



Virginia Main Streets Downtown Toolkit

Staunton, Virginia

July 20, 2011

Andrea L. Dono, National Trust Main Street Center

**NATIONAL
TRUST
FOR
HISTORIC
PRESERVATION™**



What is Sustainability?



Sustainability Ninja

NATIONAL TRUST FOR HISTORIC PRESERVATION®

“3Ps”: Planet – People – Prosperity



NATIONAL TRUST FOR HISTORIC PRESERVATION®

4 Points + 3Ps = Green

Organization = People

Econ Restructuring = Prosperity, People

Design = Planet, Prosperity

Promotion = People

Not Sustainable



NATIONAL TRUST FOR HISTORIC PRESERVATION®

More Sustainable



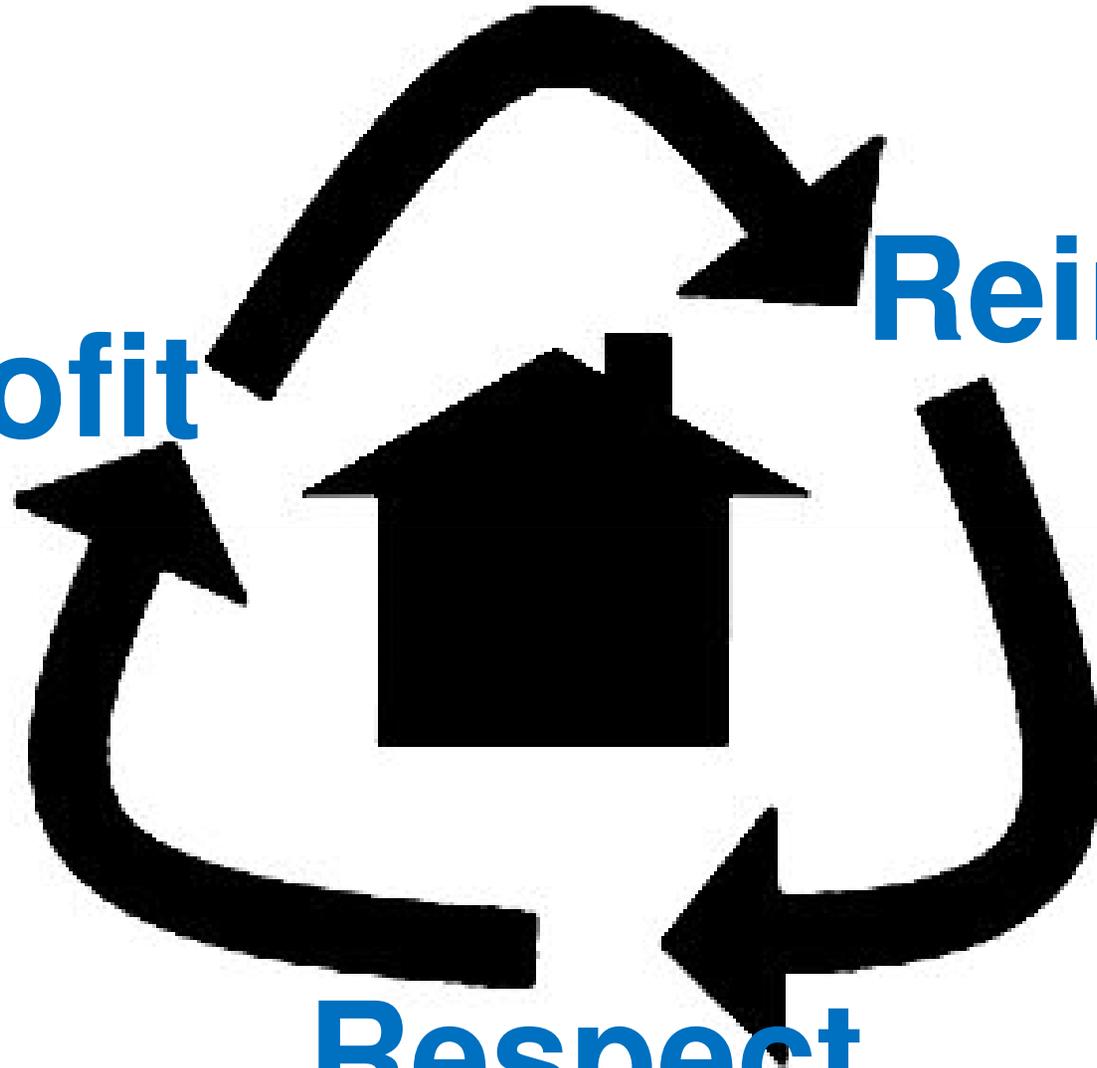
NATIONAL TRUST FOR HISTORIC PRESERVATION[®]

