



Preservation workshop for owners of older & historic homes

September 17, 2011



Hosted by the City of Columbia's
Historic Preservation Office

www.columbiaplanning.net

The City of Columbia Preservation Office has organized a series of free workshops for homeowners of historic and older homes, as well as for interested contractors that frequently work within the City's 14 locally-designated historic districts. These workshops are intended to provide information and resources for homeowners and contractors who are searching for practical solutions to various preservation-related issues associated with older structures. This booklet is intended to give you an overview of



what each presenter discussed at the workshop, as well as provide you with sources of additional information.

Who are we?

The City of Columbia Preservation Office is responsible for administering design guidelines for each of Columbia's locally-designated historic districts to help ensure each district's unique character is maintained. The office is staffed by four preservation planners who assist homeowners and contractors through the design review process as required by City Ordinance.

What is design review?

As a resident of a local historic district, or as a contractor working within a local historic district, it is important to know that most projects visible from the public right-of-way that affect the exterior of a house, as well as many site improvements (i.e. fences, walls, driveway resurfacing, etc.), are required to undergo a design review process and receive design approval prior to beginning work.

City staff is responsible for shepherding projects through the design review process from conceptual design ideas to formal design approval, and they



will even meet with you on-site to discuss a project if necessary. All proposed projects come directly to staff for consultation first; therefore, staff highly encourages you to contact them as soon as you begin thinking about a project so that they can ensure you move efficiently through the design review process. Once you have contacted staff to discuss the proposed project, they can direct you as to whether the project can be approved at staff level or if it must be taken before the Design/Development Review Commission (D/DRC) per the City Ordinance.

Once staff or the D/DRC has approved your project, they will issue a Certificate of Design Approval (CDA), which will allow you to obtain any necessary permits. It is important to know that the permitting process relies upon completing the design review process. Permits cannot be issued unless a CDA has been issued.

What is the D/DRC?

The Design/Development Review Commission (D/DRC) is a 9-10 member quasi-judicial board appointed by City Council. The commission is comprised of volunteers with expertise in fields such as law, architecture, planning, real estate, and historic preservation.

The D/DRC meets once a month, usually on the second Thursday, to review projects that staff cannot review based upon the adopted guidelines and City Ordinance.



Pictured from left to right: Beronica Whisnant, Betsy Kaemmerlen, Dr. Leslie Skinner (Chair), Bruce Harper, Lesesne Monteith, Dale Marshall (Vice Chair), David Ross, Catherine Horne, and Doris Hildebrand.

Design/Development Review Commission

Preventative Maintenance: Historic Preservation For The Homeowner

“Being A Good Steward”

Presented by Dan Elswick, senior historic architectural consultant with the South Carolina Historic Preservation Office

Your building is the first line of defense for safeguarding your collections. Being a good steward means knowing your building, understanding deterioration, and knowing when to ask for help.

1. Be observant of deterioration or damage to your home

Document these observations

- a) Ask yourself what are the current conditions?
- b) Assessing the current conditions of your building is critical to preparing a plan for the treatment of your building.
- c) A rainy day is an excellent day to see how water drains away from your house and to inspect for interior leaks. Moisture is the number one cause of most building failures.
 - **Routine Maintenance Note: Keep downspout clear**
- d) Is there a gutter garden? Make sure leaves and other debris are not clogging the gutters.
 - **Routine Maintenance Note: Periodically Remove Debris and check fittings**
- e) How Does the Site Drain? The ground around your building needs to slope away from the building to encourage water to drain away from the building.
- f) Is There A “Moldy Moat?” If there is mold or other fungi growing around your building it means that water is not properly flowing away from the building.
 - **Routine Maintenance Note: Positive Drainage Away from House**
- g) The Foundation Should Breathe: Open lattice between foundation piers will allow moisture under the house to pass into the open air while keeping the critters out.
 - **Routine Maintenance Note: Keep Vegetation Away from House**
- h) Take care not to remove historic landscape materials. Once you know what to retain, begin a routine landscape maintenance program.
- i) Check Inside, Too. Use all of your senses! **Look** for peeling paint or stains; **Listen** for dripping water; **Touch** walls for dampness; **Smell** odors like musty dampness; We don’t recommend actually TASTING your building, although we hear that LEAD is SWEET!
- j) Some items may require professional observation. Know your limits and call in the professionals when you are beyond your expertise.
- k) Collect a history of your building in a journal that documents the work you have done to your house. It will help you remember the last time you painted your house, and can help future stewards to know what you’ve done and what they should do in the future.

