

Inspections & Zoning Update

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BUILDING CODE & ZONING NEWS FOR THE DEVELOPMENT COMMUNITY TROUGHOUT CATAWBA COUNTY

PROPER ROOF FLASHING TECHNIQUES

If you are collecting dripping water in a pot beneath your roof, you may want to inspect the roof flashing above the area. Anywhere unlike surfaces intersect on a roof or an exterior wall is a prime spot for a leak. Proper flashing provides the extra protection these spots need. These problem areas can include skylights and chimneys, plumbing soil and vent stacks, exhaust fans and roof valleys as well as the intersection of the roof deck and dormer walls.

Most approved flashing is made of corrosion-resistive materials but for ease of installation aluminum is most commonly used. Aluminum is easy to bend and if installed correctly your roof should not leak. However, from time to time, fasteners can work loose, or the flashing material pulls away from seams and joints and requires maintenance. Here are some general principles of roof flashing that might help you in a repair or even new construction.

All roofing systems are made of numerous components such as roof sheathing, underlayment, roofing material, roof intersections, flashing applications and ventilation. All of these must be installed correctly for the system to work properly. Pitched roof systems direct the flow of water downward and outward relying on overlapping elements



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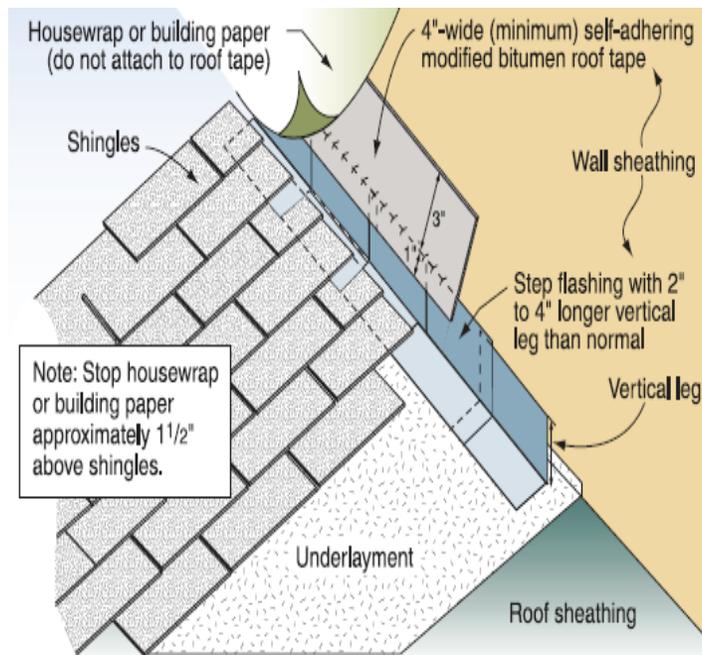
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such as roofing felts, shingles, tiles and flashing applications along with the pitch of the roof to redirect the flow of water that runs into the intersection down and away from the interior of the structure to the topside of the roofing material.

Some of the different types of flashing on a structure can include valley flashing which protects the valleys where two roof planes meet. Valley flashing is installed over the roofing felt before the finish roof material is installed. Step flashing protects joints between the roof deck and chimneys or dormers. Vent flashing fits over flues or pipes. Drip edges are strips of flashing material that run along roof eaves and rakes to keep water from seeping under the finished roof

Finally the roofing material, what you actually see on a roof, provides the primary waterproof barrier for the structure with the flashing and other materials working in conjunction to reinforce waterproofing at roof intersections or penetrations.



TYPICAL FLASHING INSTALLATION

UNVENTED GAS HEATERS INSTALLATION

With the official arrival of winter on the 21st of December the onset of installations of new heating systems are on a steady rise in homes and businesses. Many times we are faced with aging heating systems and the rising cost of new installation so we may turn to a more economical way of heating our homes. This method of madness sometimes can cost more in the long run if our homework is not done on the new systems. There are many things that must be considered before installing unvented heaters in our homes. The first and most important part of any installation is the manufacturers installation instructions which must be followed during the installation. The second consideration with the installation of an unvented heater is that there must be a primary source of heat in the home that maintains 68 degrees at a point three feet above the floor on a designed heating day. The use of one or more unvented heaters and or portable heaters is prohibited as the primary source of heat. The third important requirement that must be considered is the room or space volume in relationship to the input rating of the heater or heaters installed. The input rating of all heaters must not exceed 20 Btu/h per cubic foot of volume of such room or space.



