Land Use and Environmental Service Agency
(Code Enforcement)

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303.3 - Question: At what degree of open, does a door closer need to close the door to a mechanical area from a bedroom?

Answer: The technical answer is any degree. There are many different manufacturer's and designs for self closing devices on the market, consideration should be taken when making the inspection that the closer functions as designed.

306.4 - Question: If I have a crawlspace with 6ft for the first 10 feet in from the crawlspace door, can I start my 20ft run where the 6ft head height ends?

Answer: No, the exception to 306.4 NCMC requires 6 feet high for the entire length. If any part of the passage way drops below 6 feet high, then the exception does not apply and requirements of 306.4 would stand.

306.4 Appliances under floors. Underfloor spaces containing appliances shall be provided with an access opening and unobstructed passageway large enough to remove the largest appliance. The passageway shall not be less than 22 inches (559 mm) high and 36 inches (914 mm) wide, nor more than 20 feet (6096 mm) in

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length measured along the centerline of the passageway from the opening to the appliance. A level service space not less than 30 inches (762 mm)deep and 30 inches (762 mm) wide shall be present at the front or service side of the appliance. If the depth of the passageway or the service space exceeds 12 inches (305 mm) below the adjoining grade, the walls of the passageway shall be lined with concrete or masonry. Such concrete or masonry shall extend a minimum of 4 inches (102 mm) above the adjoining grade and shall have sufficient lateral-bearing capacity to resist collapse. The clear access opening dimensions shall be a minimum of 22 inches high by 30 inches wide (559mmby 762 mm), and large enough to allow removal of the largest appliance.

Exceptions:

1. The passageway is not required where the level service space is present when the access is open and the

appliance is capable of being serviced and removed through the required opening.

2. Where the passageway is not less than 6 feet (1829 mm) high unobstructed and not less than 6 feet high (1929 mm) for its entire length, the passageway shall not be limited in length.

307 - Question: Does equipment installed in a sealed crawlspace, require a safety pan be placed under the equipment?

Answer: There is nothing in the code to require an auxiliary pan in a crawlspace. It is a common practice with some companies to install a pan under the unit in the sealed crawlspace to prevent water from collecting in the crawlspace in the event of a drain stopping up.

403.3 - Question: Are exhaust fans required in both the toilet room and the bathroom when the toilet room is located in the bathroom?

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Answer: Yes, Table 403.3 NCMC requires exhaust in bathrooms and toiletrooms. The key word here is "and". The definitions in the mechanical code for "Bathroom" and "Toiletroom" are slightly different than those in the plumbing code. They are two separate rooms.
BATHROOM. A room containing a bathtub, shower, spa or similar bathing fixture.
TOILET ROOM. A room containing a water closet and, frequently, a lavatory, but not a bathtub, shower, spa or similar bathing fixture.

Energy Code - Question: I have a quick question about the required efficiency for VTAC units. I applied table 503.2.3(3) when selecting equipment for the job, but a supplier is telling me that is not the correct testing standard for VTACs. The table lists AHRI 310/380 which is for PTACs, but he quoted AHRI 390 which is for VTACs. There is not a table that references standard AHRI 390 in the energy code.

Answer: The supplier is correct. Since North Carolina adopted a 6 year code cycle, we are currently 2 cycles behind on the energy code. Table C403.2.3(3) was added in the 2012 IECC and addresses VTAC units. We will accept Table C403.2.3(3) from the 2015 IECC, which will be our 2018 code, as an alternate until the new code comes into effect.

504 - Question: Can 4 inch B vent be used for dryer vent?

Answer: No, it would not meet the required gauge and the joints would not run in the direction of air flow.

504.5 - Question: I have a laundry room that is bigger than a closet, am I still required to provide make up air?

Answer: It will depend on the laundry room size. If it meets the requirements of R304.3 for minimum habitable room dimensions, then make up air would not be

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required. If the room does not meet the minimum dimensions, then it would be required per 504.5 NCMC.

R304.3 Minimum dimensions. Habitable rooms shall not be less than 7 feet in any horizontal dimension.

504.5 Makeup air. Where a closet is designed for the installation of a clothes dryer, an opening having an area of not less than 100 square inches (0.0645 m2) shall be provided in the closet enclosure or makeup air shall be provided by other approved means.