2. Understanding deterioration of building materials will alert you to problems early, when repairs are the simplest. Water is almost always involved.

- a) **Masonry Deterioration:** We have used masonry in buildings for eons, but water can still cause problems with lime-based mortar and brick that is not hard-fired.
- b) **Solve the Problem, THEN treat the symptoms:** Damage will return until the source of the problem is treated. Water in a wall needs to be intercepted like when water is directed away from the foundation and has foundation drains.
- c) **Masonry units and/or mortar is a deceptively simple construction technology.** You may notice on your house that soft or sandblasted brick has spalled or deteriorated, or that the lime in old mortar had been drawn out of the wall leaving only sand behind.
- d) **Repointing is for Professionals:** This work is generally not for an unskilled worker, and we can damage the building in each step of the process.
 - Remove the deteriorated mortar
 - Install mortar matching the strength, porosity, color, and texture
 - Tool the joint to match the historic joint
- e) **“Rising Damp”** is a condition where ground water is soaked up by the brick. Deterioration occurs most in the “Tide Line” area where the wall gets wet then dries in many cycles over a period of time.
- f) **Repairing masonry damage from impacts is obviously more involved.**
- g) **Wood deterioration can be caused by water, insects, and fungus**
 - **Water:** Enters through the end grain, which remains open after wood is cut and cured. Keep an eye on areas of the building that have exposed end grain.
 - **Insects:** Termites are another enemy of wood. Inspect annually for these hungry critters.
 - **Fungus:** Deteriorates wood in nature, but it doesn’t stop just because wood is in a building.
- h) **Repairs Are Usually Straightforward:** Remove damaged portion; Install matching piece; Attach to frame, and paint.
- i) **“If You Can’t Buy It, You Gotta Make It”** – when it comes to replacing wood pieces that are missing or deteriorated, some may be readily available. Others may need to be custom made. Once it is in place, a coat of paint will blend it into the whole building.
- j) **Repairing wood damage from impacts is obviously more involved.**

3. Ask for Help

- a) Contact City of Columbia Preservation Office Staff or visit www.columbiaplanning.net and click on “Preservation and Design”
- b) Contact State Historic Preservation Office staff Dan Elswick at 803-896-6174 or visit www.shpo.sc.gov

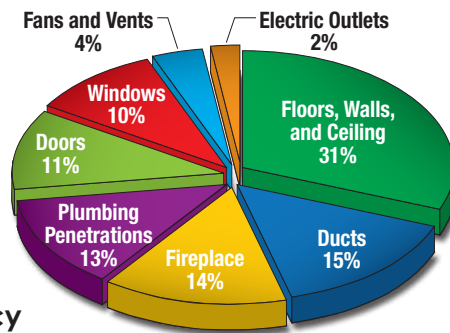
Green Tips for Your Home

Energy efficiency is one of the best ways to “go green.” Historic buildings were designed to take advantage of natural light and air, but try these tips for an even “greener” old building.

Find the Sources of Heat and Air Loss

Do it yourself, by using a checklist for a home energy audit or hire a professional home energy auditor to do a blower-door test and duct blast test. Though this method can cost several hundred dollars, the professional should be able to indicate problem areas, as well as configure a price list for solutions, helping you prioritize the needs.

Be sure your mechanical systems are serviced regularly to maintain efficiency. If you buy a new system, install insulation and weatherstripping in your building first, then have a Manual-J calculation done for correct sizing of the system.