Reuse

Reinvest

Retrofit

Respect



NATIONAL TRUST FOR HISTORIC PRESERVATION®

Getting Started, Not Overwhelmed

Small, Incremental Projects

Frame What You Already Do As Green

Not Additional Work

1. Partnerships



NATIONAL TRUST FOR HISTORIC PRESERVATION®

City Leadership: Franklin, TN



NATIONAL TRUST FOR HISTORIC PRESERVATION®

Waste Management Elvis



NATIONAL TRUST FOR HISTORIC PRESERVATION®

2. Green Your Buildings

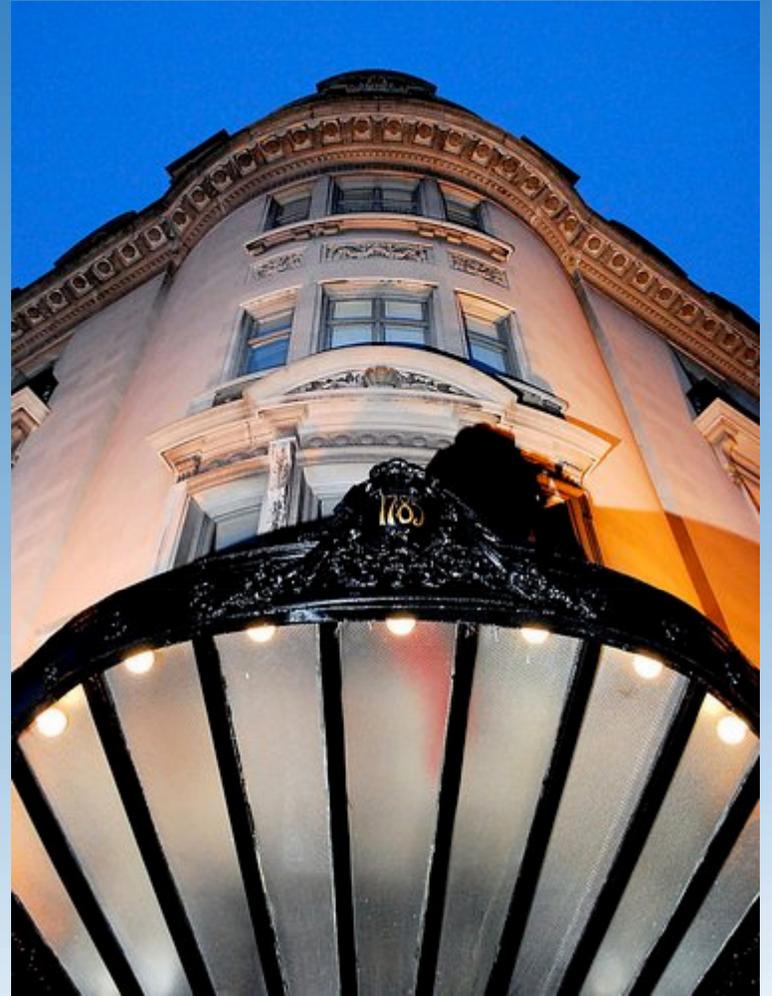
Many historic buildings are already energy efficient

Commercial Buildings (non malls):

<u>Date Built</u>	<u>Btu/sq. ft</u>
Before 1920	80,127
1920 – 1945	90,234
1946 – 1959	80,198
1960 – 1969	90,976
1970 – 1979	94,968
1980 – 1989	100,077
1990 – 1999	88,834
2000 – 2003	79,703

Source: U.S. Energy Information Administration, *2003 Commercial Building Energy Consumption Survey*

“When you strip away the rhetoric, preservation is simply having the good sense to hold on to things that are well designed, that link us with our past, and that have plenty of good use left in them.” — Richard Moe, NTHP