504.6.4 - Question: Can dryer booster fans be used to achieve longer dryer exhaust runs?

Answer: No, The current booster fans produced have not been tested and listed as an exhaust system. Only the electrical components. There are currently no dryer manufacturers that support booster fans in their installation instructions. It would be extremely difficult to interlock the booster fan and the dryer to assure the dryer will not function if the fan is inoperable.

504.6.6 - Question: I have a client that wants to utilize a condensing dryer, what would be the inspection procedure for this type of dryer.

Answer: Section 504.6.6 NCMC requires an exhaust duct system to be installed where a space for a clothes dryer is to be provided. The exception for this section removes the requirement for the exhaust duct if a listed condensing dryer is installed. Most of the time, an exhaust duct is installed, even if a condensing dryer is installed; in the event a traditional dryer is installed later. If this is the case then nothing about the inspection would change. In the event they do not wish to install the exhaust duct, the manufacturer's installation instruction will need to be provided at the rough inspection and the dryer will need to be installed for the final.

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504.6.6 Exhaust duct required. Where space for a clothes dryer is provided, an exhaust duct system shall be installed.

Exception: Where a listed condensing clothes dryer is installed prior to occupancy of structure.

505.2 - Question: It was my understanding that I could go up to 600 cfm on domestic kitchen hoods before I had to provide makeup air, but I was told I had to provide it because the house had a fireplace. Is this correct?

Answer: Yes, there was a code change that allows domestic exhaust hoods that do not exceed 600 cfm to be installed without providing makeup air. There is a stipulation, all the appliance in the house have to be direct-vent, power-vent, unvented or electric. The fireplace is not a direct vent.
See attached code reference and flow chart.

506.3.2.5 - Question: Can you clarify the section of 506.3.2.5 NCMC where it states, "in the presence of the code official?"

Answer: Section 506.3.2.5 NCMC requires a grease duct test to be performed while the inspector is onsite. The inspector will witness the test and the results. During the light test, the inspector will be looking for pinholes in the duct.
506.3.2.5 Grease duct test. Prior to the use or concealment of any portion of a grease duct system, a leakage test shall be performed in the presence of the code official. Ducts shall be considered to be concealed where installed in shafts or covered by coatings or wraps that prevent the ductwork from being visually inspected on all sides. The permit holder shall be responsible to provide the necessary equipment and perform the grease duct leakage test. A light test shall be performed to determine that all welded and brazed joints are liquid tight.

A light test shall be performed by passing a lamp having a power rating of not less than 100 watts through the entire section of ductwork to be tested. The lamp shall be open so as to emit light equally in all directions perpendicular to the ductwalls. A test shall be performed for the entire duct system, including the

hood-to-duct connection. The ductwork shall be permitted to be tested in sections, provided that every joint is tested. For listed factory-built grease ducts, this test shall be limited to duct joints assembled in the field and shall exclude factory welds.

506.3.2.5 - Question: Does a factory built grease duct require a light test?

Answer: Section 506.3.2.5 NCMC only requires the joints assembled in the field to be tested.

506.3.2.5 Grease duct test. Prior to the use or concealment of any portion of a grease duct system, a leakage test shall be performed in the presence of the code official. Ducts shall be considered to be concealed where installed in shafts or covered by coatings or wraps that prevent the ductwork from being visually inspected on all sides. The permit holder shall be responsible to provide the necessary equipment and perform the grease duct leakage test. A light test shall be performed to determine that all welded and brazed joints are liquid tight.

A light test shall be performed by passing a lamp having a power rating of not less than 100 watts through the entire section of ductwork to be tested. The lamp shall be open so as to emit light equally in all directions perpendicular to the ductwalls. A test shall be performed for the entire duct system, including the hood-to-duct connection. The ductwork shall be permitted to be tested in sections, provided that every joint is tested. For listed factory-built grease ducts, this test shall be limited to duct joints assembled in the field and shall exclude factory welds.

507 - Question: Can ozone generators be used in the place of grease scrubbers to allow a flush termination with the side of the building?

Answer: No, all ozone generators we have looked at does not have a UL rating and connect to the grease duct via a PVC pipe. The is no 3rd party testing data to show how effective these units work.