Increasing the Energy Efficiency of Historic Buildings

- Avoid destroying original features
- Start with the simple updates first
- Add gaskets to light switches and outlets
- Weatherstrip doors and windows
- Add storm windows and doors
- Use less water by installing low-flow faucets during renovations
- Consider collecting rain water for outdoor use
- Use cellular shades, shutters, blinds or thermal drapes to help insulate windows
- Add the recommended amount of INSULATION! The best energy investment you can make: add insulation to your attic and under the floor. These areas are generally accessible in historic homes.

How does air escape?
*Graphic from the Energy Savers Booklet
by the U.S. Dept. of Energy*

Sustainability and Historic Buildings

Common general definition: “meeting the needs of the present without compromising the ability of future generations to meet their own needs.”

Three Facets of Sustainability: **Economic, Environmental and Social.**

Common sustainability goals are for protection of the environment, conserving energy and promoting “green” design for new construction, often at the expense of historic buildings.

Historic buildings are already sustainable!

Economic: Historic buildings have already been bought and sold numerous times. When they are in historic districts or well-defined, maintained neighborhoods, they can increase in value at a rate slightly higher than other areas.

Social: Historic buildings are often located close to city centers, where there are often artistic, cultural, religious and educational institutions. Maintaining these buildings retains our shared cultural history, and their walk-ability and green spaces contribute to social interaction.

Environmental: Reusing historic buildings reduces the pollution associated with new construction, protects from sprawl by utilizing existing infrastructure, and reduces debris in landfills from demolition.

“The demolition of a 2000 square foot home would result in 230,000 lbs of waste. Since approximately 245,000 homes are demolished each year, it is estimated that 19.7 million tons of waste is generated by the demolition of these homes.”



Making the Case: Historic Preservation as Sustainable Development, A DRAFT White Paper presented in advance of the Sustainable Preservation Research Retreat, October 2007, Hosted by the National Trust for Historic Preservation, by Patrice Frye

Historic Window & Door Conservation

Our historic buildings were designed with specific windows and doors, used to complement the architecture of the building. Built of old growth, dense wood, historic windows and doors have stood the test of time. Several examples in Columbia date from the early 1800s. Constructed with strong mortise and tenon joinery, these windows and doors were built to last.

Simple Steps to Window and Door Repair

1. Assess the conditions of your windows and doors. Which ones need immediate attention? Is there water splashing back up on them from a sill? How is the paint?
2. Call the City Zoning Office (545-3333) to check if permits are required for the work. Remove the door or window, or leave in place for minor repairs. If removing a window, you can pull off the interior stops, then pull out the bottom sash and then the top sash. If attached by rope to a weight, either cut the rope if you plan to replace it, or remove it gently from the sides of the window sash. Look for weight pockets in the side jambs, which may be painted over. Open them to access the weights, or pull off the facing trim on the wall to access the weight pocket. Label your sashes if you are working on more than one window. Doors are removed by pushing up the pins in the hinges. Now check the door and window frames for disrepair while they are visible.
3. If you plan to repaint, check to see if you have lead-based paint, and if so, follow lead safety practices. Rough the surface slightly so new paint will adhere, and remove areas of build-up that will restrict the movement of the doors or sashes. If you are removing the paint and old glazing putty on windows, there are heat guns, infrared heat strippers, chemicals, tools and sandpaper that can assist in removing old paint. Follow safety precautions!
4. For areas that show signs of wear or decay, remove the paint from at least those areas to determine the extent of the problem. If the wood feels soft, use a chemical consolidant to strengthen the wood. If you need to replace missing wood, cut out the area and splice in new wood, with the grain running the same direction, or use a structural epoxy. If the wood piece needs to be replaced, find a salvage window or door (*try the Restore thrift shop from Habitat for Humanity, or the His House thrift shop on Hwy 1, near I-20*), have a carpenter cut a new piece to match, or find the piece online (*one resource is www.oldwindowrestorer.com*).
5. If you are replacing glazing putty, clean the old putty off of the glass. If the wood is dried out or appears weathered, you can do a light sanding and add a mixture of boiled linseed oil and turpentine to nourish the wood. Follow safety procedures, as boiled linseed oil on rags can spontaneously combust! Apply new glazing putty, allow it to “skin over” and then paint.
6. Prime any bare wood, putty or old paint and topcoat with a high quality paint. Do not paint parts of the frame or sash that were not painted historically, as bare wood is best for letting the window parts glide past each other. Treat bare wood with linseed oil to keep nourished, or with wax to protect from weather.
7. Install weatherstripping along sides of window and door frames and at the meeting rails for windows. Install a door sweep at the door’s bottom edge. Clean and re-install hardware or attach new hardware. Install new cotton or cotton/polyester rope to the window sashes, run the cord through the pulley and attach to the weight, tying it with a figure 8 knot.
8. Reattach the interior stop on windows, make sure it is snug against the sash but not too snug, which will restrict the window’s movement. Historic, restored wood windows with weights can usually be lifted easily with a single finger. Caulk around the window and door trim, install storm windows or doors for energy efficiency, and enjoy!

