.9. The Rules Review Commission objected to the June 9, 2015 adoption for “failure to comply with the APA.” (Adopted)**
- **Item D – 4 Request by Al Bass, Building Code Council, to amend the 2012 NC Plumbing Code for condensate drains. (Adopted)**

Qualification Board Update

Minutes

The minutes of the previous three Qualifications Board Meeting are available at the following link:

October 2015 Meeting Minutes

http://www.ncdoi.com/OSFM/Engineering_and_Codes/Documents/COQB_Minutes/2016%2001%2028~October%2027,%202015_.pdf

January 2016 Meeting minutes:

http://www.ncdoi.com/OSFM/Engineering_and_Codes/Documents/COQB_Minutes/2016%2005%2006~January%2026,%202016_.pdf

March 2016 Meeting Minutes

http://www.ncdoi.com/OSFM/Engineering_and_Codes/Documents/COQB_Minutes/2016%2005%2006~March%2015,%202016_.pdf

Individuals wishing to provide feedback are encouraged to contact Mike Hejduk at mike.hejduk@ncdoi.gov.

Model Code Development – ICC Published Results

As discussed in previous newsletters, the Model Code that North Carolina uses as the base document for the NC building codes and trade codes (except Electrical-it is based on an NFPA document, NFPA 70) is updated every three years. States, cities and other jurisdictions outside of NC adopt them at various intervals as they see fit. The proposals to the model codes, and the reasons for the proposal and subsequent rebuttals, can be viewed on-line for the more recent code cycles. Older code cycles (pre-2006) are not available on-line, contact ICC to obtain records. In researching the “why” behind a code change, it is sometimes helpful to view the proposer’s back-up data. Even for new code proposals, if nothing changes, many times the discussion reveals technical reasons that may have been not been obvious before. Of course, only the changes made to the model codes are available for review on this website. Changes to the NC code would have to be done by reviewing archived Building Code Council proposed changes.

Model Code proposed changes, history:

<http://www.iccsafe.org/codes-tech-support/codes/code-development/code-development-archives/>

Department Notes

Engineering Department

Personnel Notes

The Engineering Department is happy to welcome the new Chief Electrical Code Consultant. His name is Joseph Starling. Mr. Starling is a NC native, growing up in the triangle working with his father in electrical contracting. He has worked for himself in electrical contracting, software design, and microprocessor development. He has also worked as an instructor for Wake tech in their Applied Engineering Department teaching electrical systems. Mr. Starling is also an experience field inspector, working in Atlantic Beach as the chief electrical inspector.

Mr. Starling holds a BS in electrical engineering and a BS in computer engineering, both from NC State. Licenses held are an Unlimited Electrical Contracting, Level III Electrical and Mechanical, Level II Plumbing, and Level I Building Fire, and an EI from the engineering board. We are fortunate to be able to draw upon Mr. Starling's knowledge, and please welcome him aboard if you have a chance.

Joseph Daniel Starling

Chief Electrical Code Consultant and State Electrical Engineer NC Department of Insurance, Office of State Fire Marshal

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New Code Interpretations Posted

Since the last Engineering Newsletter was posted, the following web interpretations have been posted to the interpretations webpage, at the following link:

Code Interpretations link:

http://www.ncdoi.com/OSFM/Engineering_and_Codes/Default.aspx?field1=Code_Interpretations&user=State_Building_Codes

Building	1807.2.5 - Retaining Wall Cumulative Vertical Height.doc
	303.1 - Defining Assembly Spaces Accessory to Educational Occupancies.doc
Fuel Gas	0404.7 - Indoor Gas Piping.doc

In addition to the generic code interpretations, job-specific Formal Interpretations and subsequent Appeals, if any, are being posted on the same webpage as the general interpretations. They are located under the table heading "SPECIFIC ACTIONS". There are several Formal Interpretations posted, including:

Formal Interpretations	160420 Admin 107 Inspections.pdf
	160421 R302.1 Exterior Walls.pdf
	160426 Building 1021.2 Single Exits.pdf
	160505 Plumbing 715 Backwater.pdf
	160511 Building 903.3.1.3 NFPA 13D.pdf
Appeals	160323 NCAEC BCC Order - Docks.pdf

Cumulative Supplements

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

Cumulative code changes link:

[http://www.ncdoi.com/OSFM/Engineering_and_Codes/Default.aspx?field1=Codes -
_Current_and_Past&user=State_Building_Codes](http://www.ncdoi.com/OSFM/Engineering_and_Codes/Default.aspx?field1=Codes_-_Current_and_Past&user=State_Building_Codes)

You may have to scroll down on the screen that is accessed at the above link to see another link to the “**Accumulative Supplement to the 2012 NC Building Code.**” This document now contains all code amendments that are adopted since 2012. Use the Table of Contents to scan for changes by Code.

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.

Qualifications Assurance Section – COQB, HILB & PYRO

Training Summary

A review of the Standard Course offerings for July 2015 – May 2016 showed 1261 student names were submitted on 136 class rosters for F,B,M,E,P (excluding Law and Admin courses). This is an average of about 9.3 students per class. With classes this small, the community colleges have a challenging time justifying offering the classes, and classes may get canceled and rescheduled for a later date. Of the 58 community colleges in NC, about 22 offer Standard Courses. These classes are open to the public, and are an excellent chance for anyone associated with the building trade to obtain the same basic training a code official receives.

TRADE	TOTAL CLASSES FY 15-16	TOTAL STUDENTS ¹
BLDG 1	12	154
BLDG 2	8	47
BLDG 3	9	69
ELEC 1	10	119
ELEC 2	3	15
ELEC 3	9	51
FIRE 1	27	325
FIRE 2	12	94
FIRE 3	8	60
MECH 1	7	92
MECH 2	5	28

MECH 3	7	41
PLUMB 1	9	95
PLUMB 2	4	26
PLUMB 3	6	45
TOTALS	136	1261

(Time period represented is July 2015 – May 24, 2016)

¹Students may be taking more than one course; total students may be less than total quantity of inspectors.

Qualifications Board Link:

http://www.ncdoi.com/OSFM/Engineering_and_Codes/Default.aspx?field1=Code_Officials_Qualification_Board_USER&user=Code_Officials_Qualification_Board

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NC Building Code Training

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

http://www.ncdoi.com/OSFM/Engineering_and_Codes/Default.aspx?field1=Code_Education_-_Student_Main&user=Code_Education_Resources

Once the web page is accessed, click the “**FIND A CLASS**” button to refine your search. As discussed in previous newsletters, please consider the use of the Standard Classes if you are a design professional, contractor, or code official, as they are an underutilized offering.

The NC Building Inspectors Association, NC Plumbing Inspectors Association, NC Mechanical Inspectors Association and NC Fire Marshal’s Association have scheduled their Annual Meetings, which have training hours included, please refer to their following websites for further information.

<http://www.ncbia.org/>

<http://ncpia.us/>

<http://ncmia.com/>

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

The North Carolina Electrical Inspectors Association (Ellis Cannaday Chapter) has mostly finished their training for the 2015-2016 fiscal year, but please check their website for any updates:

<http://www.nciae.org/>

Current Topics

Flood Elevation Reminder – Fire Stations

This is a reminder of the Commercial Construction Flood Elevation Requirements, and how they affect certain facilities such as fire stations.

Section 1612.4 of the 2012 NC Building Code requires compliance with ASCE 24-05. Section 2-3 of ASCE 24 contains a table (Table 2-1) that provides the required first floor elevation above the Base Flood Elevation (BFE). The requirements are based on construction categories found in Table 1-1 of ASCE 24.

Please note:

- Footnote C to Table 2-1 indicates that the first floor can be below the BFE if the building meets the floodproofing requirements of Section 6.
- Note that building such as fire stations cannot meet the requirements of Section 6 at the truck bays because the required garage door openings must be $BFE+2'$ per Table 6-1.

Please take note of these requirements in site planning.