Historic Buildings Were Built to Last

Materials & energy too expensive to waste

Built with conservation in mind

Basic maintenance & restoration can leverage original energy-saving systems

Retractable Awnings



NATIONAL TRUST FOR HISTORIC PRESERVATION®

Transom Windows



NATIONAL TRUST FOR HISTORIC PRESERVATION®

Shiny Ceiling



NATIONAL TRUST FOR HISTORIC PRESERVATION®

Compact Urban Design & Shared Walls



NATIONAL TRUST FOR HISTORIC PRESERVATION®

Recessed Entryways



NATIONAL TRUST FOR HISTORIC PRESERVATION®

Thick Masonry & Operable Windows



NATIONAL TRUST FOR HISTORIC PRESERVATION®

White Roof – Bedford, IA



NATIONAL TRUST FOR HISTORIC PRESERVATION®

Green Roof – Cedar Rapids, IA



NATIONAL TRUST FOR HISTORIC PRESERVATION®

LEED Certification?



One L Productions

16M-sq ft urban complex

76 acres, 165 restaurants

New is better bias

Few points for
preservation

Low performance

\$\$\$

NATIONAL TRUST FOR HISTORIC PRESERVATION[®]

LEED as Guidance – Port Townsend



NATIONAL TRUST FOR HISTORIC PRESERVATION®

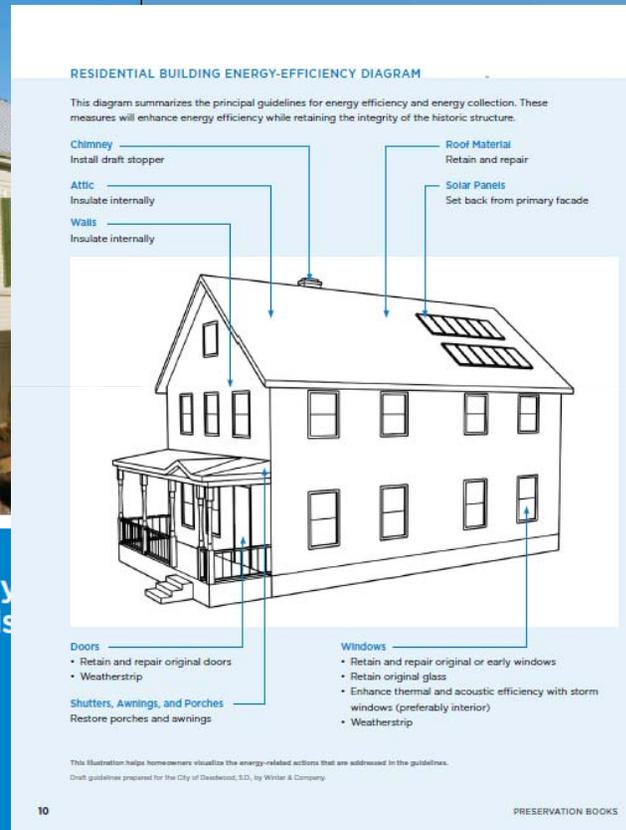
Green Design Guidelines



Developing Sustainability Guidelines for Historic Dis

By Noré V. Winter

NATIONAL
TRUST
FOR
HISTORIC
PRESERVATION



Energy Audits

Identify energy drains

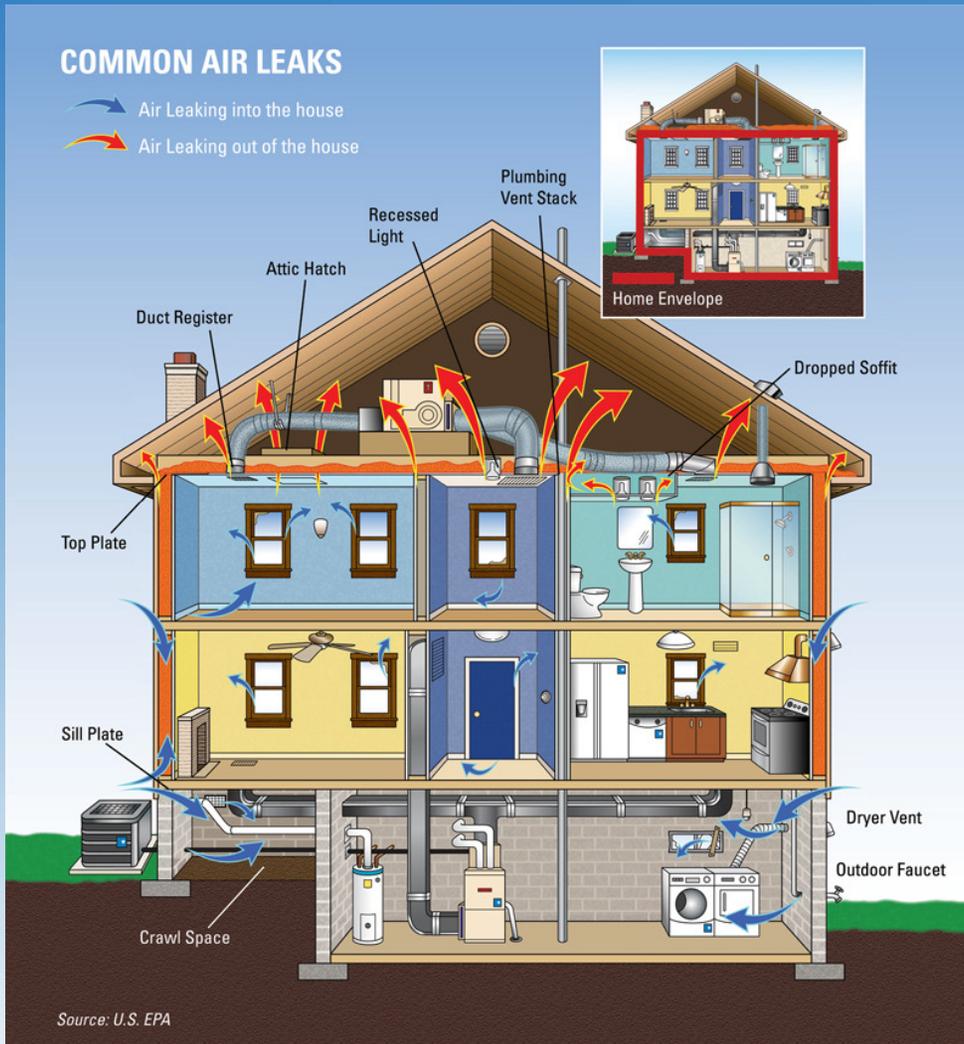
Cheap Solutions!

