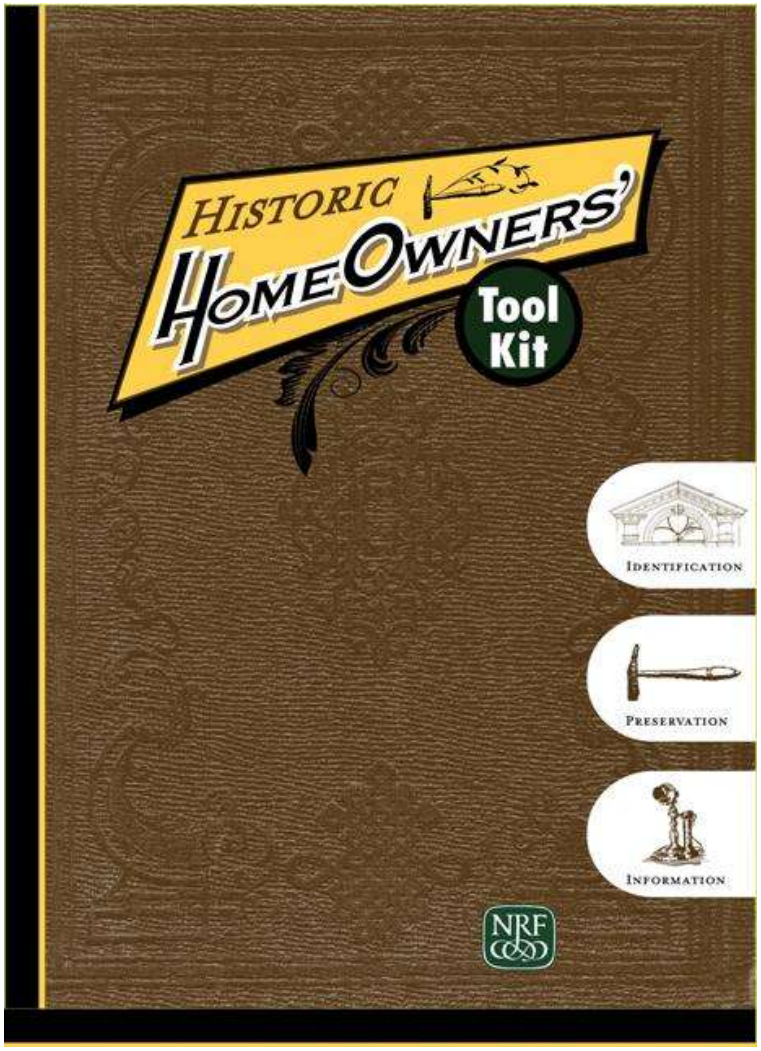

Welcome

We hope you find this resource packet helpful!

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Authors:
Lisa Dady, Director of Education, NRF
Richard Youngken, Principal, Youngken Associates

With contributions by:
Robert Foley, Director of Preservation, NRF
Pieter Roos, Executive Director, NRF
Alyssa Lozupone and Hilary Retseck, NRF Graduate Student Interns
Others as cited

Newport Restoration Foundation
51 Touro Street
Newport, RI 02840
401-849-7300
info@newportrestoration.org

Contents

Preservation Principles

Historic preservationists do not want to freeze time. Preservation is not about *resisting* change, rather it's about *managing* change so that as communities evolve they do not lose their special places along the way. All old buildings - from the plainest barn to the fanciest mansion, from a 1750s Georgian house to a 1950s ranch house – deserve to be preserved. This is how we hold onto our heritage and keep our community's character.

To accomplish this, homeowners, municipalities, architects, and others can use the standards set forth by the U.S. Secretary of the Interior. These represent the philosophical basis and "best practices" approach for preservation.

From The National Park Service:
The Secretary of Interior's Standards for Treatment of Historic Properties

The Secretary of the Interior's Standards for the Treatment of Historic Properties were developed to help protect our nation's irreplaceable cultural resources by promoting consistent preservation practices. The Standards may be applied to any property: buildings, sites, structures, landscapes, and districts.

There are four distinct, but interrelated, approaches to the treatment of historic properties-- **preservation, rehabilitation, restoration, and reconstruction**. The four treatment approaches are outlined below in hierarchical order:

Preservation places a high premium on the retention of all historic fabric through conservation, maintenance and repair. It reflects a building's continuum over time, through successive occupancies, and the respectful changes and alterations that are made.

Rehabilitation, the second treatment, emphasizes the retention and repair of historic materials, but more latitude is provided for replacement because it is assumed the property is more deteriorated prior to work. (Both Preservation and Rehabilitation standards focus attention on the preservation of those materials, features, finishes, spaces, and spatial relationships that, together, give a property its historic character.)

Restoration, the third treatment, focuses on the retention of materials from the most significant time in a property's history, while permitting the removal of materials from other periods.

Reconstruction, the fourth treatment, establishes limited opportunities to re-create a non-surviving site, landscape, building, structure, or object in all new materials.

Standards and Guidelines – Over ☞

From The National Park Service:
The Secretary of Interior's Standards for Treatment of Historic Properties

Standards and Guidelines:

1. Recognize appropriate use
A property shall be used for its historic purpose or shall be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.

2. Retain historic character
The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.

3. Avoid conjecture
Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding a conjectural feature or architectural elements from other historic buildings, shall not be undertaken.

4. Maintain significant alterations
Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.

5. Preserve character defining features and workmanship
Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved.

6. Repair before you replace materials
Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, other visual qualities, and, where possible, materials. Replacement of missing features will be substantiated by documentary, physical, or pictorial evidence.

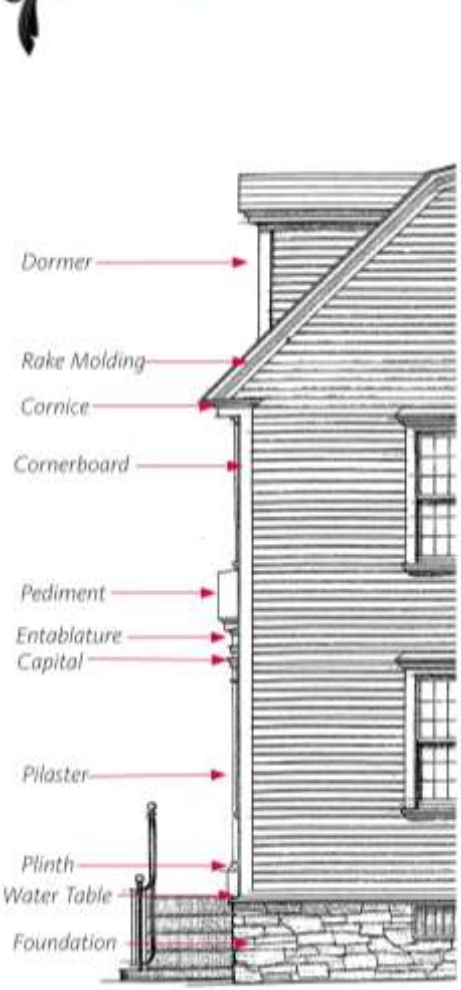
7. Avoid damaging treatments
Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.

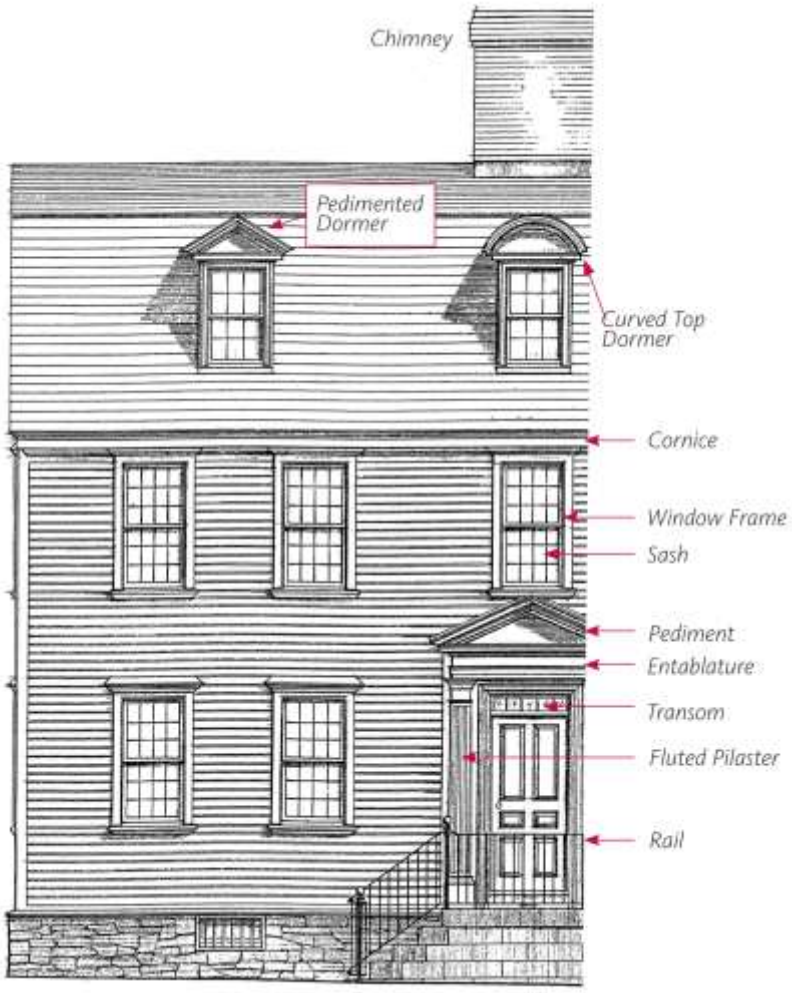
8. Consider archaeological resources
Significant archeological resources affected by a project shall be protected. If such resources must be disturbed, mitigation measures shall be undertaken.

