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May 2017

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Introduction

Current Topics

Update on 2018 NC Building Code

The 2018 NC Building Code has been introduced to the NC Building code council. It has to go through the general adoption period. We have started to get calls concerning when the codes will be adopted, and when they will be effective. It may be desirable for a jurisdiction to know when they need to put a placeholder in their budget for new code books, CD’s, or subscription.

The statute setting the next code cycle is located at the following link, with an excerpt immediately following:

http://www.ncga.state.nc.us/EnactedLegislation/Statutes/HTML/BySection/Chapter_143/GS_143-138.html

(d) Amendments of the Code. - Subject to the procedures set forth in G.S. 143-136(c) and (d), the Building Code Council may periodically revise and amend the North Carolina State Building Code, either on its own motion or upon application from any citizen, State agency, or political subdivision of the State. In addition to the periodic revisions or amendments made by the Council, the Council shall, following the procedure set forth in G.S. 143-136(c), revise the North Carolina State Building Code: Residential Code for One- and Two-Family Dwellings, including provisions applicable to One- and Two-Family Dwellings from the NC Energy Code, NC Electrical Code, NC Fuel Gas Code, NC Plumbing Code, and NC Mechanical Code only every six years, to become effective the first day of January of the following year, with at least six months between adoption and effective date. The first six-year revision under this subsection shall be adopted to become effective January 1, 2019, and every six years thereafter. (see link to statute for full text, above)

Based on the statute, the 2018 NC Code (Except Electrical) will become adopted no later than July 1, 2018, and then we enter into a (minimum) six month overlap timeframe where either the 2012 NC code or the 2018 is acceptable. Then, on January 1, 2019 the 2018 NC code is effective, and the 2018 NC Code is the requirement. This time frame of overlap may be extended, but that cannot be predicted at this time.

Also, at this point in time, we cannot predict if there will be published code ready to ship prior to July 1, 2018, or what date after July 1, 2018 the codes will be ready to ship (purchase). However, the process is, to date, on-schedule for meeting the requirements set forth in the statute. The following represents a time line that may aid in planning when to budget for new code training and materials.

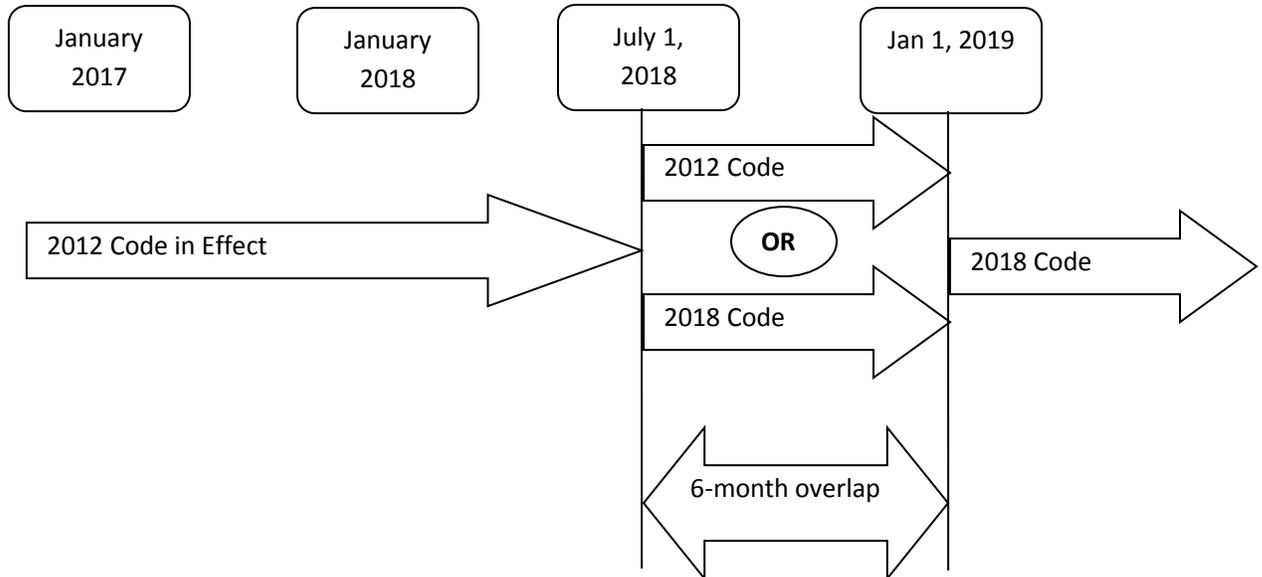


FIGURE 1: TENTATIVE ADOPTION AND EFFECTIVE DATES*

- *Dates of overlap and earliest adoption date (July 1, 2018) **are subject to variation** due to the public adoption process.