Want to see it in action? Try these video series:

“Simple Steps to Working Windows,”
by the City of Kalamazoo
and the Michigan State Historic Preservation Office,
at [youtube.com](https://www.youtube.com), 5 parts

Window Repair Videos, including epoxy repair,
from the
Kansas Historical Society,
<http://www.kshs.org/p/window-repair-videos/14680>

Prepping and Painting Your Home

Owners of historic homes should always test for lead paint! Lead is dangerous if ingested or inhaled; if you're dealing with paint through heat removal, lead vapors can result, even several coats down.

Thinking About Painting Your Home?

- Check for lead paint on pre 1978 homes
- Check for power lines to house to make sure they are insulated
- Always use low pressure when washing
- Wash windows with pressure of a garden hose
- Test with denatured alcohol to determine if paint is oil or latex (Latex will be gummy when rubbed with denatured alcohol)
- Use a pull scraper with a carbide blade (scraping both ways)
- Choose the right products for your specific project (when in doubt call a local paint rep)
- Always use premium quality products to ensure longevity
- Take the extra time to prep well (the key to a great paint job is the prep work).

Hiring a Contractor

- Ask a supplier who they recommend. In general, suppliers know a lot of people involved in the business and can attest to the reputation of individual contractors.
- Get a written estimate
- Ask if workers are employees of the contractor that you are hiring or if the workers are subcontracted
- Request the names of their last 3 customers for reference purposes
- Ask for verification of certification of insurance

Lead Safety Tips

*This is not intended to be a thorough presentation on lead safety. Always consult the rules and regulations produced by the Environmental Protection Agency, www.epa.gov.

When Working on Your Historic Building

Assume that any building constructed before 1978 may have lead paint. Lead is toxic and is especially potent and harmful to children and pregnant women; in adults it can create reproductive issues, high blood pressure, nerve disorders, muscle and joint pain.

Planning to Remove Paint?

- Try a lead test kit from a hardware store, many are approved for wood and masonry surfaces by the EPA.
- Restrict children and pets from the work area.
- Avoid dust: lightly spray areas you will sand with water, and sand by hand.
- Use chemical strippers (without methylene chloride)
- Use heat guns (but do not go above 700 degrees F).
- Buy or rent a HEPA vacuum, which can remove lead dust.
- Clean up the work area thoroughly. Double bag your debris.
- Wash your work clothes separately from other laundry.

Equipment to Use

Safety glasses, shoe covers, protective clothes, plastic dropcloths, spray bottles, disposable rags, heavy duty plastic bags, mops and buckets, and duct tape, to tape down dropcloths to the work area.

Want more info: www.maclac.com/Misc/leadbrochure-en.pdf (Insider's Guide to Lead-Safe Painting and Home Improvement)

Additional Resources

Government and Local web sites and resources

www.columbiaplanning.net

City of Columbia web site, Click on “Preservation & Design” to access the page containing historic district design guidelines, maps, and other information

www.scdah.sc.gov

South Carolina Department of Archives and History

www.shpo.sc.gov

The South Carolina State Historic Preservation Office (SHPO) encourages responsible stewardship of the state’s historic places. This site provides information about the programs and services offered by the SHPO.

www.shpo.sc.gov/grants

Provides information about tax incentives for historic buildings; You can also contact Rebekah Dobrasko at 803-896-6183 or dobrasko@scdah.state.sc.us for more information about these incentives.

www.cr.nps.gov

The National Park Service

www.nps.gov/history/hps/tps/briefs/presbhom.htm

The National Park Service Preservation Briefs provide guidance on preserving, rehabilitating, and restoring historic buildings.

www.cr.nps.gov/hps/tps/standguide/index.htm

The Secretary of the Interiors Standards for the Treatment of Historic Properties explains the differences between Preservation, Restoration, Rehabilitation, and Reconstruction.