9. Make additions and alterations compatible
New additions, exterior alterations, or related new construction shall not destroy historic materials which characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.

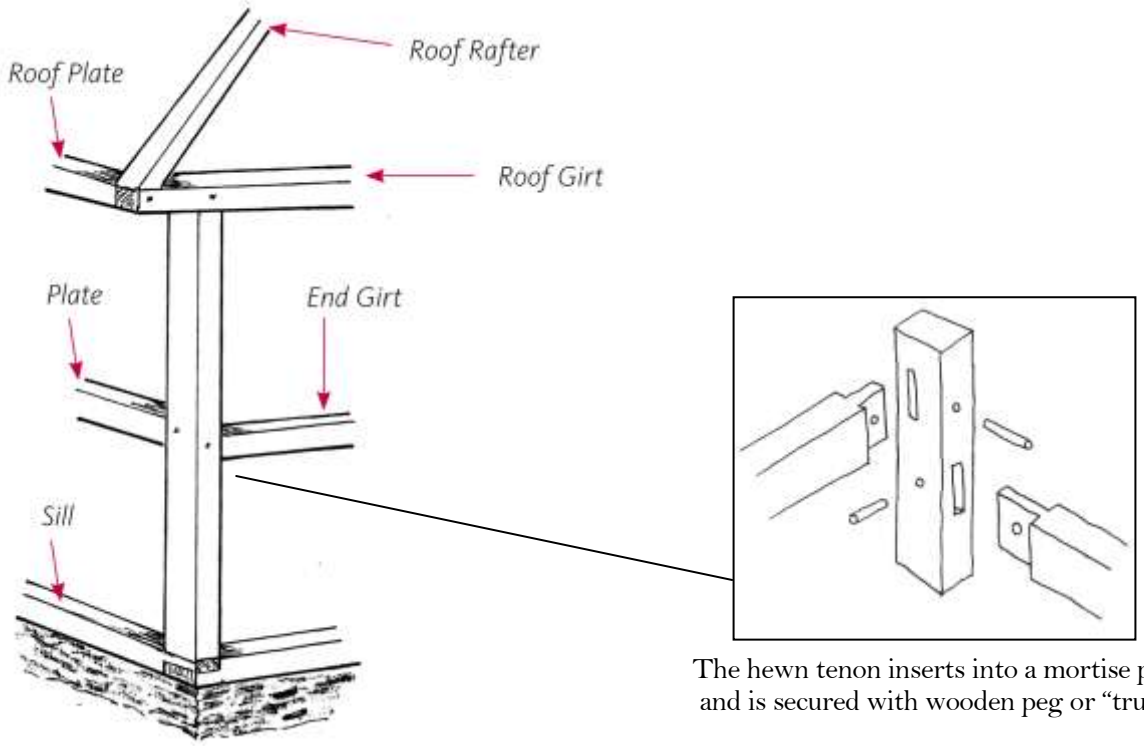
10. Make alterations reversible
New additions and adjacent or related new construction shall be undertaken in a such a manner that if removed in the future, the essential form and integrity of the historic property and its environment shall be unimpaired.

Anatomy of a House



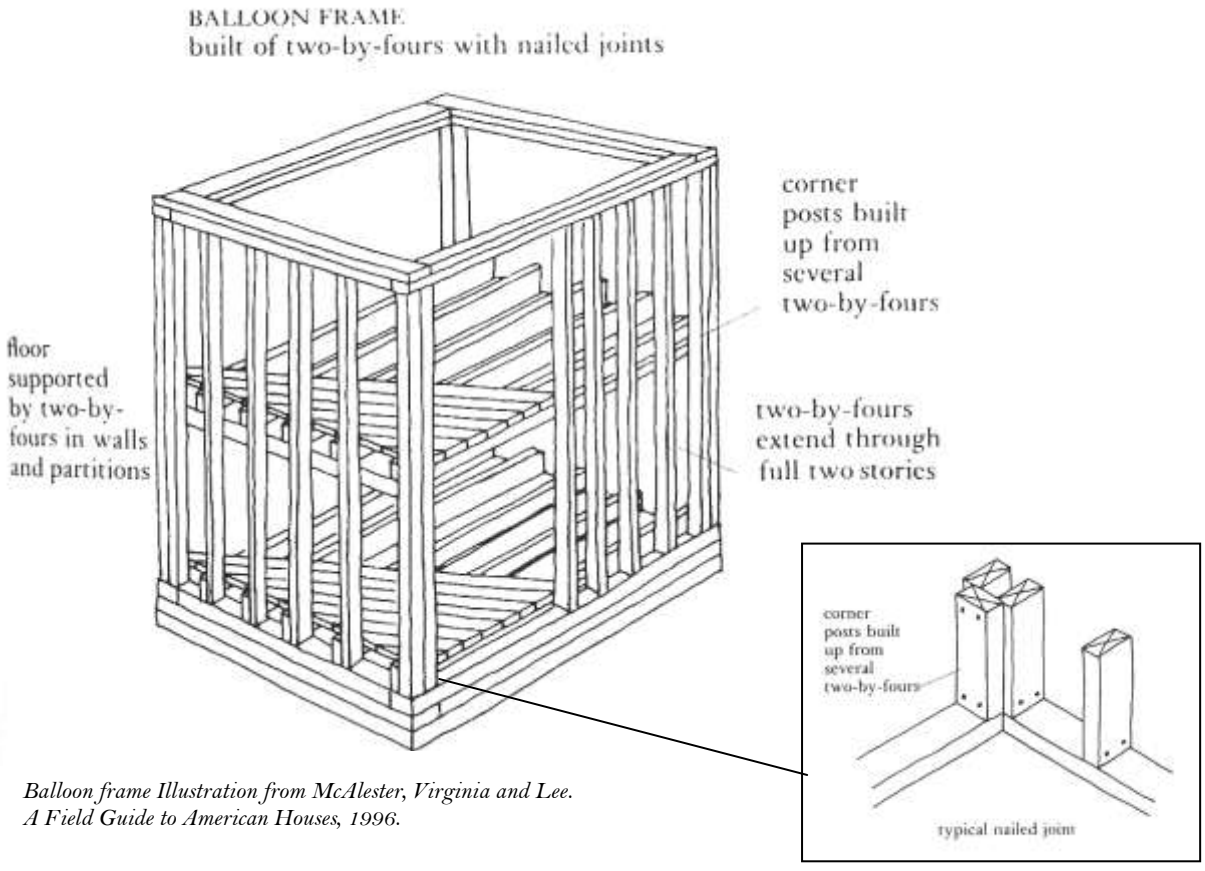


In the 18th century, many houses in the city of Newport were built with a distinctive construction technique. Simple oak frames were sheathed in vertical planks, 1.5 to 2 inches thick, nailed to the outside of the frame and spanning one or two stories. Exterior clapboards or shingles were nailed directly on to the planks as was the interior lath.



The hewn tenon inserts into a mortise pocket and is secured with wooden peg or "trunnel."

Early Rhode Island houses were heavy timber-framed structures with mortise and tenon joints, also known as "post-and-girt" frames (above). After the 1830s, a new system of "balloon framing," with nailed 2 x 4 lumber, became the new standard for house construction (below).



Balloon frame Illustration from McAlester, Virginia and Lee. A Field Guide to American Houses, 1996.

