

Electrical Continuing Education Classes

Just a reminder for all Electrical tradesmen to be sure and check the expiration date on your license. Danville Community College has the following Electrical Continuing Education classes scheduled on the following dates:

January 17, 2017

March 21, 2017

May 16, 2017



Inspections Newsletter

December Issue

Old Man Winter Is Coming By Mike LaPrade

Once again it is that time of year when the temperatures fall and cold weather sets in. This can be a very frustrating time. Water flooding homes, loss of water service, expensive repair bills and high water usage fees. Some of this frustration can be avoided with a few simple steps saving you time, money and loss of service.

Close all exterior vents, access doors and open airways that may allow air through your crawlspace or under your dwelling.

Insulate the piping located under your home or dwelling that may be exposed to extreme cold conditions and in exterior walls if possible and also

under cabinets located on exterior walls.

On the nights when the temperatures drop to extremely low levels open cabinets where your plumbing is located on an exterior wall such as a kitchen sink, bathroom lavatory cabinets and access doors for your tub and shower units. This will allow warm air to enter will help prevent freezing.

If your home or dwelling will be unoccupied for an extended period of time throughout the winter months consider turning the water off. Drain all the water from your piping, pour a small amount of Food Grade Anti-Freeze solution in the traps of all

fixtures. This will help prevent ruptures of the fixtures if they are exposed freezing temperatures and also maintain proper trap seal to prevent sewer gases from entering your home. Place a reminder note on the water heater or near the electrical or gas supply that it has been drained.

Be familiar of the main water shut off valve location in the event a ruptured water pipe. If no shut off valve exists have a licensed plumbing contractor install one in an accessible location. If an accessible shut off valve does not exist please call 434-799-5285 for an EMERGENCY TURN OFF of the water meter.

Virginia Rehabilitation Code By David Cockran

The Virginia Rehabilitation Code has been designated as the required code that controls the rehabilitation, reconstruction, alteration, repair and change of occupancy of existing buildings. All Existing buildings, are governed by the Virginia Rehabilitation Code except R-5 Residential use and I-

2, I-3 Institutional use. R-5 Residential uses can also elect to use the Virginia Rehabilitation Code if they so choose. R-5 Residential uses include single family dwellings, townhouses and duplexes. The purpose of the Virginia Rehabilitation Code is to allow structures to be upgraded without having

to meet all the requirements of the current Virginia Construction Code and thus make it more cost effective to renovate existing building and find uses for them.

TABLE N1102.4.1.1 (R402.4.1.1) AIR BARRIER AND INSULATION INSTALLATION

COMPONENT	CRITERIA ^{a, b}
Air barrier and thermal barrier	A continuous air barrier shall be installed in the building envelope. Exterior thermal envelope contains a continuous air barrier. Breaks or joints in the air barrier shall be sealed. Air-permeable insulation shall not be used as a sealing material.
Ceiling/attic	The air barrier in any dropped ceiling/soffit shall be aligned with the insulation and any gaps in the air barrier sealed. Access openings, drop down stair or knee wall doors to unconditioned attic spaces shall be sealed.
Walls	Cavities within corners and headers shall be insulated by completely filling the cavity with a material having a minimum thermal resistance of R-3 per inch. The junction of the foundation and sill plate shall be sealed. The junction of the top plate and top of exterior walls shall be sealed. Exterior thermal envelope insulation for framed walls shall be installed in substantial contact and continuous alignment with the air barrier. Knee walls shall be sealed.
Windows, skylights and doors	The space between window/door jambs and framing and skylights and framing shall be sealed.
Rim joists	Rim joists shall be insulated and include the air barrier.
Floors (including above-garage and cantilevered floors)	Insulation shall be installed to maintain permanent contact with underside of subfloor decking. The air barrier shall be installed at any exposed edge of insulation.
Crawl space walls	Where provided in lieu of floor insulation, insulation shall be permanently attached to the crawlspace walls. Exposed earth in unvented crawl spaces shall be covered with a Class I vapor retarder with overlapping joints taped.
Shafts, penetrations	Duct shafts, utility penetrations, and flue shafts opening to exterior or unconditioned space shall be sealed.
Narrow cavities	Batts in narrow cavities shall be cut to fit, or narrow cavities shall be filled by insulation that on installation readily conforms to the available cavity space.
Garage separation	Air sealing shall be provided between the garage and conditioned spaces.
Recessed lighting	Recessed light fixtures installed in the building thermal envelope shall be air tight, IC rated, and sealed to the drywall.
Plumbing and wiring	Batt insulation shall be cut neatly to fit around wiring and plumbing in exterior walls, or insulation that on installation readily conforms to available space shall extend behind piping and wiring.
Shower/tub on exterior wall ^c	Exterior walls adjacent to showers and tubs shall be insulated, and an air barrier shall be installed on the interior side of the exterior wall, adjacent to the shower or tub.
Electrical/phone box on exterior walls	The air barrier shall be installed behind electrical or communication boxes or air-sealed boxes shall be installed.
HVAC register boots	HVAC register boots that penetrate building thermal envelope shall be sealed to the sub-floor or drywall.
Fireplace	An air barrier shall be installed on fireplace walls. Fireplaces shall have gasketed doors or tight-fitting flue dampers.