Plastic Sewer Pipe Tracer Wire Requirement

This article is a follow-up to a blast e-mail that went out to building code official heads of departments in March.

In general, when a code amendment is made, the effective date is rolled to the next calendar year. However, in cases where there is a more urgent need, an earlier implementation date may be chosen. Such was the case with Item D-2 of the December 2017 BCC Meeting Minutes (see title and links to minutes in Building Code Council Approved Rule Changes article). Due to all horizontal drilling going on in NC for fiber and natural gas installations and the life-safety aspect, they chose to implement sooner.

BCC Approved Rule reprint

Item D – 2 Request by Ralph Euchner, representing NC Building Code Council, to amend the 2012 NC Plumbing Code, Section 306.2.4 as follows:

306.2.4 Tracer wire. For plastic sewer piping, an insulated copper tracer wire or other approved conductor shall be installed adjacent to and over the full length of the piping. Access shall be provided to the tracer wire or the tracer wire shall terminate at the cleanout between the building drain and building sewer. The tracer wire size shall be not less than 14 AWG and the insulation type shall be listed for direct burial.

Effective March 1, 2017

The life safety aspect happens because when a gas company drills through an unmarked plastic sewer line, the drain may work for a while, but then when it stops up, a plumber is called to clean it out. When they rod out or use root-cutting methods on the line, they can penetrate the gas line and now there is a direct path into the structure for the gas. Boring into other unmarked lines is of course not desirable, but from a minimum life-safety aspect, water lines, if cut, do not provide a path into a structure, and the “strike” is somewhat self-reporting in a relatively short time period.

Please consider contacting a knowledgeable utility locator to get the ins-and-outs of utility location, and just how the locators function. Remember the purpose of the tracer wire is to be able to place an electrical charge on it, and have it maintain that charge for the entire length of the tracer wire. Uninsulated tracer wires diffuse the electrical charge over a very short length. We are not trying to use the tracer wire as a grounding device, we want it to maintain a charge and very-low current flow over its entire length so the locator can trace it both horizontally, and, to some extent, vertically (depth of cover).

Here are some frequently asked questions and answers on this code amendment.

Is THHN acceptable? No, neither THHN or THWN are listed for direct burial. The tracer wire being required by this amendment is cheaper than THHN or THWN and readily available from supply houses that cater to underground utilities. A quick google search for underground tracer wire should yield a good starting point.

Is Type UF cable acceptable? Yes, it is listed for direct burial, but it really is more expensive than what is being called for in this amendment. Searching for tracer wire on utility-supply houses will yield better results.

Does the insulator have to be a specific color? No. Although the industry standard for utilities does recommend sewer piping to be traced with green, this is not required for this code amendment.

Is it required to have both ends of the wire accessible? No. Although that is desirable because then you can complete the circuit and get a really good current flow, it is not minimally required. It is understood that the “deep end” of the sewer piping will be where the tracer wire terminates, and the accessible end will terminate at the cleanout between the building drain and building sewer. There is nothing prohibiting the tracer wire to go all the way the side of the building and terminate at the wall, but minimally it needs to be to the cleanout. This is where the utility locator will place an electrical charge on the tracer wire. The terminal end underground must be sealed to prevent corrosion.

Does the tracer wire need to be wrapped around the plastic sewer pipe? No. The requirement is for the tracer wire to accurately represent both the path and depth of the sewer line. Wrapping is not prohibited, but is not required. It also does not need to be touching the pipe, it just needs to really close to represent the actual path the sewer pipe takes.

Does there need to be two tracer wires, one “adjacent to” and one “over the length”? No, adjacent to and over the full length does not mean “adjacent to and on top of”. It just needs to be really close to the sewer pipe, to accurately represent to path and depth of the plastic sewer pipe.

Do septic tank sewer lines need to be traced? Yes. However, the definition in the plumbing code applies. For instance, sometimes the septic tank is so close to the house that there is technically not a *sewer* but only building drain piping. The building *drain* is not required to be traced.

Do septic tank drain field lines require tracing? No, they are not sewer piping by the plumbing code definition.

For further questions, please contact your local plumbing code official, or our office: Bill Moeller 919-647-0007 or Dan Dittman 919-647-0012.