Front Doorways

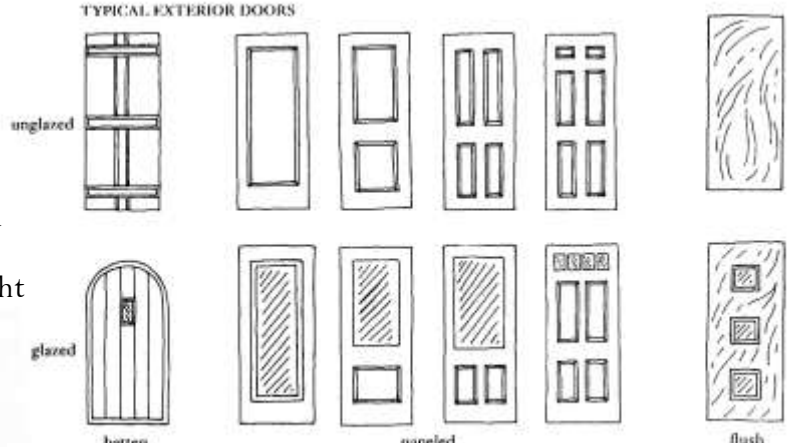


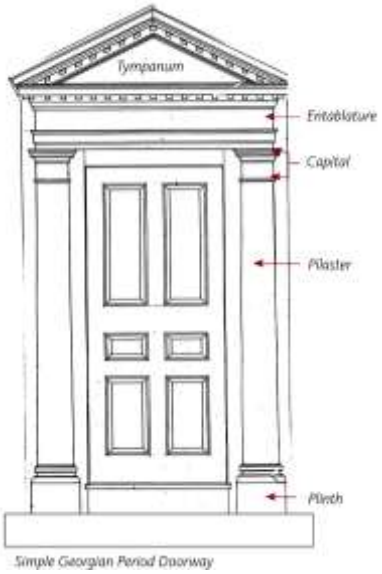
Illustration from McAlester, Virginia and Lee. A Field Guide to American Houses, 1996.

Front doors are an important signature of style. Exterior door configurations changed with architectural taste over time.

Mid-to-late 19th century doors had various numbers of panels and configurations. A typical door might have two long raised panels over two short ones. They were often flat panels with applied molding.

These were followed by more elaborate and heavier Victorian arched openings in the mid-late 19th century and then revived during the late Victorian Shingle and Colonial Revival periods. These revival style doorways are invariably larger in scale and complexity than those of a century earlier.

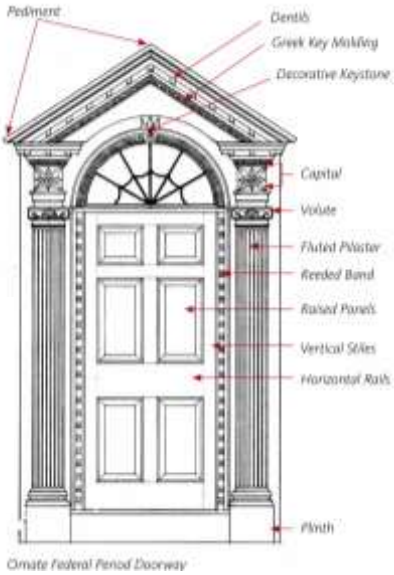
Late 19th and early 20th century doors reverted back to multiple panels, but sometimes in horizontal configurations, with at least one large panel spanning the width of the door. These revivalist doors are generally more elaborate than the original Colonial six panel doors.



Simple Georgian Period Doorway

Colonial-period doors were usually two to six raised panels. The "surround" was often pilasters supporting a simple flat gable pediment or broken-scroll classical pediment. (left)

In the Federal Period (circa 1790 to 1830) doors had four to eight raised panels. A fan light over the door and side lights are a signature of this period. (right)



Ornate Federal Period Doorway

Doorways are character-defining elements that should be, and usually can be, retained and repaired. Historic doors have true raised panels, with a thickness and boldness that is more solid than the timorous, barely relieved panels found in today's home supply chain stores. Indeed, stock replacement doors and encasements are rarely true in terms of dimension and can be mislabeled as to style. If the original door is seriously deteriorated or missing, replication of the original or recreation of a door in the architectural style of the house, with proper proportions, is preferred.

▲ **Appropriate** Original six-panel wooden door with sidelights.

The number and configuration of panels in a replacement door should be consistent with the architectural style of the building. Replacement of wood doors with aluminum framed glass or steel doors, and replacement of double doors with single-leaf doors, is discouraged.

Illustrations courtesy of the Providence Historic District Commission.

▲ **Inappropriate** Sidelights replaced by mailboxes and buzzers.

▲ **Inappropriate** Door without panels in wood, steel, etc.

▲ **Inappropriate** Door design and aluminum screen.

▲ **Appropriate** House with original four-panel double doors.

▲ **Inappropriate** Single door instead of double door. No panels. Non-historic glass panel design.

Exterior Siding

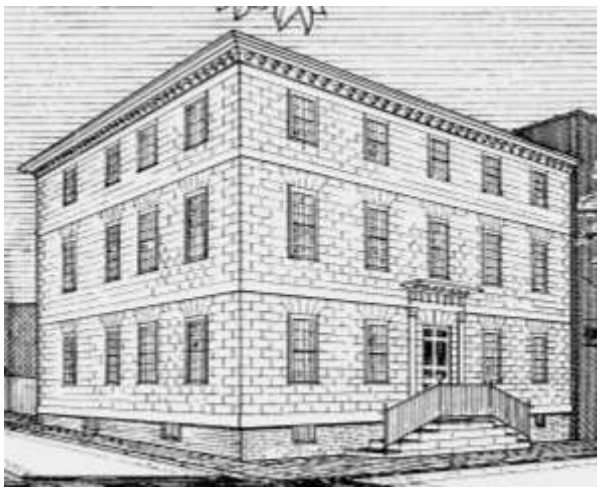
Newport's 17th and 18th century buildings are primarily clad in wooden shingles and/or clapboards, materials easily available to the colonial craftsmen. They are often used together with the principal façade of the building clad in clapboards while the side and rear elevations (not so visible from the street) have cedar shingles. In general, the cladding of 17th, 18th, and 19th century Newport buildings is character-defining. Replacement of rotten clapboard should take into account the building's stylistic period in terms of appropriate dimensions, placement and treatment. For example, the width of the exposed part of board increases as styles changed from the 18th century forward.

Colonial-period cladding

The clapboards we see today are usually 19th or 20th century replacement material. Original 18th century or earlier clapboards, if found on a building would be extremely rare, valuable and worth saving if possible. Houses restored by the Newport Restoration Foundation or others have clapboard cladding that duplicates the detailing and dimension of the original clapboards that may have been on the building. Features of these include:

- Use of reproduction rose-headed iron nails to simulate hand-forged nails of the period.
- Use of short clapboards mated with diagonal scarf joints as the original riven clapboard was not a long board.
- Embellishment with a bead on the bottom edge of the clapboard.
- Application to the building in diminishing width near the foundation of the building to create a more weather tight water table. In late 18th and 19th century buildings this stylistic feature is less pronounced or absent.

Brick cladding is also prevalent in the colonial and Federal period, particularly in institutional buildings such as the Colony House and Brick Market



A notable cladding treatment in the Georgian period was the use of sand-coated beveled block wood siding to simulate stone construction (known as *rustication*). Some important Newport 18th-century buildings have this including the Buliod-Seixas-Perry House at 29 Touro Street (right).

Nineteenth & Early 20th century Cladding

This period includes decorative wood shingle work, wooden clapboards, novelty siding, bevel-board siding and ship-lap siding. The late-19th century Stick Style, Shingle Style, and Colonial Revival houses in Newport are particularly sensitive to alterations of their historic wooden cladding. Care should be taken when re-shingling to replace in-kind the original shingle style and configuration. The Shingle Style is expressed through the decorative use of shingles to create an organic skin not only on exterior walls, but also on character-defining elements such as turrets, bays, dormers, and roofs.