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507.2.2 - Question: The 2012 Code would allow, under the exceptions to 507.2.3, two domestic ranges in dwelling units, churches, schools, day care centers, break areas and similar locations. The 2012 code has no restriction to 4 burners for domestic ranges, you can have as many burners as the manufacturer provides or even a grill on the domestic range cook top and meet the code. Would a clubhouse for an apartment complex require a hood if they install two 5 burner ranges?

Answer: We have an interpretation that applies on our web site. The interpretation would allow a type II hood in an apartment clubhouse occupancy over domestic ranges rather than Type I hood if the cooking would be considered sporadic and non intensive. If two ranges are installed the cooking capabilities would be considered intensive and the two ranges would produce large amounts of smoke and grease laden vapors, therefore a type I hood, not a type II hood, would be required.

507.9 - Question: I have an existing hood that the label was lost over the years. The hood is supposed to be a reduced clearance hood. Will I be able to use the reduced clearances if I move the hood?

Answer: Possibly but we would need documentation from the manufacturer on the listing and the reduced clearances. Also, there will need to be some identification to confirm the hood is the model represented by the documentation. If the documentation cannot be provided, then the standard 18 inch clearance in the code will apply. If reductions in the clearances are needed, then Table 308.6, Reductions Methods for Unlisted Equipment, maybe used.

602.1 - Question: I was turned down for installing a gas water heater in a mechanical closet in an apartment. Why was I turned down, the code exempts equipment rooms in dwelling units.

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Answer: Section, 602.2.1 exempts materials only, used in equipment rooms and furnace rooms in dwelling units. Section 602.1 would still apply, it prohibits Fuel-Fired appliances from being installed in a plenum. There is also no exception for direct vent appliances.

602.1 General. Supply, return, exhaust, relief and ventilation air plenums shall be limited to uninhabited crawl spaces, areas above a ceiling or below the floor, attic spaces and mechanical equipment rooms. Plenums shall be limited to one fire area. Fuel-fired appliances shall not be installed within a plenum.

602.2.1 Materials within plenums. Except as required by Sections 602.2.1.1 through 602.2.1.6, materials within plenums shall be noncombustible or shall have a flame spread index of not more than 25 and a smoke-developed index of not more than 50 when tested in accordance with ASTM E 84 or UL 723.

Exceptions:

1. Rigid and flexible ducts and connectors shall conform to Section 603.

2. Duct coverings, linings, tape and connectors shall conform to Sections 603 and 604.

3. This section shall not apply to materials exposed within plenums in one- and two-family dwellings.

4. This section shall not apply to smoke detectors.

5. Combustible materials fully enclosed within continuous noncombustible raceways or enclosures,

approved gypsum board assemblies or within materials listed and labeled for such application.

6. This section shall not apply to materials exposed within equipment rooms and furnace rooms in dwelling units.

603 - Question: Can a PVC pipe run through a return duct for a One- or Two-Family dwelling?

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Answer: No, the exception in section 602.2.1 refers to plenums. The definition of a plenum refers to an enclosed area of a building. Section 603 refers to ducts and lists no exception.

PLENUM. An enclosed portion of the building structure, other than an occupiable space being conditioned, that is designed to allow air movement, and thereby serve as part of an air distribution system.

603.8 - Question: What are the requirements for underground ducts?

Answer: Section 603.8 NCMC requires metallic ducts to have an approved protective coating or be completely encased in a minimum of 2 inches of concrete, needs a min slope of 1/8 inch per foot and needs to be secured before the concrete is poured.

603.8 Underground ducts. Ducts shall be approved for underground installation. Metallic ducts not having an approved protective coating shall be completely encased in a minimum of 2 inches (51 mm) of concrete.

603.8.1 Slope. Ducts shall have a minimum slope of 1/8 inch per foot (10.4 mm/m) to allow drainage to a point provided with access.

603.8.2 Sealing. Ducts shall be sealed and secured prior to pouring the concrete encasement.

603.8.3 Plastic ducts and fittings. Plastic ducts shall be constructed of PVC having a minimum pipe stiffness of 8 psi (55 kPa) at 5-percent deflection when tested in accordance with ASTMD2412. Plastic duct fittings shall be constructed of either PVC or high-density polyethylene. Plastic duct and fittings shall be utilized in underground installations only. The maximum design temperature for systems utilizing plastic duct and fittings shall be 150°F (66°C).

604.7 - Question: How much are you allowed to compress insulation on ducts?