- Insulation

- Programmable thermostats

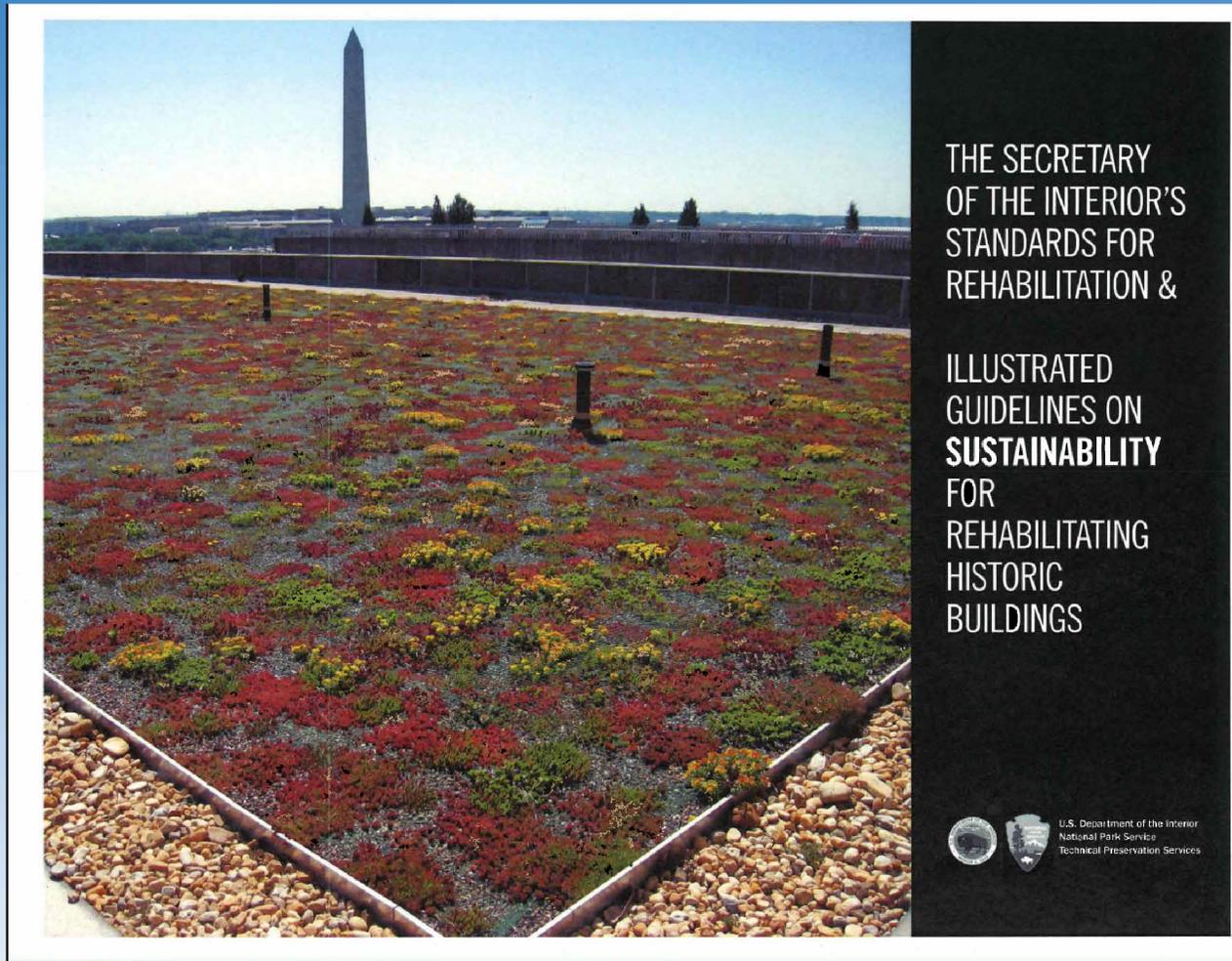
- Weather stripping

- Caulking



U.S. EPA

National Parks Service



<http://www.nps.gov/history/hps/tps/download/guidelines-sustainability.pdf>

NATIONAL TRUST FOR HISTORIC PRESERVATION®

Historic Windows



Email Share Print RSS Font: A / A+ / A++

Window Know-How: A Guide to Old-Building-Friendly Contractors

So, you want to repair your home's existing windows?

Congratulations! You've made a great choice that says a lot about your commitment to your home's historic character – and your desire to save money. And instead of carting them off to a landfill and spending needlessly on higher-priced and lower-quality replacements, you've shown that you're confident increased energy efficiency goals can be met – and perhaps exceeded – by giving what you already have some TLC.

Now that you feel good about your newest home renovation project, we hope that you'll find our interactive map helpful as a first step to finding qualified, old-window-

Did You Know?



NATIONAL TRUST FOR HISTORIC PRESERVATION

HISTORIC WOOD WINDOWS

A tip sheet from the National Trust for Historic Preservation

Introduction

There is an epidemic spreading across the country. In the name of energy efficiency and environmental responsibility, replacement window manufacturers are convincing people to replace their historic wood windows. The result is the rapid erosion of a building's character, the waste of a historic resource, and a potential net loss in energy conservation. Typically replacement windows are vinyl, aluminum, or a composite with wood, and none will last as long as the original windows. Repairing, rather than replacing, wood windows is most likely to be the "greener option" and a more sustainable building practice.

Research shows that most traditionally designed wood-frame buildings have more heat loss through the windows! A historic wood window, properly maintained and fitted with a storm window, can be just as energy efficient as a new window! Replacing a historic single-pane window also may not save you much money in the long run. While the type of window installed and whether or not a storm window is used, studies have found that it could save 100 years or more in energy savings! According to information published in a recent *Old House Journal* article, the cost of replacing a single-pane window with a low-e glass double-pane thermal replacement window? Also, a historic wood window can easily last more than 100 years, while a new window may not last 25.

Not every wood window can be repaired and there are situations where replacement is appropriate. However, many historic wood windows can and should be repaired, especially if the windows were manufactured before about 1940. Wood windows made before this

Historic windows are among the most important elements of a building, simple repairs and routine maintenance combined with storm windows make for energy efficiency that in most cases matches, if not exceeds, the efficiency of replacement windows. Working throughout the region to help to fight building owners being misled to care for their historic windows. At the National Trust for Historic Preservation, we've helped fund a window repair workshop throughout the United States.

time were constructed with individual panes, each of which can be repaired or replaced, the wood itself is denser and of higher quality than what is grown today and it is generally more rot- and warp-resistant than modern wood.