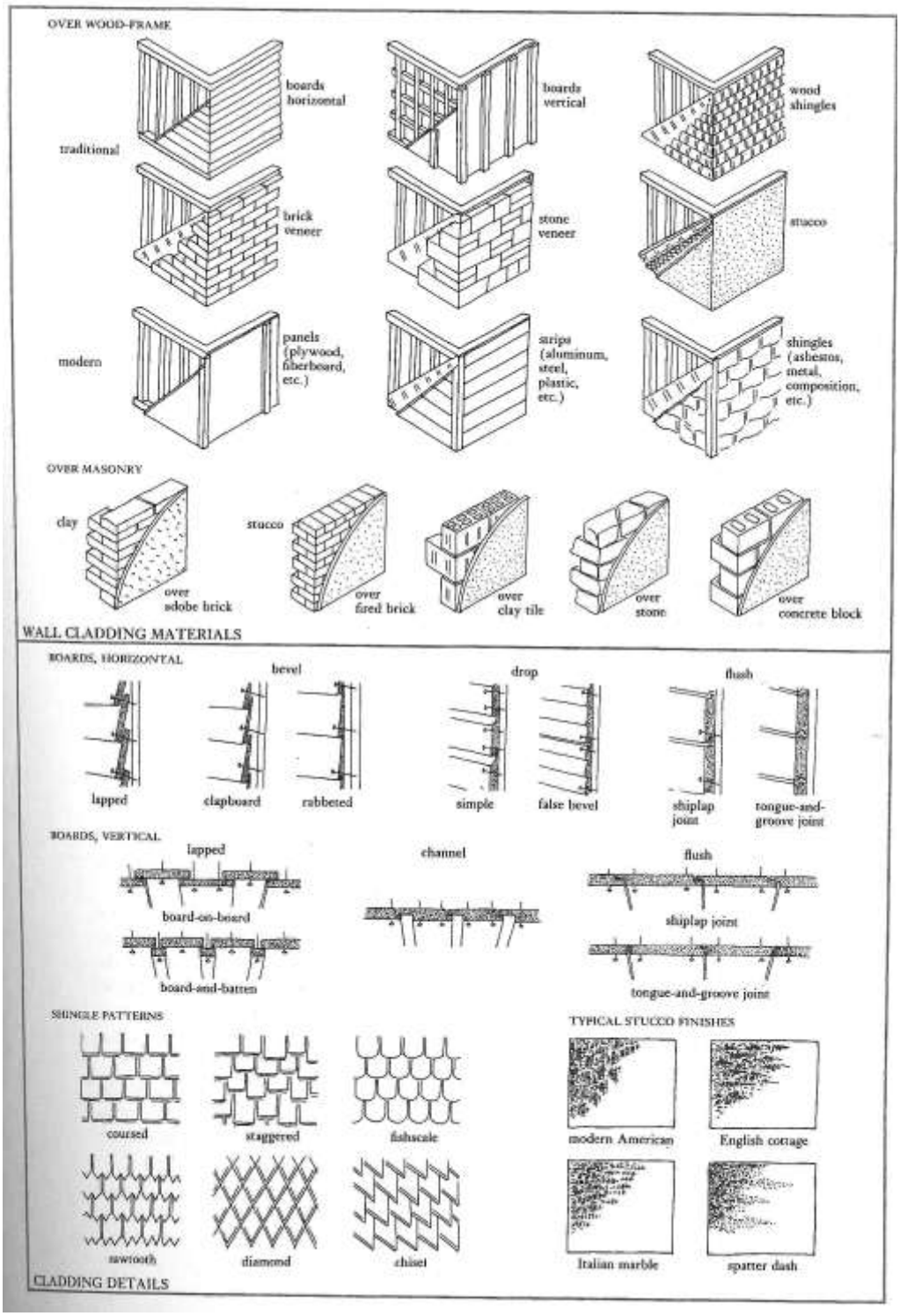
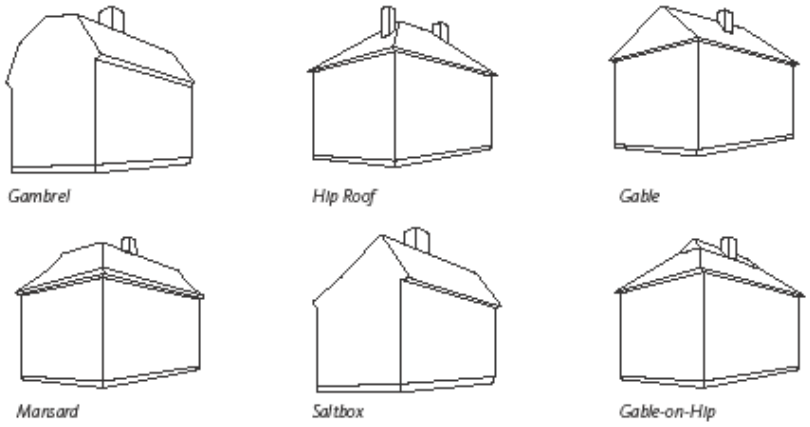


Illustration from McAlester, Virginia and Lee, A Field Guide to American Houses, 1996.

Mid-to-Late 20th Century Cladding

Introduction of synthetic cladding such as asbestos, aluminum, or vinyl siding in the mid-late 20th century was usually in response to maintenance issues with the historic wooden materials. These materials were usually applied over existing cladding to provide a relatively low-maintenance exterior. Unfortunately, not only was historical architectural detail either covered or removed in the process, but areas of rot were covered over, allowing decay to progress unseen. On close inspection, synthetic siding materials do not convey the same authentic character as the original materials. They may also cause harm to the building by trapping moisture and/or creating hidden insect and animal nesting sites. Therefore, it is recommended that when wooden cladding has deteriorated, it be replaced in-kind.

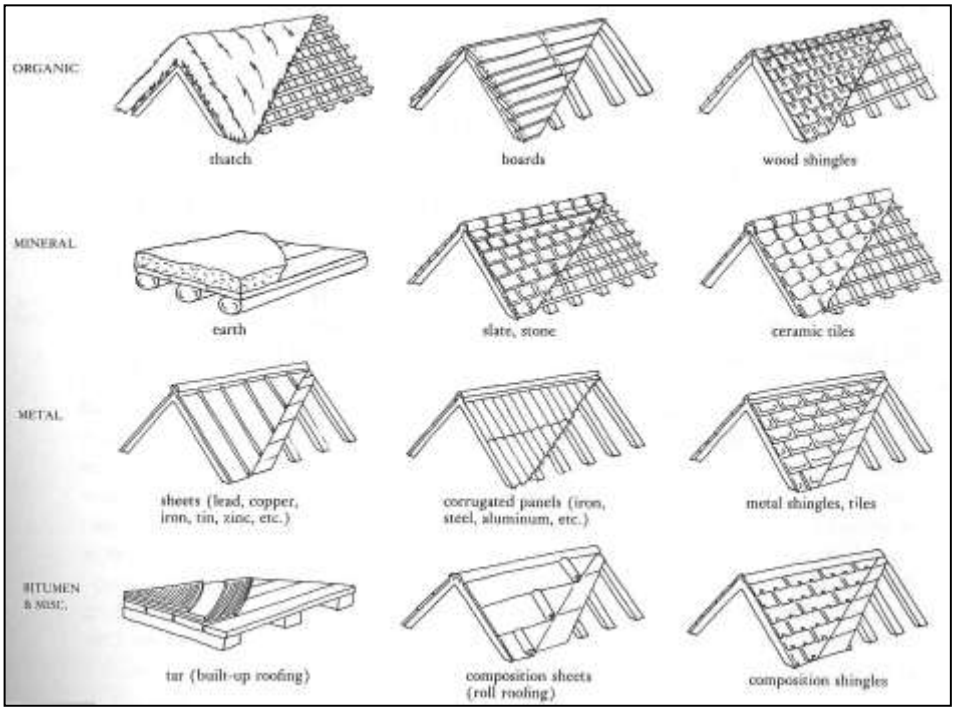
Roofs



Shapes and Materials
The roof shape and cladding materials of houses can contribute significantly to their historical character. Newport's Colonial roofs of the 17th and 18th centuries were generally clad in wooden shingles. Some early institutional buildings, such as Touro Synagogue and the Redwood Library, may have been clad or later reclad in slate. Over time, Newport roofs became more complex. As architectural styles and taste shifted to the Victorian styles of the mid-late 19th century and the revival styles of the early 20th century, roofs became articulated with multiple gables, dormers, turrets, and towers, and embellished with finials, crestings, balustrades, and bracketed cornices and soffits. When reroofing is warranted, consider the following:

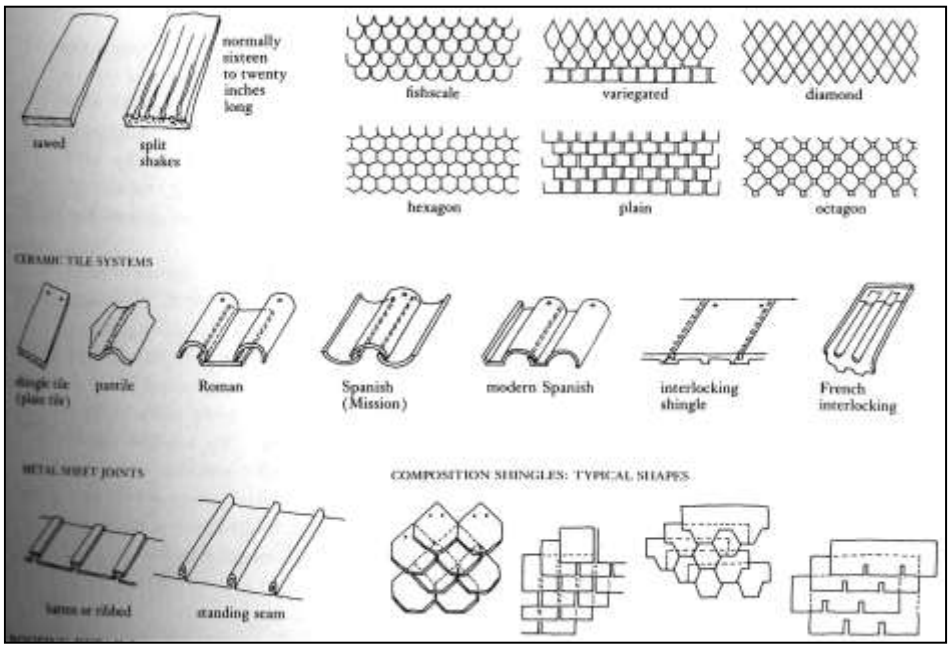
- Roofing materials, including wood shingles, slate, tin-plate metal (standing seam or flat seam), lead-coated copper, and terracotta tile, are usually character-defining in their texture and application so these should be replaced in-kind. Take care to replicate historical patterns and other roof details such as roof crestings, finials, weather vanes, and flashing details. When this is not possible, due to fire-code constraints or excessive costs, suitable substitutes include 3-tab asphalt shingles in shades of grey or black.
- Pay careful attention to the details of installation and appropriate flashing. It is important to realize that different materials and their fasteners, particularly metals, may react negatively when combined, thus materials must be chosen carefully.
- It is inappropriate to create a roof surface pattern or decorative embellishment where there is no evidence that such detail ever existed on the building. This "gilding the lily" approach leads to a false historic appearance and jeopardizes the building's authenticity.
- In Newport, as a rule the Historic District Commission will not approve rooftop mechanical equipment due to its impact to the roof and its incongruous visual appearance. HVAC devices should be located on the ground in the rear of the building or in other less visually prominent locations.

Roof Alterations
Within Newport's colonial district there has been a tendency to build roof decks, cutouts, cupolas, and "widow walks" upon the roofs of historic buildings, particularly those with potential for harbor views. Adding embellishments where none existed may create a false historical appearance and jeopardize the authenticity of the building. Moreover, removal of roof framing necessitated by cut outs can be detrimental to structural integrity as well as incongruous with the visual appearance of the building. Such additions must be designed carefully to blend with the historical roofline and be treated as new additions. Please see the fact sheet on designing acceptable new additions.



Roofing Materials

Illustration from McAlester, Virginia and Lee, A Field Guide to American Houses, 1996.



Roofing Details

Illustration from McAlester, Virginia and Lee, A Field Guide to American Houses, 1996.

Roof Color

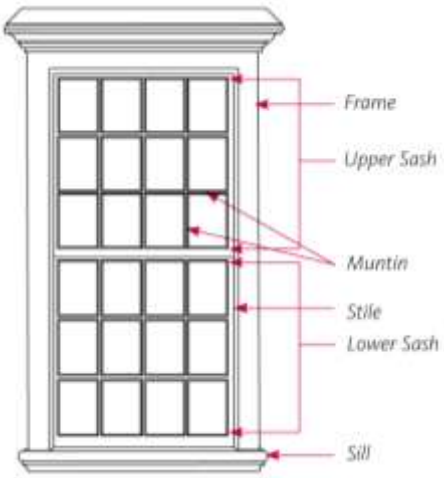
Roof color for all periods is dependent upon the material. Wood shingled roofs will change color naturally as they weather. Slate roofs can be repaired or replaced in slate or reproduction slate to match the original colors. In cases where replacement slate is impractical, avoid "architectural" asphalt shingles or those with a painted pattern to suggest a 3-D appearance, these mimic an historic appearance, but are rarely convincing. Colored roofs existed in the past. In particular, metal roofs, other than copper, were painted red or green to prevent rust. Metal porch roofs on some of Newport's mid-late 19th century houses were painted in decorative stripes.

See Also

Roofing for Historic Buildings, National Park Service Preservation Brief #4 at:
www.nps.gov/history/hps/tps/briefs/brief04.htm

Historic New England Roofing Property Care White Paper at:
www.historicnewengland.org/preservation/preserving-historic-sites/property-care-white-papers/roofing-white-papers

Windows



Windows are significant character-defining elements of a building. It is difficult to overstate their importance to the overall look and feel of your home; they are a primary aspect of a building's "personality." Preservation standards stress retaining original windows. Indeed, once original windows are removed, a house loses much of its authenticity and charm.

Most Endangered

Wooden windows have lasted in Rhode Island's houses for 75, 100, 175 years plus. It is a testament to their quality and to the importance of maintaining this valuable asset rather than wasting money on lesser quality replacements. Consider these points from The National Trust for Historic Preservation: *

"If you had a beautiful piece of art that was custom designed, crafted by hand, made from native old-growth wood, and imbued with clues to its age and crafting traditions, would you throw the authentic piece in the dumpster if a simulated plastic version suddenly became available? Seems ridiculous, right? However, this is precisely what people all over the country are doing when they rip out their historic wood windows and replace them with new windows. Here is some additional food for thought:

*Reason #1 [*to retain your windows*]: Old Windows are Built with High-Quality Materials*

Reason #2: Old Windows "Fit" Their Openings

Reason #3: Old Windows Can Be Repaired

Reason #4: Old Windows Perform Well and are Energy Efficient

Myth #1: Replacement Windows Will Save You Money

Myth #2: Replacement Windows are Guaranteed

Myth #3: Replacement Windows are Maintenance Free

Myth #4: Replacement Windows are the Environmentally-Responsible Choice"

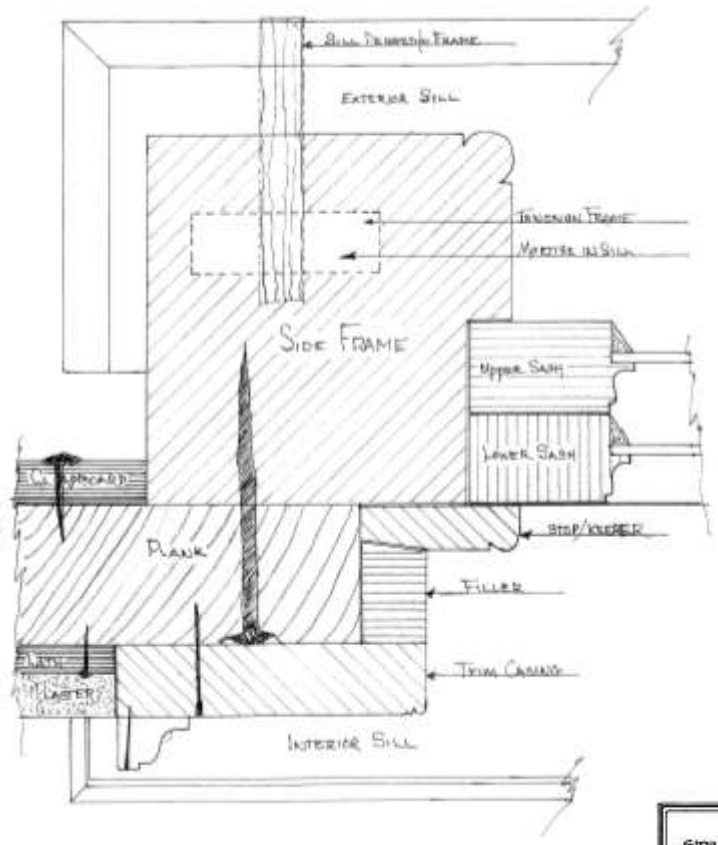
* For the full version of this article: www.preservationnation.org/issues/weatherization/windows/

Repair or Replace?

More often than people realize, existing windows can be saved rather than replaced. Each individual building should be evaluated for whether replacement is warranted due to severe rot or damage. For help, consult NRF or another RI preservation organization, or check *www.preservationnation.org/resources/homeowners* for an "Old-Building-Friendly Contractor." If replacement is warranted, follow these considerations:

- Window configurations and styles changed over time. Therefore, one window type does not "fit all" and any replacement should closely resemble the original.
- Finding window units that fit in the historic framed opening is recommended, rather than creating new openings of a different size and orientation than the historic windows. It is preferable to replace just the window sash, not the whole window unit.
- New sash should closely match the original configuration of panes as well as the dimensions and profile of the muntins and stiles. These elements create a shadow line that can be distinctive to the building's character. In the case of double-pane thermal replacements, they should have simulated divided panes.