Click on “Rehabilitation” to get detailed illustrated standards and guidelines for rehabilitating historic buildings.

www.nps.gov/history/hps/tps/tax/index.htm

This site will provide you with more information about federal preservation tax incentives.

www.historiccolumbia.org

Historic Columbia Foundation, Columbia’s history non-profit

www.palmettotrust.org

The Palmetto Trust for Historic Preservation has dedicated itself to preserving and protecting the irreplaceable architectural heritage of South Carolina since 1990.

www.myrcpl.com/local-history/home

The Walker Local History Room, located on the 3rd floor of the Richland County Public Library (main branch), specializes in collecting historical and family history information about the Midlands area of South Carolina. Many of their resources are available online.

Other Educational Resources

www.preservationnation.org

National Trust for Historic Preservation

www.preservationbooks.org/Bookstore.asp

The National Trust for Historic Preservation Bookstore sells books on a variety of historic preservation topics including how to care for older and historic houses.

preservationdirectory.com/HistoricalPreservation/Home.aspx

Preservation Directory, an online resource for historic preservation and building restoration

www.buffaloah.com/a/DCTNRY/vocab.html

An illustrated architectural dictionary to help you understand the different architectural elements of your home

Additional Resources *(continued)*

www.realviews.com

This American architecture web site provides information about different architectural styles.

library.sc.edu/digital/collections/sanborn.html

Sanborn Fire Insurance Maps can help you research the history of your house.

Materials & Products

www.oldhouseweb.com

Ideas and advice for owners of old houses

www.ambungalow.com

American Bungalow Magazine

www.oldhousejournal.com

Old-House Journal will help you find products and services for homes built before 1950.

Books

The Visual Dictionary of American Domestic Architecture

By Rachel Carley

Carley offers a detailed guide to 500 years of American home design, and includes more than 600 detailed drawings that show you how to identify and describe a house of a particular style.

For Every House a Garden: A Guide for Reproducing Period Gardens

By Rudy and Joy Favretti

Presents a practical guide for reproducing period gardens in their many forms

Houses and Homes: Exploring Their History

By Barbara J. Howe

This provides homeowners with research techniques to help them discover the history of their house by using written records, oral testimonies, visual sources, the house's surroundings, and the building itself.

Landmark Yellow Pages: Where to Find All the Names, Addresses, Facts, and Figures You Need

Edited by Diane Maddex and produced by the National Trust For Historic Preservation

A comprehensive guide to preservation information, including products and services, legal information, and state-by-state resources.

A Field Guide To American Houses

By Virginia and Lee McAlester

This book helps owners identify and place houses into their historic and architectural contexts.

What Style Is It: A Guide to American Architecture

By John Poppeliers and S. Allen Chambers Jr

This book offers a unique overview of 22 of the most important architectural styles in America.

New Old House Starter Kit

By Richard Wagner

Contains practical advice including finding a qualified architect, budgeting for rehabilitation work, and researching a property's history.

City of Columbia

Preservation Design Contacts

West Gervais Street, Landmark District,
& Individual Landmarks

Amy Moore – Historic Preservation Planner

803.545.3335

aemoore@columbiasc.net

Earlewood, Cottontown/Bellevue, Wales Garden,
Elmwood Park, & Governor's Hill

Lindsay Crick – City Planner

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Melrose Heights, Old Shandon/Lower Waverly,
Waverly, & Landmark District

Staci Richey – City Planner

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University Hill, Granby, Whaley, & Oakwood Court

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