These are just some of the many reasons to repair rather than replace historic wood windows. In addition, repairing a building's authenticity by maintaining original material is removed from a building, it is gone forever. There are more benefits to repairing your windows – so keep reading!

1. Epkema (2009), James O. (2007), "Energy and Repair Building (2009), e.g. historic windows available at www.historichomes.com/windows/repairing.html" at the National Trust for Historic Preservation, 25 Nov. 2007.

About the Initiative: Historic preservation cannot be an important component of any effort to promote sustainable development. The conservation of our existing historic resources, including buildings, structures, and buildings, is essential to our nation's heritage and is critical to combating climate change.

Learn more about Preservation and Sustainability on the web:

www.nthp.org

For more information, contact:

Patricia Gray, Director of Sustainability Research
(202) 588-6225
Patricia.Gray@nthp.org

Barbara A. Campaigne, ALA, LEED AP, Graham Good Architect
(202) 588-6233
Barbara_Campaigne@nthp.org

Rebecca Williams (author of this publication), Field Representative, Northeast Office
(410) 522-0895
rebecca_williams@nthp.org

Weatherization

WEATHERIZATION GUIDE FOR OLDER & HISTORIC BUILDINGS

WHAT'S AT STAKE?

Ever since the days of the oil crisis in the 1970's, most Americans have so focused on energy consumption, especially weatherization, that the cost of heating and cooling has risen so has the awareness of just how much energy leaks out of an average home each day. Central to the discussion is the role of older and historic buildings – and making them more energy efficient without jeopardizing their unique character.

START WITH AN AUDIT - THE GOOD KIND

- **Why a Home Energy Audit?** The first step in saving your home's energy is knowing exactly where the problems areas are located. After all, the problems aren't always obvious. Don't let knowledge is power. A thorough, top-to-bottom home energy audit will equip you with everything you need to weatherize your older or historic home the right way. [Read More](#)
- **Conversation with an Energy Auditor: Don't Miss It!** [Click Here](#)
- **Conversation with an Energy Auditor: America's Best - National Home Energy Auditors** [Click Here](#)
- **Conversation with an Energy Auditor: Tom Bonister: Aired Home Inspections** [Click Here](#)

SEE MORE RESOURCES

WINDOWS

From Gothic masterpieces to the colorful masses of stained glass, original windows help tell the special stories of our older and historic homes. However, despite their character-defining contributions, they are a common – and quite often inoperable – source of energy waste that should be broken out and repaired. Use this section of our guide to learn how you can keep your old windows, achieve energy efficiency, and be "green" in the process. [Read More](#)

Love Your Historic Windows
Do you like your older or historic windows? Think that they are too great to be replaced? Take a look at our photo group on how to:

Old Windows: Repair vs. Replace (PDF)
A visual look at the impacts with real photos.

Weatherize Windows Field Guide
How to take photos of your windows so you can:

Checklist of Windows Technology
From A to Z, start up on your window logs.

- Why do my old windows rattle?
- Should I believe the hype about new windows being better?
- Should I repair or replace my old windows?
- Will storm windows help?
- How do I find someone to repair my windows?
- Are there any low-cost ways to make my windows more energy efficient?

SEE MORE RESOURCES

PRESERVATION = SUSTAINABILITY LEARN MORE

JOIN TODAY!
Help us save the places that matter to you.



WINDOW OF THE WEEK

Each week, we'll highlight a different reader-submitted photo of an older or historic window that is definitely worthy of a little window love and care. Want to be the first to share your favorite window moment in the neighborhood? Drop your picture online and join our [Love Your Historic Windows](#) group on Facebook for a chance to be next week's spotlight. It's quick and easy to spread as many photos as you want, and it sends a great message to the world – older or historic windows matter!

10 REASONS TO REPAIR OR REPLACE

For most homeowners, a window is a window. But for so many people out there, a window is a window with a story. It's not just a window, it's a piece of history. [Click Here](#)

CREDIT WHERE IT'S DUE: A GUIDE TO INDIANAPOLIS

Not every old window should be saved. Sometimes it is necessary to replace a window due to extensive deterioration or missing components. An entire window may need to be replaced or sometimes selectively just components, such as retaining the frame while installing new sashes. When replacing windows, remember to match the originals as closely as possible. New windows should replicate originals, in terms of size, glazing (tint), proportions, width, dimension of components (muntins, frame), profile of sash, depth and materials.