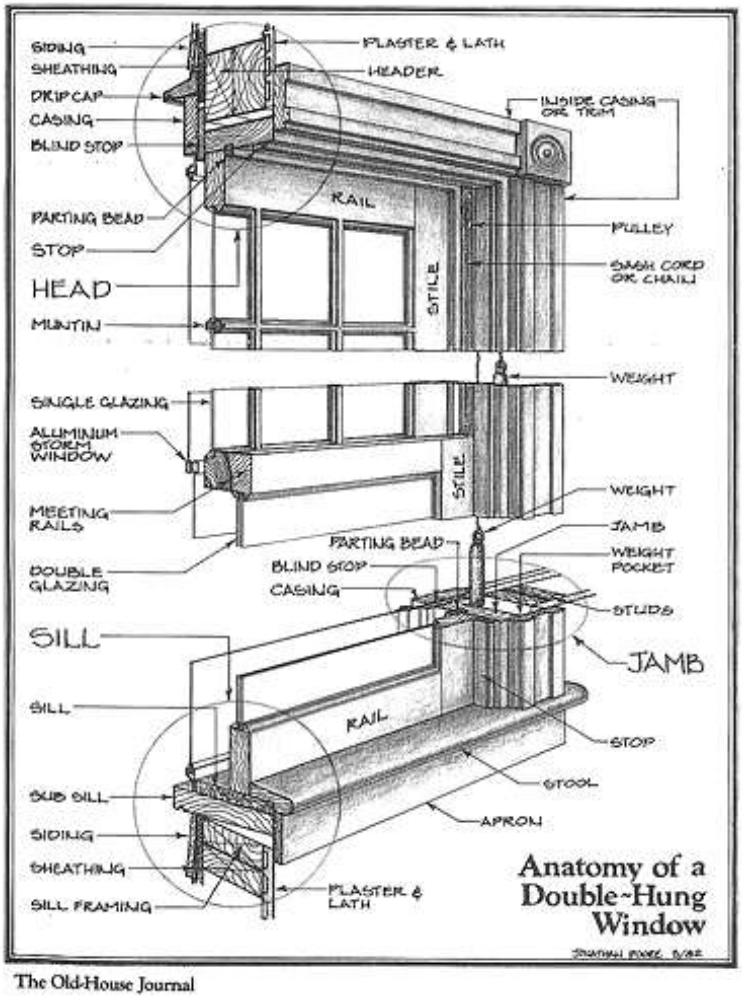
Window Changes over Time



On early Newport houses, built with a heavy post and beam frame, window surrounds appear to "pop out" of the exterior building due to the narrow wall depth. This is character-defining. See cutaway, top view (left).

These windows were joined with mortise and tenon joints (right).

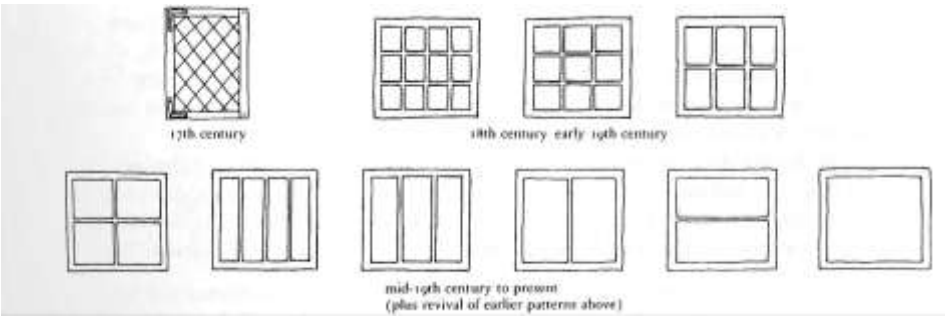
Double-hung sash windows are commonplace in houses built after the mid-19th century (illustration at right). Simple tips for keeping these in working order are in the "see also" section below.



The Old-House Journal

Window Changes over Time (continued)

Changes in glassmaking technology allowed for larger sheets of glass and gradually the number of panes in windows diminished over the centuries.



Colonial-era windows often had 12 [panes] over 12 [panes] configurations, transitioning to 6 over 9 and 6 over 6 in the Late 18th and early 19th centuries. By the mid-to-late 19th century and 20th century windows might have larger panes, large single panes surrounded by multiple panes, stained glass-work, and other embellishments. *Illustration from McAlester, Virginia and Lee, A Field Guide to American Houses, 1996.*

Energy Efficiency and Windows

In an attempt to save energy home-owners may be tempted to remove historic windows. Not only is this an expensive move, it is often not as successful in saving energy over the long term as one hopes. Tightening and weather stripping existing windows are preferable to wholesale replacement from both a preservation and cost-conscious standpoint. Adding properly working, well-sealed exterior or interior storm windows to your historic sash can achieve the best return on investment in terms of energy efficiency and cost. For more about energy efficiency and windows see other sheets in this packet and the resources listed below.

See also

- National Trust for Historic Preservation Wood Windows Tip Sheet: www.preservationnation.org/about-us/field-offices/what-is-preservation/additional-resources/2009-Revised-Window-Tip-Sheet.pdf
- National Trust for Historic Preservation Windows Resources www.preservationnation.org/information-center/sustainable-communities/weatherization/windows/
- New England Window Restoration Alliance: www.windowrestorationne.org
- *Should Your Old Wood Windows Be Saved?* an article that weighs cost, complexity, efficiency and preservation, at: www.finehomebuilding.com/PDF/Free/021210040.pdf
- DIY links, how to:
  - ☞ Replace sash cord: www.do-it-yourself-help.com/window_sash_cord_repair.html
  - ☞ Repair rotted wood: www.thisoldhouse.com/toh/asktoh/question/0,,20058419,00.html
  - ☞ Repair a broken pane of glass and glazing tips: http://www.familyhandyman.com/DIY-Projects/Doors---Windows/Window-Repair/how-to-glaze-a-window-single-pane

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Masonry

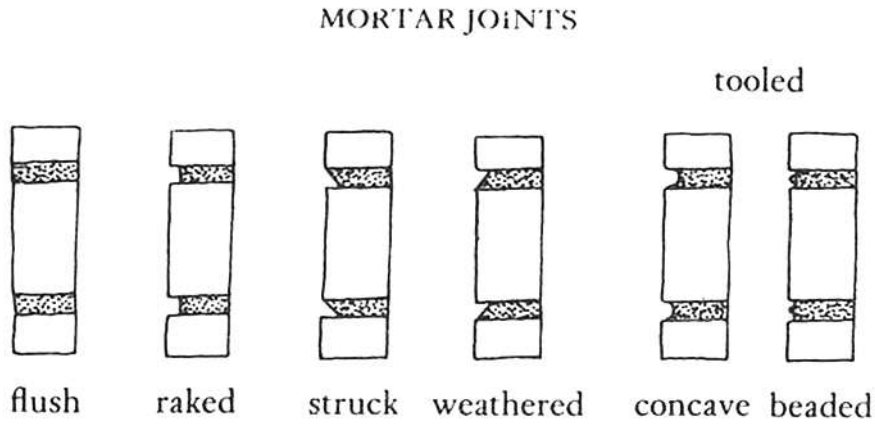
Newport's historic properties have many forms of masonry construction. Many colonial homes have rubble stone foundations and chimneys made of stone and brick, while Victorian and early 20th century buildings are built of stone, brick and combinations of stone, clapboards, and shingles. Look for beautifully crafted mortar joints, beaded or gouged in shape, particularly on late 19th century buildings. Some beaded work is stained to match the stone or to contrast in color, often in a red hue. Some of these Newport examples are masonry masterpieces, but any masonry element may be character-defining. Thus, any maintenance or alterations requires thoughtful review.