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Answer: Section 604.7 assumes a 25% compression, this is accepted as an industry standard. The manufacturer could provide a different compression rate to meet the required R-value.

606.2 - Question: Are duct detectors required in a system that does not exceed 2000 cfm, but feeds different areas of a building?

Answer: No, Section 606.2 NCMC refers to Sections 606.2.1 through 606.2.3 for when smoke detectors are required. The exception listed under 606.2 applies to Sections 606.2.1 through 606.2.3.

607.4 - Question: May flexible duct be allowed to be removed as a method to provide access to fire dampers as a substitute for fire damper access doors?

Answer: No, flexible duct is not allowed to be removed as a method to provide access to fire dampers as a substitute for fire damper access doors. Access means must be provided without requiring disassembly of the duct system. Section 607.4 identifies specific requirements for fire damper access.

607.5.5 #2 - Question: When you have a shaft that complies with 607.5.5 #2. The sub ducts have to extend into the shaft a minimum of 22 inches and be made out of 26 gage. The last line of the section states, "the exhaust fan is powered continuously in accordance with the provisions of Section 909.11 of the International Building Code, and maintains airflow upward to the outdoors." Section 909.11 requires an approved standby power source. Does this mean they must install a generator? Can they use batteries?

Answer: Section 909.11 of the Building Code requires an approved standby power source. This is typically a generator, but if there is no other requirement of a standby power source other than the fan for the shaft, a battery system may be

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used. They battery will need to have the capacity to run the fan at full volume for no less than 90 minutes.

607.5.7 - Question: I am designing a project with smoke partitions. I am confused, the code appears to only require dampers in the transfer openings and not in the duct that penetrates the partition. Is this correct?

Answer: Yes, Section 607.5.7 NCNC only requires a damper at a transfer opening. For the duct penetration, Section 711.7 NCBC would apply; which requires the space around the penetrating duct to be filled with material to limit the free passage of smoke.

607.5.7 Smoke partitions. A listed smoke damper designed to resist the passage of smoke shall be provided at each point where an air transfer opening penetrates a smoke partition. Smoke dampers and smoke damper actuation methods shall comply with Section 607.3.3.2.

Exception: Where the installation of a smoke damper will interfere with the operation of a required smoke control system in accordance with Section 513, approved alternate protection shall be used.

711.7 Ducts and air transfer openings. The space around a duct penetrating a smoke partition shall be filled with an approved material to limit the free passage of smoke. Air transfer openings in smoke partitions shall be provided with a smoke damper complying with Section 716.3.2.2.

Exception: Where the installation of a smoke damper will interfere with the operation of a required smoke control system in accordance with Section 909, approved alternative protection shall be utilized.

1101.2 - Question: What refrigeration equipment is exempt from the code?

Answer: There is not truly an exemption for an refrigeration equipment. Equipment that is factory built, listed and labeled self contained and complies

with UL 207, 412, 471 or 1995 is considered to be code compliant and would not require any further inspections other than verification of the UL listing.
1101.2 Factory-built equipment and appliances. Listed and labeled self-contained, factory-built equipment and appliances shall be tested in accordance with UL 207, 412, 471 or 1995. Such equipment and appliances are deemed to meet the design, manufacture and factory test requirements of this code if installed in accordance with their listing and the manufacturer's installation instructions.

Policy - Question: Are duct detectors required to be installed and operational for temporary heat?

Answer: No, the duct detectors would only be required to be operational when occupancy is being requested, either TCO or CO. If the duct detectors are not operational during the temporary heat inspection, it should be noted in the inspectors notes.

Policy - Question: If a unit is changed out in a garage, does the flex need to be replaced with 26 GA metal duct, if it isn't touched?

Answer: Only if the flex is being replaced. If it was legally installed with the original installation and is not being altered, there would be no requirement to replace it.

Policy - Question: Can a central vacuum system in a condo, located in a highrise, use PVC piping?

Answer: Neither the plumbing or mechanical code addresses central vacuum systems in dwelling units. After discussing with the Building CA; the code prohibits Drain, Waste and Vent pipes in a highrise from being PVC or non-metallic. The code does allow water distribution to be non-metallic piping. The difference is the water distribution is filled with water. The central vacuum lines

would be no different than the DWV piping on the pumping system. Based on the intent of the code, the central vacuum piping would need to be non-metallic if located in a highrise.