Feature Articles

Codes Update

The 2018 NC State Building Codes are currently under development with a **tentative** 1/1/2019 effective date. The proposed code was introduced as a B-item at the December 2016 Building Code Council meeting. See submission at the following link:

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

See the article with the title “**2018 NC/ICC 2015 NC State Building Codes**” and the corresponding .pdf documents below this title if interested.

Building Code Council Approved Rule Changes

At the December 2016 Building Code Council meeting, there were 10 D-Items, and 9 of these were adopted in December. Please refer to the following link to review the list of D-Items from the December 2016 Building Code Council Meeting:

BCC Meeting Minutes-December 2016

http://www.ncdoi.com/OSFM/Engineering_and_Codes/Documents/BCC_Minutes/2016%2012%2016~December%2016,%202016_.pdf

BCC Meeting Minutes-March 14, 2017

http://www.ncdoi.com/OSFM/Engineering_and_Codes/Documents/BCC_Minutes/2017%2003%2017~March%2014,%202017_.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 2016, and 2017 are being posted in this single document.

Accumulative Supplement to the 2012 NC Building Code links:

http://www.ncdoi.com/OSFM/Engineering_and_Codes/Documents/2012_NCBuildingCode_amendments/2012-2017ApprovedCumulativeTest1Format.pdf

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

BCC Approved Amendments-December 2016

- **Item D – 1 Request by Dan Hartley, representing BHM Architects, to amend the 2012 NC Building Code, Section 509.2. (Adopted)**
- **Item D – 2 Request by Ralph Euchner, representing NC Building Code Council, to amend the 2012 NC Plumbing Code, Section 306.2.4. (Adopted)**
- **Item D – 3 Request by Robert Privott, representing NC Home Builders Association, to amend the 2012 NC Residential Code, Section AG105.2. (Adopted.)**
- **Item D – 4 Request by Terry Cromer, representing NC Association of Electrical Contractors, to amend the 2014 NC Electrical Code, Article 680.25(A) Exception. (Adopted)**

- **Item D – 5 Request by Michael Rettie, representing Orange County Inspection Department, to amend the 2012 NC Residential Code, Section N1102.4.3 and the 2012 NC Energy Conservation Code, Section 402.4.3. (Adopted)**
- **Item D – 6 Request by Patrick Keal, representing Big Ass Solutions, to amend the 2012 NC Mechanical Code, Section 202. (Adopted)**
- **Item D – 7 Request by Patrick Keal, representing Big Ass Solutions, to amend the 2012 NC Mechanical Code, Chapter 15. (Adopted)**
- **Item D – 8 Request by Patrick Keal, representing Big Ass Solutions, to amend the 2012 NC Mechanical Code, Section 929. (Adopted)**
- **Item D – 9 Request by Ed Johnson, representing Campus Safety Products, LLC, to amend the 2012 NC Building Code and Fire Code, Section 1008; and the Existing Building Code, Sections 403 and 704. (Adopted)**

BCC Approved Amendments-March 2017

- **There were no D-items at the March 2017 meeting.**

Qualification Board Update

Qualifications Board Rule Change Update – Increased Standard Course Training Venues

The NC Code Officials Qualification Board (NCCOQB) is taking public comments on rules as part of a periodic review effort. The web page link below will take the user to a listing of all the board’s rules and the agency’s initial determinations indicating those rules with substantive public interested highlighted. Code Enforcement Officials (CEOs) should note that the Board has directed staff to draft rule change language for two major issues identified by Authorities Having Jurisdiction (AHJs) as impacting hiring and retaining CEOs.

The first is Board Rule 11 NCAC 08.0602 where the duration of the probationary certificate is being requested extended from two years to three years.

The second issue pertains to Board Rule 11 NCAC 08.0708 to allow issuance of certificates soon after passing the state exam rather than waiting until the regular quarterly board meetings. Both of these proposed rule changes are intended to increase the pool of qualified inspectors.

Additional possible rule changes are currently being considered by several committees of the NCCOQB related to qualifications, testing and continuing education requirements applicable to inactive certificates.

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

The regularly scheduled quarterly meetings in 2017 will be held on January 24th, April 25, July 25th and October 24th. Please refer to the NCDOL.com website for agenda, time and location.