**UNVENTED GAS
HEATER**

A final note is that unvented heaters are prohibited in Assembly; Educational; Institutional and residential sleeping rooms.

PLAN REVIEW CODE NEWS

Rainwater collection is becoming increasingly popular with both homeowners and commercial building owners. Methods, equipment and processes for collecting and using rainwater may be relatively new to most of us although very common in many regions and countries. Building code, plumbing code and environmental health code requirements are evolving rapidly to address issues related to this subject.

Rainwater collection systems typically consist of the following:

- A collection area (usually the roof)
- A method of conveying the water (gutters, downspouts, and piping)
- A filter device
- A system to distribute the water as needed

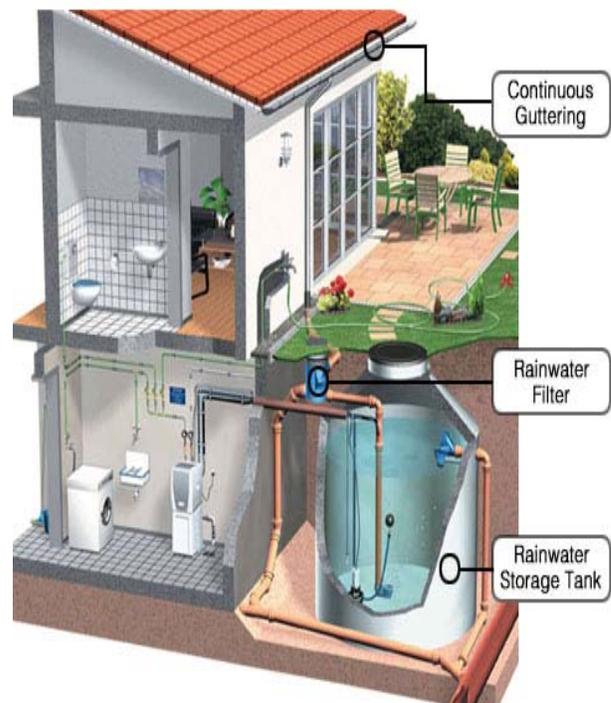
Many home owners have systems as simple as a rain barrel and collect water for their gardens as one method of being environmentally responsible. Many commercial buildings are being designed with large scale systems being used for irrigation as well as flushing toilet facilities. LEED is an acronym for Leadership in Energy and Environmental Design. LEED certification provides independent, third-party verification that a building is environmentally responsible, and is a healthy place to work. LEED certification is a key motivator for commercial buildings considering rainwater harvesting systems.

The Appendix C of the 2009 North Carolina Plumbing Code addresses gray water recycling systems but does not cover rainwater recycling systems. The effective date is January 1, 2011 for Appendix C1 of the NC Plumbing Code which addresses rain water recycling systems. Proposals to the NC Building Code Council concerning grey water and rainwater recycling systems appear to be keeping pace with this evolving technology. Environmental health regulations may also regulate these systems.

Significant economic, social and environmental benefits can be achieved by using rainwater. Rain harvesting is a great water conservation initiative.

Did You Know?

- 1 inch of rainfall on a 2,000 sq. ft. residential roof generates 1,250 gallons of water that can be reused.
- That same roof in a region receiving 30 inches of annual rainfall generates 41,000 gallons of reusable water.
- The average US household with a 10,000 square foot lot uses 5,000 gallons of water **weekly** for landscape irrigation.
- Running a sprinkler for 2 hours can use up to 500 gallons of water.



City of Hickory Planning

The City of Hickory has completed four Phase I Environmental Site Assessments (ESAs) using EPA Brownfield Grant funds at the former Piedmont Wagon property, former Moretz Mill property, former Hollar Hosiery Mill, and former Elliot Knitting Mill property. Research into the history of the sites, review of environmental records, and site inspections were conducted to identify potential environmental concerns at each property.

Phase II ESA soil and ground water sampling activities have been completed at the former Hollar Hosiery Mill property located at 883 Highland Avenue Southeast and former Piedmont Wagon properties located at 1020 Main Avenue NW and additional Phase II ESAs are planned for late 2009 and into early 2010.

The National Brownfields Conference was held in New Orleans in November. The National Brownfields Conference is the “largest”, most comprehensive conference in the nation focused on environmental revitalization and economic redevelopment.