Manufacturer's Installation Instructions - Question: On a 90% furnace or water heater, when you have to upsize the flue and combustion air pipes from 2" to 3", can it be downsized back to 2" at the termination?

Answer: Yes, if the manufacturer's installation instructions allow it. Some manufactures require it to be reduced back to a 2" pipe.

1600 - Question: Can an electric dryer, gas furnace and a gas water heater all be installed in the same utility room?

Answer: Yes, proper makeup air and combustion air will need to be provided.

Manufacture's Installation Instructions - Question: Can a tankless waterheater vent into an open parking deck?

Answer: No, unless the manufacturer's instructions allowed it.

Other - Question: Can I use Fire Resistant Plywood (FRT), behind a Type I hood? On the other side of the wall from the hood?

Answer: Limited combustibles are not directly defined in the building codes. Captiveaire installation instructions state “limited combustibles per NFPA 96”, so we have to go there for the definition. NFPA 96 has Table A.3.3.34, which is in the appendix, it defines noncombustible, limited combustible and combustible construction. Under “Wall Assemblies”, it lists Plywood on metal studs as a combustible assembly. The general note 2 at the bottom, not footnote 2, states

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the categories do not change by use of fire retardant treated wood products, it would still need 18 inches of clearance.
To answer the question, FRT plywood installed on the back of the wall, behind the hood, would be prohibited within 18 inches. We spoke with Avery Grant at Captiveaire and he confirmed we are reading this NFPA 96 table correctly.

Manufacturer's Installation Instructions - Question: Can you clarify CaptiveAire's clearance requirements for a hood with a double insulated front?

Answer: Captive Aire manufactured ventilation hoods built with a double wall insulated front, and have a 0" clearance to combustible label installed on each exhaust canopy. Per the ETL listing, hood surfaces perpendicular to combustible do not need to be insulated to maintain the zero inch clearance rating.
Meaning if the vertical make up air ductwork is insulated to prevent condensation and temperature exchange, and that ductwork is installed perpendicular or 18" away from the top of the hood, then the top of the exhaust hood does not need to be addressed in regards to the make up air ductwork and it being deemed combustible.

Other - Question: Can Zoomlock refrigerant connectors be used?

Answer: Yes, the company has an ICC Evaluation. They can be used when all the conditions of listing of the ICC Evaluation are met.

Manufacture's Installation Instructions - Question: If 3 gas appliances are installed under a covered patio, can they all be put under on large hood, or do they need their own hood?

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Answer: The hood needs to be matched to the appliance. If the large hood stated it was matched to all 3 of the appliances for simultaneous use, then one hood could be used. This would be very difficult, if not impossible to find a hood that would accept 3 appliances. Individual hoods can be used over each appliance and installed end to end.

Other - Question: Who looks at compressed air systems with in a building?

Answer: Compressed air systems are outside the scope of the NCPC and NCMC.

Other - Question: Is it acceptable to use a product like 3M fire wrap to insulate the makeup air ducts on a Type I hood?

Answer: Yes, Section 506.3.1.2 requires duct insulation installed within 18inches of a Type I hood to be noncombustible or shall be listed for the application. A product like 3M Fire Barrier Duct Wrap is listed for Grease Ducts and Air Ducts. After 18 inches, standard duct wrap could be used. The Fire Wrap in this case is only being used to insulate and control condensation, it is not being used to reduce clearance to combustibles.

506.3.1.2 Makeup air ducts. Makeup air ducts connecting to or within 18 inches (457 mm) of a Type I hood shall be constructed and installed in accordance with Sections 603.1, 603.3, 603.4, 603.9, 603.10 and 603.12. Duct insulation installed within 18 inches (457 mm) of a Type I hood shall be noncombustible or shall be listed for the application.

Manufacturer's Installation Instructions - Question: Are combustibles allowed in the wall behind a "Zero Clearance" hood?

Answer: Yes, if the listing of the hoods states zero or reduced clearances to combustibles, then those clearances can be used. It should be noted that the

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hood can be zero clearance to combustibles, but the appliances installed under the hood may not be.

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301.1.1 - Question: I heard as of Jan 1, 2016; CSST doesn't have to be bonded anymore. Is that true?