SEE MORE RESOURCES



NATIONAL TRUST FOR HISTORIC PRESERVATION

Repair or Replace Old Windows
A Visual Look at the Impacts

Repair or Replace Old Windows

When Are Replacement Windows Necessary?
A selling point of replacement windows is that they are maintenance free. In truth, based on their materials, components and relatively short life expectancy, you, and subsequent owners, will probably be looking at replacing your replacement windows in less than 20 years. However, the selling point of old windows is most have been on the job for 50 to 100 years or more, and can continue to do so.

Not every old window should be saved. Sometimes it is necessary to replace a window due to extensive deterioration or missing components. An entire window may need to be replaced or sometimes selectively just components, such as retaining the frame while installing new sashes. When replacing windows, remember to match the originals as closely as possible. New windows should replicate originals, in terms of size, glazing (tint), proportions, width, dimension of components (muntins, frame), profile of sash, depth and materials.

A Six-over-six double-hung sash with loose meeting rail, missing glass – can be repaired.

B Queen Anne windows needing paint, re-glazing – can be repaired.

C Arched double-hung sash windows missing glass and frames – replacement likely.

D Two-over-two double-hung sash with loose bottom rail, needing paint, re-glazing – can be repaired.

E One-over-one double-hung sash windows and fixed transoms with detached meeting rail, needing paint and re-glazing – can be repaired.

F Queen Anne window in poor condition, detached from frame and missing glass – borderline, requiring extensive repairs.

G Queen Anne window missing glass and subject to structural settling of the building – borderline, requiring extensive repairs.

3. Green Your Streets



NATIONAL TRUST FOR HISTORIC PRESERVATION®

Rain Barrels



NATIONAL TRUST FOR HISTORIC PRESERVATION®

Stormwater Management



NATIONAL TRUST FOR HISTORIC PRESERVATION®

Stormwater Management



NATIONAL TRUST FOR HISTORIC PRESERVATION®

Stormwater Management

 RUNDLELL ERNSTBERGER ASSOCIATES, LLC
LAND PLANNING • URBAN DESIGN • LANDSCAPE ARCHITECTURE



NATIONAL TRUST FOR HISTORIC PRESERVATION®

Gateway Projects



NATIONAL TRUST FOR HISTORIC PRESERVATION®

Complete Streets



NATIONAL TRUST FOR HISTORIC PRESERVATION®

On-Street Recycling



NATIONAL TRUST FOR HISTORIC PRESERVATION®

Energy-efficient Street Lights



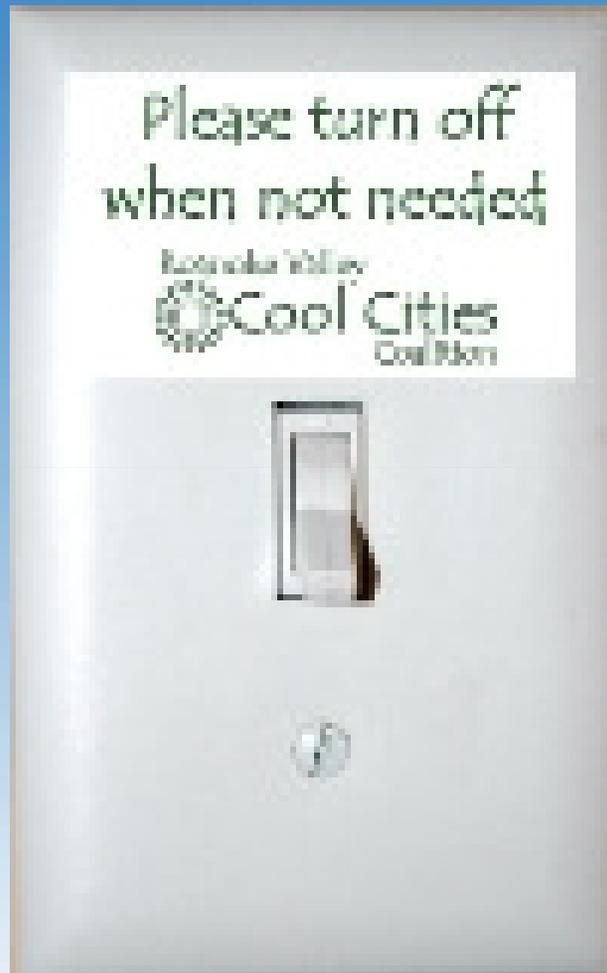
NATIONAL TRUST FOR HISTORIC PRESERVATION®

