



Mechanical news from W-S / Forsyth Planning & Development Services

Changes in our department

We have been granted two new positions to our department one of which is a new Mechanical Inspector. I am pleased to welcome **Todd Bondurant** to our team of Mechanical Inspectors. Todd is a native of Reidsville NC and comes from a long background in the HVAC industry holding H3, H2 License. Todd will be a floating inspector (no assigned area) that will be working across the county performing Mechanical & Electrical Inspections on replacement systems he will also be filling in for other absent inspectors. Lets give him a big welcome to Forsyth County.

Questions from contractors

Question : Can I connect flex duct to a unit or to the duct system when the equipment manufactures listing and instructions require 1" clearance to combustible materials for the first 3ft of the duct system.

Answer : No. If the equipment listing requires 1" clearance to combustible material for the first 3ft of the duct system, then flex duct cannot be connected to the system within 3ft of the unit. There are a few requirements that prohibit this installation. See the following code sections.

2012 NCMC

304.1 General. Equipment and appliances shall be installed as required by the terms of their approval, in accordance with the conditions of the listing, the manufacturer's installation instructions and this code. Manufacturer's installation instructions shall be available on the job site at the time of inspection.

603.6.4 Flexible air duct and air connector clearance. Flexible air ducts and air connectors shall be installed with a minimum clearance to an appliance as specified in the appliance manufacturer's installation instructions.

Also **(ADC) Air Diffusion Council** has specific requirements for flex duct and connector clearance. Please see the following requirements.

4.2 Installation Restrictions and Use Limitations

There are specific restrictions and limitations related to the use of flexible ducts. Some are due to NFPA Standards, model codes and various state/local codes. **Others are due to end use performance where the product was not designed for that specific use.** Some, but not all inclusive, are as follows:

- a. Shall not be used for vertical risers serving more than two stories in height.
- b. Shall not be used in systems with entering air temperature higher than 250°F[121°C].
- c. Shall be installed in accordance with the conditions of their listing.
- d. When installed in a fire-rated floor/roof ceiling assembly, ducts shall conform with the design of the tested fire-resistive assembly.
- e. **Shall be interrupted at the immediate area of operation of electric, fossil fuel or solar energy collection heat sources to meet listed equipment clearances specified.**

6.1 Fire Safety

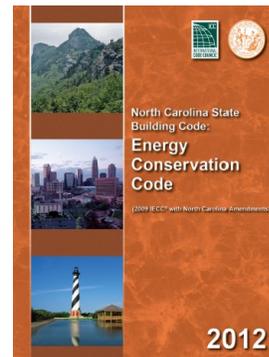
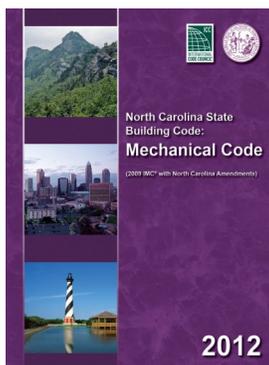
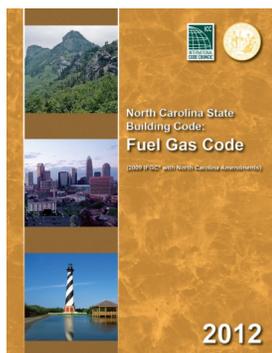
Flexible ducts **cannot be considered “noncombustible”**, except metallic non-insulated ducts, but they are generally regarded as **“limited-combustible”**. The UL 181 Safety Standard for “Factory-Made Air Ducts and Air Connectors” is used to investigate safety performance as referenced in the applicable International Codes (ICC), Uniform Mechanical Code (IAPMO), the applicable National Fire Protection Code/Standards (NFPA), and various other state and local codes.

Question : *If I am replacing a Category 3 or 4 appliance do I have to replace or make corrections to the existing flue pipe.*

Answer : *If the flue pipe is not installed in accordance with the **new equipment** manufactures installation instructions, then it will need to be corrected. Two of the common issues we see is the existing joints on PVC flue pipe systems are not primed and glued properly. Manufactures instructions require the PVC joint to be primed and glued in accordance with ASTM F 656 , ASTM D 2564 and ASTM D 2855. The NCFGC requires the joint to be primed with contrast color and glued and second is improper venting material by the Listing. See the following code section.*

2012 NCFGC

503.4.1.1 Plastic vent joints. Plastic pipe and fittings used to vent appliances shall be installed in accordance with the *appliance* manufacturer’s installation instructions. **Where a primer is required, it shall be of a contrasting color.**



Question : I am installing gas regulators on a 2# or 5# gas system, what standard must the regulators comply with.