Minutes

The minutes of the January and February Qualifications Board Meeting Minutes are available at the following links:

February 2017 Meeting Minutes

http://ncdoi.com/OSFM/Engineering_and_Codes/Documents/COQB_Minutes/2017%2002%2023~February%2023,%202017_.pdf

January 2017 Meeting Minutes

http://ncdoi.com/OSFM/Engineering_and_Codes/Documents/COQB_Minutes/2017%2001%2024~January%2024,%202017_.pdf

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

Department Notes

Engineering Department

Personnel Notes

Cliff Isaac, PE

Deputy Commissioner of Insurance

Mr. Isaac has rejoined the Department of Insurance after undertaking the Facilities and Properties Manager position at the NC DOT Rail Division. At the Rail Division, Cliff's duties included the management of consultants and employees tasked with implementing the mission of operating/preserving the rail corridors and construction of rail facilities on properties throughout the state of North Carolina. The most visible aspect of this work is the new Raleigh Union Station set to transform downtown Raleigh. Prior to this, Mr. Isaac worked for NC DOI as an investigator of code officials with the NC Qualifications Board, and also undertook the role of Chief Residential Code Official. Before joining NC DOI, Mr. Isaac spent over fifteen years at a NC-based design-build contracting firm responsible in the design and construction of retail, storage, assembly, institutional, healthcare and manufacturing facilities.

Cliff holds all level III inspection certificates in building, fire, plumbing, mechanical and electrical. He is also a certificated floodplain manager and a licensed general contractor and professional engineer. Cliff currently serves on the NC Structural Pest Control Committee and will serve as the Commissioner's appointee to the NC Code Officials Qualifications Board.

Mr. Isaac holds a Bachelor's Degree in Civil Engineering. Please welcome Cliff in his new role as Deputy Commissioner of Insurance.

Kevin C. Durigon, PE

Mr. Durigon has joined the Private Plan Review section of the NC Department of Insurance Engineering Division. Prior to joining NCDI as a Building Code Consultant, Kevin worked as a Structural Engineer for the Indiana Department of Transportation, Jacobs Engineering Group (Philadelphia, PA), and the North Carolina Department of Transportation. Kevin graduated from Michigan State University in 2003 with a B.S. in Civil Engineering. Please welcome Kevin in his new role in the Private Plan review section of NC DOI.

New Code Interpretations Posted

Since the last Engineering Newsletter was posted, there have been several Appeal and Formal Interpretations posted.

Code Interpretations link:

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

Since the prior Newsletter, there has been one Formal Interpretation posted. Formal interpretations and Appeals are available in the interpretations link shown above. They are located under the table heading "SPECIFIC ACTIONS".

Formal Interpretations 170111 Mecklenburg Mechanical 306.5 Roof Access.pdf

Appeals No new appeals

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/Documents/2012_NCBuildingCode_amendments/2012-2017ApprovedCumulativeTest1Format.pdf

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 – Standard Courses

A review of the Standard Course offerings for July 2016 – Jan 2017 showed 931 student names were submitted on 101 class rosters for L&A, F,B,M,E,P (excluding Law and Admin courses). This is an average of about 9.2 students per class. 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.

TABLE 1: STANDARD COURSE TRAINING SUMMARY TO DATE (FY 2016-2017)

| Trade | Total Classes FY 16-17 | total students ¹ | pass | fail | Ce Credit only |
|----------------------------------|------------------------|-----------------------------|------|------|----------------|
| Law & AD | 14 | 222 | 208 | 1 | 13 |
| B1 | 6 | 92 | 72 | 12 | 8 |
| B2 | 3 | 28 | 25 | 3 | 0 |
| B3 | 5 | 27 | 24 | 2 | 1 |
| E1 | 8 | 57 | 47 | 3 | 7 |
| E2 | 4 | 26 | 26 | 0 | 0 |
| E3 | 6 | 31 | 30 | 0 | 1 |
| F1 | 12 | 135 | 125 | 1 | 9 |
| F2 | 7 | 56 | 53 | 2 | 1 |
| F3 | 6 | 49 | 46 | 3 | 0 |
| M1 | 5 | 50 | 46 | 2 | 2 |
| M2 | 3 | 13 | 10 | 0 | 3 |
| M3 | 6 | 28 | 28 | 0 | 0 |
| P1 | 6 | 56 | 52 | 1 | 3 |
| P2 | 3 | 33 | 31 | 0 | 2 |
| P3 | 4 | 28 | 25 | 0 | 3 |
| Running Total FY2016-2017 | 101 | 931 | 848 | 30 | 53 |
| Totals FY 2015-2016 | 136 | 1261 | 1108 | 63 | 90 |

Standard Course Statistics 6/30/16-1/31/2017

¹An inspector may be taking more than one course; therefore total students may be more than the 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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Upcoming 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](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/>

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

End of Newsletter