Several of the City’s Brownfield properties will be presented to prospective buyers and developers at the conference during the “Brownfields Transaction Forum”. For more information, please contact Brian Frazier @ 828-323-7556 or visit www.brownsfieldsconference.org.



Catawba County Permit Center News

Permits Issued from September 2009 through November 2009: The Catawba County Permit Center issued a total of 1,852 permits in this quarter, with a total cost of construction of \$103,004,803.00. There were 79 new single-family dwelling permits issued during this same time period. A few of the larger projects were: The Old Post Office Playhouse, VA Medical Office Up-fit, Catawba Valley Medical Center Alteration and Addition.

Permit Center Software: Catawba County Permit Center is now utilizing the new software system for permits and inspections. Over the last few months we have been working to “fine tune” the system and learn all the new features. We are currently working on the reports and information that will soon be available online by the general public and to the contractors. It is our goal to have all these reports on the website by mid to late January.



ELECTRIC RANGES AND DRYERS, 3-wire or 4-wire ?

For many years the National Electrical Code allowed ranges and dryers to be wired with a 3-wire cord using the grounded circuit conductor as a method to bond the frame of the appliance. Changes were made during the years to allow an existing range or dryer to remain connected to a 3-wire cord if the existing branch circuit was not altered or extended during a service change or upgrade.



The 2008 National Electrical Code section 250.140 still requires all new branch circuits for ranges and dryers to be 4-wire. The exception for existing ranges and dryers has not changed. This exception states; “For existing branch-circuit installations only where an equipment grounding conductor is not present in the outlet or junction box, the frames of electric ranges, wall-mounted ovens, counter-mounted cooking units, clothes dryers, and outlet or junction boxes that are part of the circuit for these appliances shall be permitted to be connected to the grounded circuit conductor if all the following conditions are met.” The keys words to this are in the last sentence, **“if all of the following conditions are met.”**

Of the four conditions, number three is really the one that decides if the existing branch circuit can remain. “The grounded conductor is insulated, or the grounded conductor is un-insulated and part of a Type SE service-entrance cable and the branch circuit originates at the service equipment.” Once again, the last sentence says it all; **“and the branch circuit originates at the service equipment.”** This statement requires the existing branch to be able to reach the service equipment. In most service upgrades, the existing main service becomes a sub-panel after a new service is installed elsewhere. Because of this, the existing range and dryer branch circuit will now be located in a sub-panel and not the main service. Extending the existing branch circuit to reach the new location of the service equipment is not permitted by code. Under this condition, the existing branch circuit to the range and dryer will have to be replaced with a new 4-wire circuit including the cord and receptacle.



Local Government Contacts

Catawba County Planning & Zoning

Ph. 828-465-8380 / Fax 828-465-8484

Catawba County Building Services Safety Inspections

Ph. 828-466-5130 / Fax 828-322-6814

Catawba County Fire Marshall

Ph. 828-465-8230 / Fax 828-464-4820

Catawba County Environmental Health

Ph. 828-465-8270 / Fax 828-465-8276

Catawba County Erosion Control

Ph. 828-465-8161

Catawba County Permit Centers

Ph. 828-465-8399

Fax 828-465-8962 *Newton* / Fax 828-322-6814 *Hickory*

City of Claremont Zoning

Ph. 828-459-7009 / Fax 828-459-0596

City of Claremont Fire Department

Ph. 828-459-9296

City of Conover Zoning

Ph. 828-464-1191 / Fax 828-465-5177

City of Conover Fire

Ph. 828-464-1295 / Fax 828-464-1253

City of Hickory DAC/Zoning

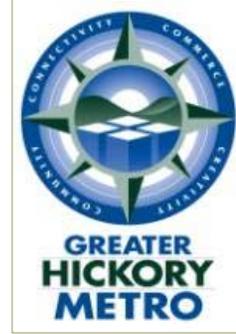
Ph. 828-323-7556 / Fax 828-323-7474

City of Hickory Fire

Ph. 828-322-7522 / Fax 828-323-7476

City of Newton Zoning

Ph. 828-465-7400 / Fax 828-465-7412



Building Services Division

100-A SW Blvd

PO Box 389

For additional information regarding building codes and services in Catawba County please visit the Catawba County website at <http://www.catawbacountync.gov/depts/u&e/building.asp>

For additional assistance please contact the following personnel:

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