Answer : NCFGC Section 410.1 requires all line pressure regulators to be listed as complying with **ANSI Z21.80**. See the following code section.

2012 NCFGC

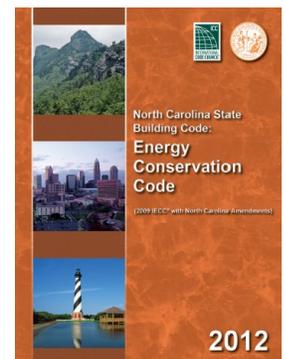
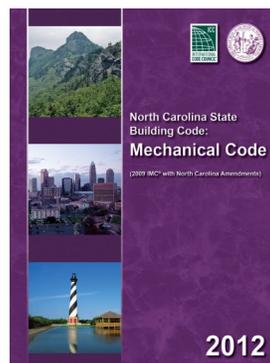
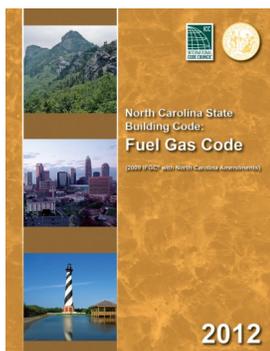
410.1 Pressure regulators. A line pressure regulator shall be installed where the *appliance* is designed to operate at a lower pressure than the supply pressure. Line gas pressure regulators shall be *listed* as complying with **ANSI Z21.80**. Access shall be provided to pressure regulators. Pressure regulators shall be protected from physical damage. Regulators installed on the exterior of the building shall be *approved* for outdoor installation.

This standard applies to all line regulators where the appliance operates under 2 psi manifold pressure. The regulator will have to be listed as complying with ANSI Z21.80. This standard is not the same standard for appliance regulators which is ANSI Z 21.18

Change out / Multi Trade Permits

Question : Can I purchase a change out / multi trade permit for the replacement of a Heating / AC system in a apartment building, on commercial property or a project that is connected to a building permit.

Answer : No, the change out / multi trade permit is only for one and two family dwellings and is to used for the replacement of equipment only. It **cannot** be used for apartments, connected to a building permit or any commercial property.



Five and Eleven Month Letters

Our office generates Five and Eleven month letters on permits that are about to expire; a copy of these letters are mailed to your address by USPS. A copy of this letter is also provided to the inspector in that assigned area and the inspector will call the contractor to check the status of the job. If your permit gets placed in stop work status after we have used our resources to keep you informed of your permit status then you will be required to purchase another permit for the work being done. All permits are public record this means anyone has the right to review your permits. When a complaint is filed with the State Board of Examiners of Plumbing, Heating & Fire Sprinkler Contractors, permit records for that contractor are one of the first things they ask us to provide. Please check your records for open/ stop work permits and keep them current. If you need help or would like to discuss this please contact me.

State Board of Examiners of Plumbing, Heating & Fire Sprinkler Contractors.