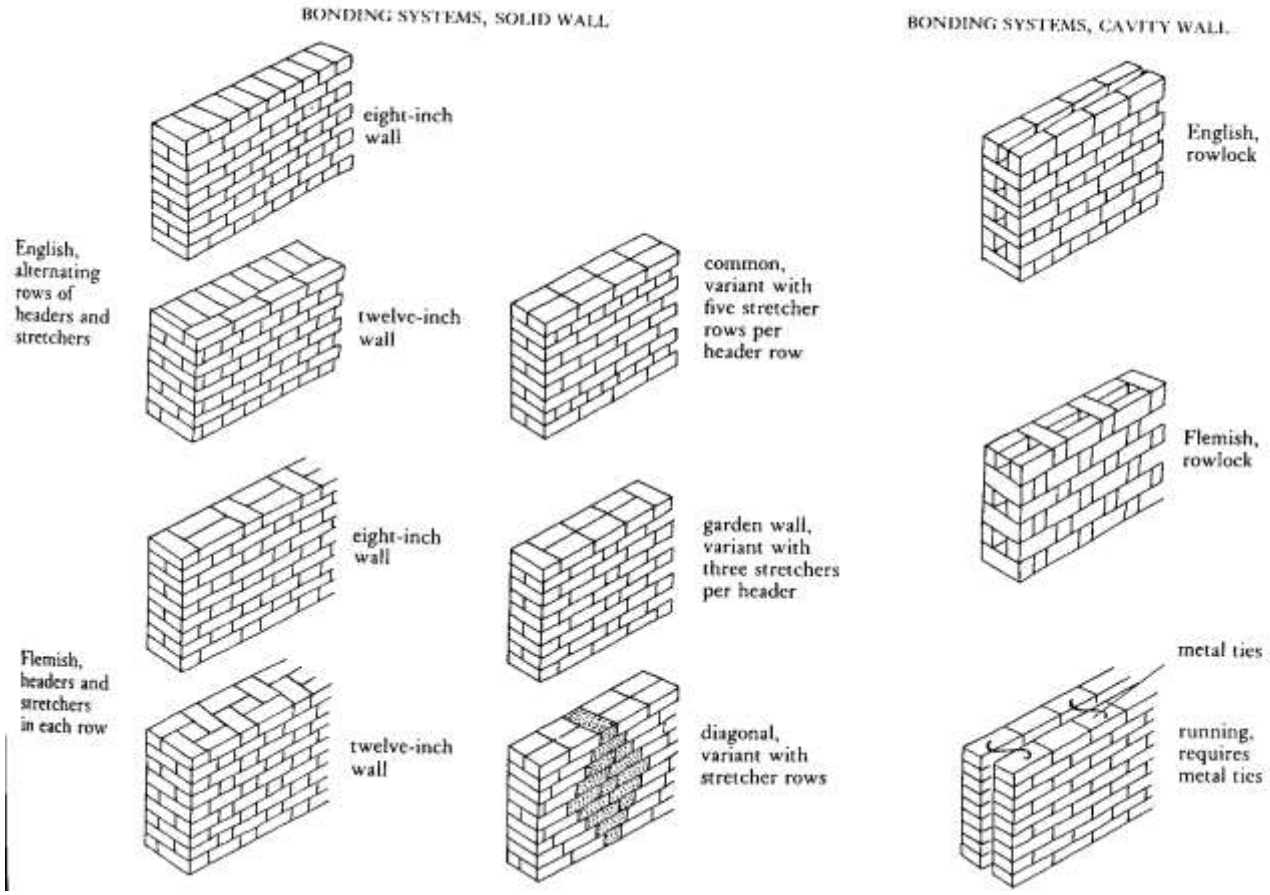
Cleaning Historic Masonry

Experts recommend that the gentlest possible method be used to remove dirt and grime, such as simple washing with soap and water and a soft bristle brush. Historic masonry often has soft mortar joints which can be eroded and abraded by more aggressive cleaning practices, including chemical cleaning. Moreover, the masonry material itself maybe soft, such as the more porous brick found in many colonial buildings or the soft sedimentary stone, such as brownstone and limestone, used in the mid-late 19th century. Even with harder more resilient stone work, including granite and marble, cleaning should employ the least abrasive or caustic method possible. Sand-blasting is never recommended.

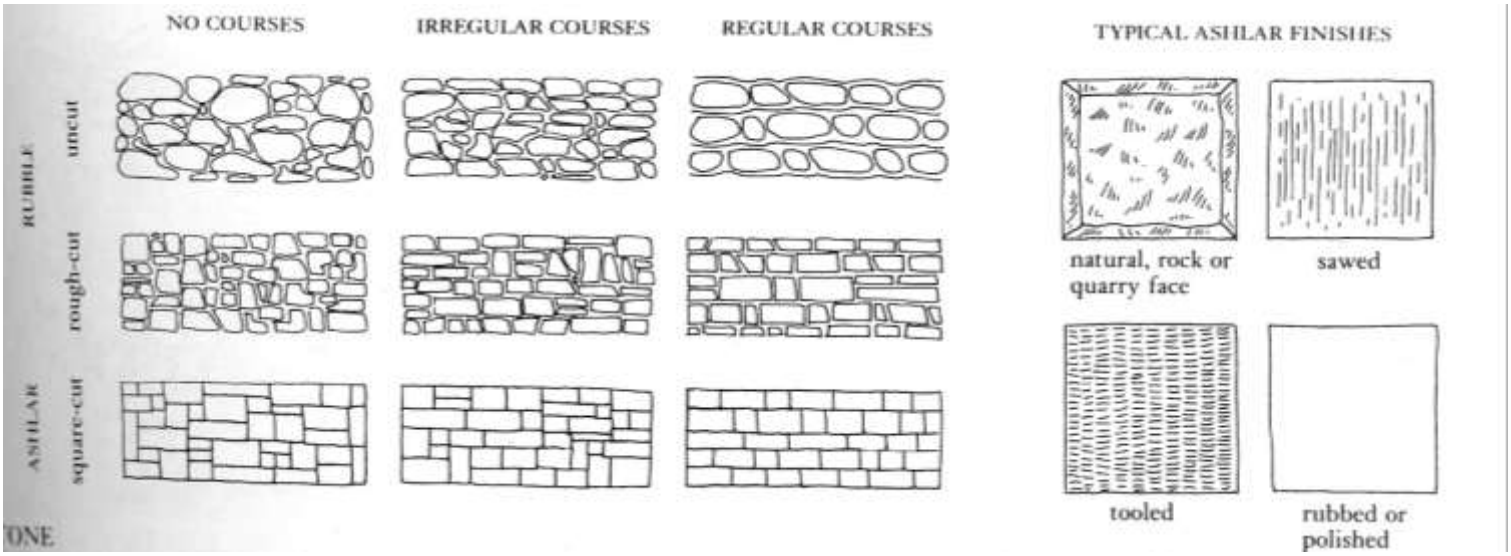
Historic mortar is generally softer than mid-late 20th century work. Usually the mortar mix had a high lime content to create a flexible soft bond. Hence using high strength Portland cement in mortar mixes is not recommended as it can create a tension in the masonry – particularly brickwork – resulting in the mortar not flexing as the mass expands and contracts in all weather. As a result, the brickwork will crack and spall leading to failure.

Where failure has occurred replacement of old brick and stone work should match the style, color and type of the surrounding historic masonry material including the mortar joint style color and dimension.





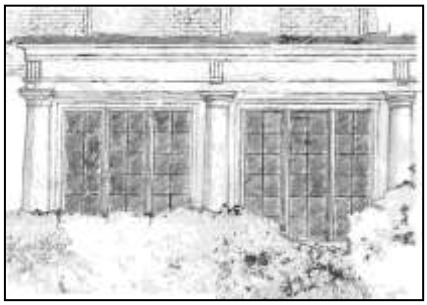
Brick illustration from *McAlester, Virginia and Lee. A Field Guide to American Houses, 1996.*



Stone illustration from *McAlester, Virginia and Lee. A Field Guide to American Houses, 1996.*

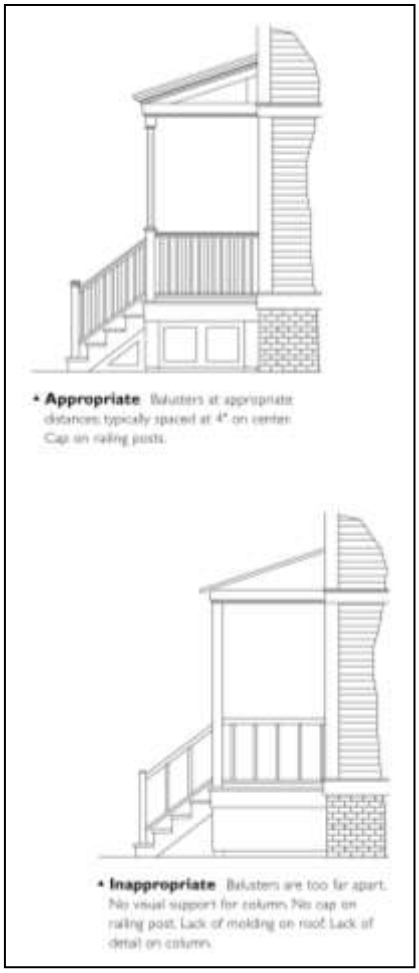
Porches

Many Newport houses, particularly in the Victorian sections of the city, have character-defining porches. Porches were constructed to provide a cooler place to enjoy the summer and offered some protection from wind and rain. Often they were designed as open porches, some with balusters and railings. Others are lower to the ground and deeper with wide steps to the ground, sometimes referred to as piazzas, using the romantic Victorian label for this style of porch.



Porch Enclosures

Enclosing a porch or part of one with screening and glass can add to its appeal by providing protected space but should be executed in a sympathetic manner. Historical porch enclosures offer a clue to the correct approach that complements the building. Period enclosures were simply constructed of multiple-paned casement windows installed above the existing porch railings in fitted wooden frames between the columns, the porch railing itself backed with wooden panels. When viewed from the street, the porch structure is readable and the materials enclosing the porch are light, removable and insubstantial. Hence the porch feeling is retained on both the exterior and the interior. The removal of columns, railing systems, and their replacement with solid walls and picture windows is *not appropriate*. This usually destroys the light appearance of the porch and gives the incongruous appearance of a solid and awkward building addition, rather than retaining the appearance of a porch.