4. Green Your Businesses



NATIONAL TRUST FOR HISTORIC PRESERVATION®

Offer Guidance & Recognition



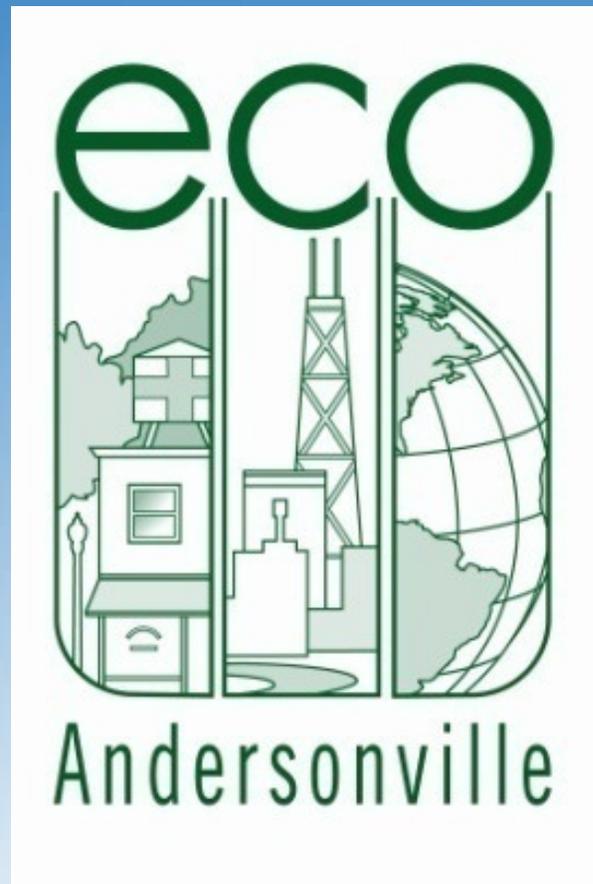
NATIONAL TRUST FOR HISTORIC PRESERVATION®

Offer Guidance & Recognition



NATIONAL TRUST FOR HISTORIC PRESERVATION®

Offer Guidance & Recognition



NATIONAL TRUST FOR HISTORIC PRESERVATION®

Green Business Directory

MANAYUNK ARTS FESTIVAL

A GREEN GUIDE TO THE
MANAYUNK BUSINESS DISTRICT

NATIONAL TRUST FOR HISTORIC PRESERVATION®

5. Green Your Committees



Board use “green filter” on work plans

Add sustainability expert to resource teams

Challenge committees to green one project this year, 5 next year, etc.

Messaging



Alberta Main Street advances efforts to develop Alberta Street as a vibrant, creative & sustainable commercial district serving residents and visitors to our community.

6. Low-hanging Fruit



NATIONAL TRUST FOR HISTORIC PRESERVATION®

Green Kits, Fairmont, WV



NATIONAL TRUST FOR HISTORIC PRESERVATION®

Buy Local - Culpeper



NATIONAL TRUST FOR HISTORIC PRESERVATION®

Urban Parks - Strasburg



NATIONAL TRUST FOR HISTORIC PRESERVATION®

Urban Parks - Strasburg



NATIONAL TRUST FOR HISTORIC PRESERVATION®

Farmers Market - Lynchburg



NATIONAL TRUST FOR HISTORIC PRESERVATION®

Art By Bike - Roanoke



NATIONAL TRUST FOR HISTORIC PRESERVATION®

Green Office Habits – Orange, VA



NATIONAL TRUST FOR HISTORIC PRESERVATION®

Final Thoughts



- Engage city/many partners
- Set goals & develop plans
- Filter messaging/ projects within 3Ps

Final Thoughts



- **Easy targets, not problem children**
- **Build ethic over time**
- **Small projects add up to big outcomes**

For More Information...

www.preservationnation.org/green

www.mainstreet.org

<http://blogs.nationaltrust.org/preservationnation/>

Facebook: National Trust Main Street Center

Twitter: @NatlMainStreet

Andrea L Dono

Andrea_Dono@nthp.org

National Trust Main Street Center