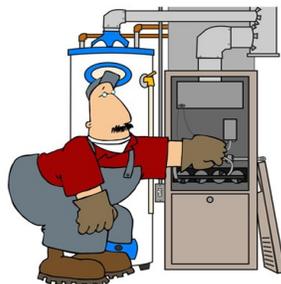
21 NCAC 50 .0402 PERMITS

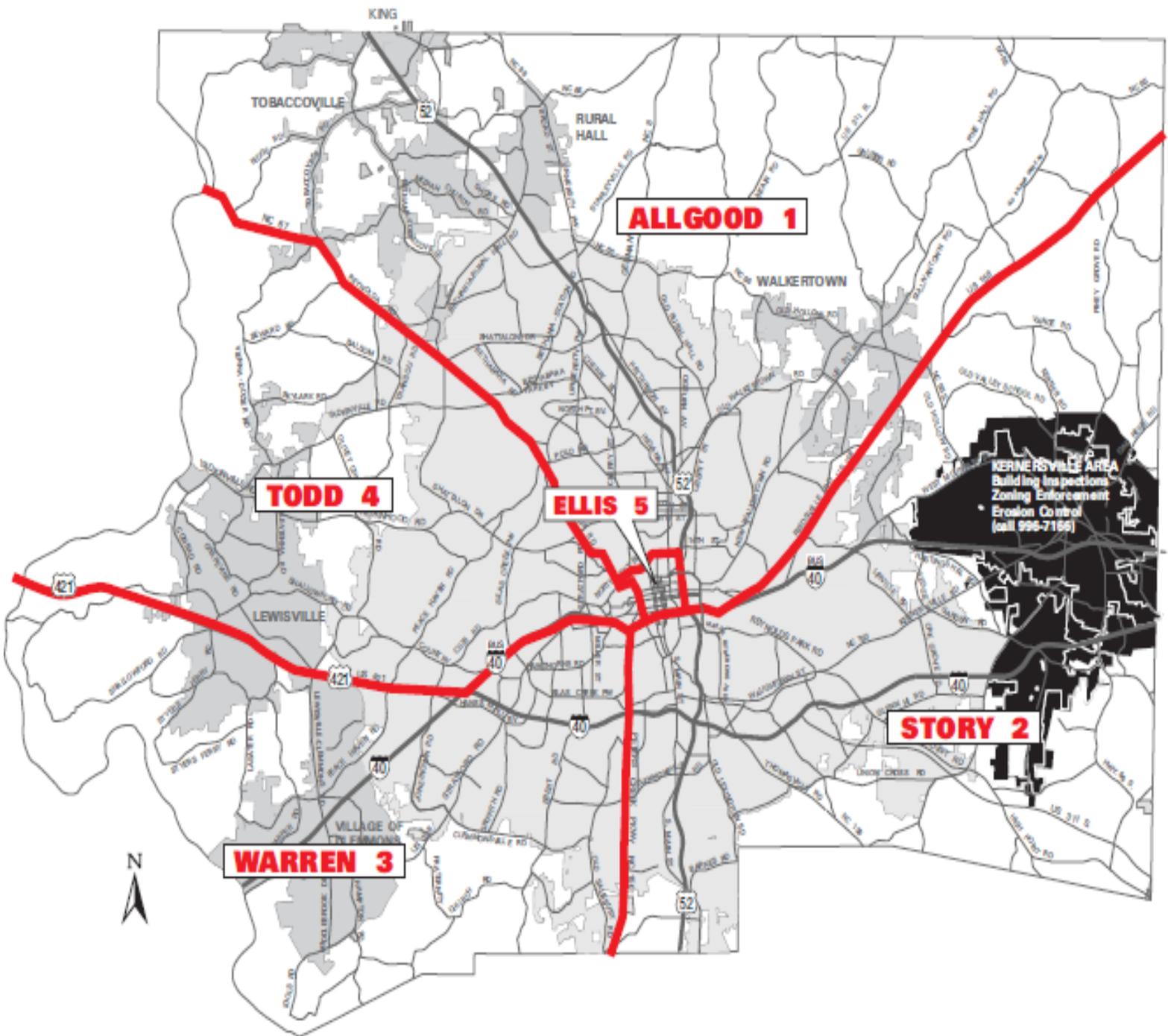
(a) A licensed contractor shall ensure that a permit is obtained from the local Code Enforcement official before commencing any work for which a license is required by the Board, except as set out in Paragraph (c) of this Rule. The contractor shall also ensure that a request for final inspection of the work for which a license is required is made by himself, the general contractor or the owner within 10 days of the earlier of the system being made operational or placed in service, absent agreement with the owner and the local Code Enforcement official. Absent agreement with the local Code Enforcement official the licensee is not relieved by the Board of responsibility to arrange inspection until a certificate of compliance or the equivalent is obtained from the local code enforcement official or the licensee has clear and convincing evidence of his effort to obtain same.

(b) A licensed contractor shall not allow a permit to be obtained or his license number to appear upon a permit except for work which he or his employees perform, over which he or a properly licensed technician will provide general supervision until the completion of the work for which he holds an executed contract with the licensed general contractor or property owner and for which he receives all contractual payments.

"The Code is not a peak to reach but a foundation to build from."

If you would like to have your questions answered in our newsletter please send information to alexe@cityofws.org or call 336-727-2382, 336-462-7501. Thank You





Mechanical/Heating Inspector's Work Areas

MECH. / HEATING INSPECTORS	Work Area	Office Phone	Mobile
Alex Ellis (Supr.)	5	727-2382	462-7501
Troy Allgood	1	747-7431	462-7489
Jim Story	2	748-3098	462-7498
Wade Warren	3	734-1394	462-7502
Shawn Todd	4	727-2387	462-7499
Todd Bondurant		747-6830	971-9228