Answer: The Building Code Council approved a code language change that did go into effect on Jan 1, 2016. CSST with an arc-resistant jacket (Black Jacket), does not require direct bonding as per section 310.1.1 NCFGC and shall be installed per the manufacturer's installation instructions. The bonding comes from the electrically grounded equipment such as a furnace or tankless waterheater. When the equipment is grounded, then not direct bonding is required for CSST with an arc-resistant jacket.

If there is a situation were the gas piping is only connected to a set of gas logs or a traditional tank style gas water heater with not equipment ground, then in a case such as this, direct bonding would be required.

310.1.1 CSST. Corrugated stainless steel tubing (CSST) gas piping systems shall be bonded to the electrical service grounding electrode system at the point where the gas service enters the building. The bonding jumper shall be not smaller than 6 AWG copper wire or equivalent.

CSST with an arc-resistant jacket listed by an approved agency for installation without the direct bonding, as prescribed in this section, shall be installed in accordance with Section 310.1 and the manufacturer's installation instructions.

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402.5 - Question: What is the pressure drop on the gas sizing charts for? Who determines the allowable pressure drop?

Answer: The allowable pressure drop is the difference between the point of delivery pressure and the minimum inlet pressure to the appliance. This is a design issue and is the responsibility of the gas piping system designer.
402.5 Allowable pressure drop. The design pressure loss in any piping system under maximum probable flow conditions, from the point of delivery to the inlet connection of the appliance, shall be such that the supply pressure at the appliance is greater than or equal to the minimum pressure required by the appliance.

403 - Question: A home inspector has disapproved the material for a "T" fitting in a gas line stating in his report: "There is a galvanized "T" fitting in the gas line at the first floor furnace. This is not an acceptable material for gas piping. The galvanizing will flake off and cause problems with the gas equipment. I recommend correction by a qualified plumber." Is this a correct call by the home inspector?

Answer: No, Galvanized pipe and fittings are an approved material per 404.9 NCFGC.

403.9.3 - Question: Can teflon tape be used on gas piping?

Answer: Section 403.9.3 NCFGC states thread compounds shall be resistant to the action of liquefied petroleum gas or to any other chemical constituents of the gases to be conducted through the piping. The commentary clarifies dope and tape. All of the yellow teflon tape we looked at was approved for gas. There is a blue tape, Blue Monster, that is approved for gas. We did not find any white teflon that stated it was approved for gas. If white is used, it will need to be approved for gas.

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404 - Question: Can galvanized steel pipe be used for gas piping?

Answer: Yes, the NCFGC does not prohibit the use of galvanized steel pipe, it only requires metallic pipe to be schedule 40. Several sections in 404 mention black steel and galvanized steel piping.

404.15.3 - Question: Can a warning marker tape with a tracer wire be used in lieu of the 18 AWG tracer wire in the gas code?

Answer: Section 404.15.3 NCFGC requires a tracer wire or other approved conductor.
To be an approved alternate, it must meet or exceed what the code requirements. The code requires 14 gauge wire approved for direct burial, these ribbons only have an aluminum foil inside them. The end of the wire has to be left accessible for conductive locating, the ribbons do not provide this option as the foil interior is not accessible. Most ribbons have locating depth limits, with 6 inch on being able to be located down to 24 inches.
If the warning marker tape is manufactured for that purpose, is equivalent to the gauge wire required by code and provides conductive locating; we could approve it as an alternate.

404.7 - Question: Does galvanized pipe used for gas piping have to be painted outside?

Answer: No, section 404.7 states the zinc coating on galvanized is adequate protection for above ground installation. The threads cut through the zinc coating should be protected with an approved method.
404.7 Above-ground outdoor piping. All piping installed outdoors shall be elevated not less than 31/2 inches (152 mm) above ground and where installed across roof surfaces, shall be elevated not less than 31/2 inches (152 mm) above

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the roof surface. Piping installed above ground, outdoors, and installed across the surface of roofs shall be securely supported and located where it will be protected from physical damage. Where passing through an outside wall, the piping shall also be protected against corrosion by coating or wrapping with an inert material. Where piping is encased in a protective pipe sleeve, the annular space between the piping and the sleeve shall be sealed. Ferrous metal exposed in exterior locations shall be protected from corrosion with one coat of exterior paint. Zinc coatings (galvanized) shall be deemed adequate protection for gas piping above ground.

404.9 - Question: Can galvanized pipe used for gas piping be direct buried?