Energy Code continued

- a. In addition, inspection of log walls shall be in accordance with the provisions of ICC-400.
- b. Structural integrity of headers shall be in accordance with the applicable building code.
- c. Air barriers used behind showers and tubs on exterior walls shall be of a permeable material that does not cause the entrapment of moisture in the stud cavity.

Caulking around penetrations. Base of exterior wall sole plates, corner studs, gang studs, posts, headers and top plates. Covering of the exterior wall with a membrane will serve as an air barrier.

Complete air sealing of existing residential structures without major renovations cannot be accomplished. But there are things that can be done to help decrease air infiltration of these structures. Any penetrations of exterior walls or floors (i.e.: pipes, electrical outlets, switches and heat registers) and around windows and doors between jambs and framing (behind trim) can be sealed with caulking, fiber glass insulations or expandable foam. HVAC ducts in unconditioned areas joints should be sealed with a metal duct tape and insulate same. Caulking around exterior of structure doors, windows and any penetrations. If structure on a crawl space change out vents to a thermostatic controlled vent.

There is another way new or existing buildings or dwelling unit can be tested for air leakage. Testing can be conducted with a blower door at a pressure of 0.2 inches w.g. (50 Pa). Where required by the building official, testing shall be conducted by an approved third party. A written report of the results of the test shall be signed by the party conducting the test and provided to the building official. Testing shall be performed at any time after creation of all penetrations of the building thermal envelope. These companies can be contracted to seal areas noted by test.

When Do I Need A Permit By Beth Harrington

Permits are required for most of the improvements made to buildings and structures. Separate plumbing, electrical & mechanical permits are required if such work is to be performed. The purpose of obtaining a permit is to allow the enforcement of the codes which have been adopted as law by the state. The enforcement of these codes is carried out to protect the public

health, safety and welfare. As a homeowner or business owner you have an investment in the property that will be built or remodeled and it must comply with the codes, if not your investment could be reduced. Therefore, a permit is used to notify the Code Official that you are constructing or remodeling a building so he ensure code compliance.

How Can I Get A Permit By Beth Harrington

Call the Inspections Office, Monday-Friday, 8:00 AM—5:00 PM at (434) 799-5260 and see if a permit is required. If required, you can come in person to our office, Room 208 of the Municipal Building. In some cases, permits may also be obtained on a mail-in or call-in basis. You can also obtain a permit application on our website at www.danville-va.gov/729/Obtaining-a-Permit. Some jobs may require a zoning clearance (i.e. decks or additions) before a permit can be issued. You will be able to speak to someone in our office or by calling (434) 799-5260.

Tips on Exterior Painting in Colder Temperatures

By Seth Hawker

Often the Inspections Division is asked for advice on how to go about painting in colder temperatures. It is important to remember that if painting can wait until the warmer weather arrives, then wait. However, we all know that there are circumstances that require cold weather painting. Cold weather painting generally means painting in temperatures between 35 and 50 degrees Fahrenheit. If you find yourself in this situation, here are a few tips to help you achieve the best results. First, always get your temperature reading from the surface you will be painting, not the ambient air. Just because the outside air is a certain temperature doesn't mean that the surface of what you are painting will be the same. Second, always plan ahead by checking the weather forecast. You'll want to paint when there are 3-4 days projected to be clear and sunny, and with temperatures above the minimum temperature rating of the paint you are using. Also, you will want to apply paint when the Sun is peaking, around noon. These are just a few tips that you can utilize when painting in colder temperatures.



Safely Heating By John Thompson

As we head into the coldest months of the year many people bring out portable heaters to knock the chill off in shops, offices, and certain rooms of their houses. To assure that these units are being operated safely keep in mind that the branch circuit and receptacle outlet these heaters are plugged into need to be sized correctly. Article 210.21 (B)2 states "Where connected to a branch circuit supplying two or more receptacles or outlets, a receptacle shall not supply a total cord-and -plug-connected load in excess of the maximum specified in Table 210.21(B)(2)." This table shows that the maximum cord and plug connected load for a 15 amp receptacle installed on a 15 or 20 amp circuit is 12 amps. With this being said a 1500 watt electric space heater would have a load of 12.5 amps. $1500/120=12.5$ this exceeds what is allowed for a 15 amp receptacle and therefore is not allowed to be plugged into a 15 amp rated receptacle outlet.

What about the size of the branch circuit? Article 210.23(A)(1) states that any one cord and plug connected utilization equipment not fastened in place shall not exceed 80% of the ampere rating of the branch circuit. The same 1500 watt heater exceeds this so therefore would be required to be used on a 20 amp circuit.

2012 Virginia Mechanical Code

By Richard Phelps

103.5.1 Equipment changes.

Upon the replacement or new installation of any fuel-burning appliances or equipment in existing Group R-5 occupancies (Single Family Dwellings), an inspection or inspections shall be conducted to ensure that the connected vent or chimney systems comply with the following:

1. Vent or chimney systems are sized in accordance with the international residential code.
2. Vent or chimney systems are clean, free of any obstruction or blockages, defects, or deterioration, and are in operable condition. Where not inspected by the local building department, persons performing such changes or installations shall certify to the building official that the requirements of items 1 and 2 of this section are met.