Answer: No, section 404.9 considers the zinc coating not adequate for underground installations.

404.9 Protection against corrosion underground. Metallic pipe or tubing exposed to corrosive action, such as soil condition or moisture, shall be protected in an approved manner. Zinc coatings (galvanizing) shall not be deemed adequate protection for gas piping underground. Where dissimilar metals are joined underground, an insulating coupling or fitting shall be used. Piping shall not be laid in contact with cinders.

409.6 - Question: I am designing a high school. There will be a classroom with several gas ranges. They will be under Type I hoods with ansul systems. Am I still required to install the "Emergency Gas Shutoff" as required for labs in schools?

Answer: Section 409.6 only addresses laboratory space in educational, research, commercial and industrial occupancies. Since this is not a laboratory, there is no requirement for an emergency gas shutoff. The intent is to shut off the gas to the counter top gas outlets for lab burners.

409.6 Shutoff valve for laboratories. Where provided with two or more fuel gas outlets, including table-, bench- and hood-mounted outlets, each laboratory space in educational, research, commercial and industrial occupancies shall be provided with a single dedicated shutoff valve through which all such gas outlets

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shall be supplied. The dedicated shutoff valve shall be readily accessible, located within the laboratory space served, located adjacent to the egress door from the space and shall be identified by approved signage stating "Gas Shutoff."

621.4 - Question: I want to install code approved unvented gas logs in a commercial restaurant that seats 100 people. Can this appliance be installed in an assembly occupancy?

Answer: No. Unvented room heaters shall not be installed within Groups A, E, and I Occupancies. Vented heaters maybe installed in those occupancies.
621.4 Prohibited locations. Unvented room heaters shall not be installed within occupancies in Groups A, E and I. The location of unvented room heaters shall also comply with Section 303.3.

Policy - Question: When is a neutralizer required for condensing appliances such as water heaters and furnaces?

Answer: CMUD's policy requires waste to be between 6 and 12 pH when entering the system. If the manufacture's data states a pH lower than 6, then a neutralizing filter is required for condensate waste discharging to the drainage system or outside the structure.
Almost all of the condensing water heaters and condensing gas furnaces researched stated that the condensate would be slightly acidic with a pH from 3 to 5. Many manufacturers recommend neutralizers, but unless it specifically requires one or states a ph level less than 6; we do not require a neutralizer.

Manufacture Instructions - Question: Does the Black Wardflex require protection if installed outside within 6 feet of the ground?

Answer: Yes, the installation manual does not specify yellow or black, the requirement applies to both.

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Other - Question: How close does a 2 psi regulator need to be, to the appliance?

Answer: Unless the manufacturer of the regulator stated a distance, there is no requirement per NCFGC to have the regulator within a specific distance to appliances. A 2 psi system is a dual pressure system. The 2 psi system is sized using the distance from the meter to the regulator. The low pressure section is sized using the distance from the regulator to the appliance.

Manufacture Instructions - Question: If I have a 90 percent furnace or high efficient water heater and it lists ASTM D1785 pipe as an acceptable material, can I use ASTM D2665? It is still schedule 40.

Answer: While most manufacturer's today allow D1785, D2665 and F891 (Cellular Core); some will allow one but not the other. We will only allow what the installation instructions state is an acceptable material.

Other - Question: What is the capacity for a 2 psi regulator with multiple appliances?

Answer: This will depend on the manufacture's installation instructions.
Maxitrol 325 Series regulator

Maximum Individual Load

Largest single appliance served by the regulator: 325-3: 100,000 Btu/h; 325-5: 325,000 Btu/h; 325-7A: 1,250,000 Btu/h, 325-9: 2,250,000 Btu/h

Capacity - Total load of multiple appliances combined: 325-3: 150,000 Btu/h; 325-5: 325,000 Btu/h; 325-7A: 1,250,000 Btu/h; 325-9: 2,250,000 Btu/h

NOTE: Capacities are used to determine the maximum multiple appliance load. The largest single appliance served by the regulator should not exceed the maximum individual load specified above.

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Manufacture Instructions - Question: Can Wardflex enter the access area (where the gas valve is locate), under the fire box of a metallic fireplace enclosure?

Answer: What is stated in the D&I guide is that WARDFLEX CSST must be terminated outside of a metallic fireplace enclosure. If the control box is part of the enclosure then it does need to be terminated before passing through.