• **Appropriate** Balusters at appropriate distances; typically spaced at 4" on center. Cap on railing posts.

• **Inappropriate** Balusters are too far apart. No visual support for column. No cap on railing post. Lack of molding on roof. Lack of detail on column.

Repair or Alterations

Details count when it comes porches; please be mindful of specific design dimensions and materials during repair or maintenance of railings, balusters, decks and infill (see illustrations at right and on reverse, courtesy of the Providence Historic District Commission).

Appropriate and inappropriate porches

▲ **Appropriate** Brick or wood columns with infill.

▲ **Inappropriate** Support for columns has been covered over.

▲ **Inappropriate** Brick or wood columns without infill.

▲ **Inappropriate** Cinderblock porch base.

PROVIDENCE HISTORIC DISTRICT COMMISSION

Energy Efficiency

Here are some simple things that YOU can do. Start at the top of each section with the least expensive, easy to do items and work your way to the bottom where a little more investment and expertise may be needed.

Systems Basics

- Reduce your AC costs! Put windows to work – cross ventilate, adjust blinds, etc.
- Install programmable thermostats and adjust the settings appropriately as seasons change.
- Set water heaters to 120 degrees, and even less in summer.
- Use thick or padded rugs to insulate bare floors.
- Don't block hot air or cold return registers with furniture or other barriers.
- Read NPS's Preservation Brief #3, "Conserving Energy in Historic Buildings".
- Regularly clean or replace filters in forced air systems and AC units.
- Replace radiator steam vents (1-pipe system) or steam traps (2-pipe system).
- Make sure heating ducts and pipes are well insulated and sealed.
- Place a reflector barrier between radiators and outside wall (particularly if wall is uninsulated).
- Have your furnace or boiler cleaned and serviced regularly.

Stop Air Leaks

- Weather-strip exterior doors and attach "sweeps" to the bottom.
- Caulk cracks and joints around door and window frames.
- Seal leaks in ductwork – that's what REAL duct tape is for!
- Weather-strip or seal attic doorways and hatches.
- Use appropriate spray-foam to seal cracks in foundations and crawlspaces.
- Use foam backer rod to fill large gaps.

Insulation

- Different types of insulation for different applications; Understand R-values
- Attics are the best place to start with insulation; it can give the best return on investment and has the least potential to harm the historic fabric of your house.
- Plaster walls can be adequate – leave them alone unless other work is needed.

Windows

- Exterior storms – good investment for energy savings, but also to protect your wood windows!
- Interior "insulating panels" – lower cost alternative, doesn't impact historic character of exterior facade, but beware of potential moisture issues.
- Most original wooden windows can be retained and repaired, resulting in a snug fit and increased energy savings. For more on windows see other tip sheets in this packet.

See Also: www.commonsensepreservation.org/topics/energy-efficiency-basics

Energy efficiency information provided by the Collaborative for Common Sense Preservation:

HISTORIC NEW ENGLAND
Defining the past. Shaping the future.

NRF
Newport Restoration Foundation

preserve RHODE ISLAND

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Insurance:

Preserving the Integrity of your Home through Proper Coverage

Insuring homes built more than 50 years ago can be more difficult than insuring newer homes due to special coverage conditions associated with these older properties. Because it is such a specialized market, there are a limited number of insurance carriers apt to properly insure your historic home. However, with proper knowledge of how to find the right insurance carrier and the right coverage, you can avoid the unnecessary risk of being underinsured in the event of a loss. Begin by reviewing these considerations when insuring a historic home:

Risk Assessment and Appraisal
Have your home inspected by a historic preservation expert. Some insurance carriers specializing in historic home coverage will arrange a comprehensive consultation with one of their experts at no additional cost. They can be a good source of advice on ways to rebuild or restore your home if a loss should occur.

Architectural Legacy
Older homes often feature rich architectural qualities, including elegant wainscoting, hand-crafted stained-glass windows, traditional wide floorboards, or elaborate moldings. Standard insurance coverage often does not replace these features in-kind. A detailed custom report outlining your home's history, complex characteristics, and unique features should be generated by an appraiser who specializes in historic homes, accompanied by archival-quality photography. This will aid in preparing a statement of your home's historical significance to ensure the greatest protection.

Costs Associated with a Loss
Many historic homeowners make the mistake of being underinsured, either because their broker or insurer utilized standard valuation methods and coverage forms that do not adequately account for special material and valuation considerations, or the costs to properly insure a historic home simply seem too expensive. This is generally because it is difficult to find replacement items needed for special architectural details or an appraiser who can put a realistic economic value on them. One way to reduce costs without compromising your coverage, is to consider a high deductible thus reducing your annual premium. Furthermore, ask your carrier about credits that could be applied to your premium following large-scale restorations to the home or other preventative measures that could reduce your risk of loss.

Reconstruction Following a Loss: Codes & Requirements
Be sure to choose a trusted broker and insurance carrier with knowledge of local, State, and Federal building codes specific to historic homes. Communities have control over how the home is built and renovated if it is in a local Historic District. The National Trust for Historic Preservation, local preservation organizations, and the Historic District Commission provide a wealth of information regarding reconstruction guidelines and requirements.

Information provided by:
Dwyer Insurance and
Chartis Private Client Group.

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Historic Districts in Rhode Island

Rhode Island cities and towns establish **Historic Districts** to preserve the cultural integrity of their communities. Historic Districts protect the traditional and unique qualities of an area and help create an attractive environment for commercial, residential, industrial, and tourist activities. **Historic District Zoning**, a local zoning initiative created by the state of Rhode Island, allows cities and towns to guide wise design decisions for their communities.

A city or town with local historic district zoning establishes a **Historic District Commission** (HDC) to review and approve major projects affecting the outside appearance of a building within a district, including exterior alterations, new construction, or demolition. (Paint colors are not regulated.) HDCs do not want to stop construction and home-improvement projects; rather they want to ensure that changes are compatible with an area's character.

More about Historic Districts from the *RI Historical Preservation and Heritage Commission:*

Which communities have local historic district zoning?
Bristol, Cranston, Cumberland, East Greenwich, East Providence, Glocester, Hopkinton, Narragansett, New Shoreham, Newport, North Kingstown, North Providence, North Smithfield, Pawtucket, Providence, South Kingstown, and Warwick.

How are changes to a historic building evaluated?
There are general principles which should guide the rehabilitation of historic buildings. The most common formulation of these general principles or standards is known as the Secretary of the Interior's Standards for Rehabilitation. Many local historic district commissions have adopted these standards as their own.

How does the review process work?
The property owner's application for a building permit begins the review process. If the building official finds that a property is located in a local historic district zone, he or she forwards the permit application to the local historic district commission, which usually holds monthly meetings.

The local commission needs clear information about the proposed changes. Property owners should check with local officials to find out about the application procedures.

Applications for building permits are reviewed at the regular meetings of the local historic district commission. After any needed adjustments, the approved application is stamped, and the building official may issue a building permit.

Decisions of the local historic district commission are binding for the building official, but may be appealed to the local zoning board. The zoning board's decision can be appealed in the state courts.

What is the main disadvantage of historic district zoning?
Preparing applications to the historic district commission may require extra time and effort before construction begins. The time and effort on the part of the homeowner is usually offset, however, by the expertise and constructive review of the historic district commission and staff, and a more successful construction project.

What is the main advantage of historic district zoning?
Historic district zoning protects a neighborhood's historic architecture, which largely defines its sense of place. Thoughtless alterations to historic buildings can erode property values and destroy the qualities that make a neighborhood appealing.

A community's heritage is fundamental to its economy and sense of place. Historic District Commissions act as guardians of a community's unique physical identity, protecting the investment of past historic preservationists and fostering livability for generations to come.

Historic Districts in Newport

The City of Newport established the **Newport Historic District** in 1965 to preserve the cultural integrity of the downtown area. Now covering over half of the city's land parcels, the district highlights resources that embody the traditional and unique qualities of historic Newport and helps create an attractive environment for commercial, residential, industrial, and tourist activities. Historic District Zoning, a local zoning initiative created by the state of Rhode Island, allows cities and towns to guide wise design decisions for their communities.

The Historic District Commission (HDC), a volunteer committee of residents appointed by the City Council, is responsible for overseeing the provisions of historic district zoning. The HDC reviews and approves major projects affecting the outside appearance of a building within a district, including alterations, new construction, or demolition. (Paint colors are not regulated.) The HDC does not want to stop construction and home-improvement projects; rather they want to ensure that changes are compatible with an area's character.

All major projects affecting the exterior appearance of a building within the district must be approved by the HDC before work starts, even if the project does not require a building permit. Homeowners do not need to submit routine maintenance and minor projects, such as caulking and repainting, for approval, but anything changing a building's exterior appearance requires a **Certificate of Appropriateness**.

To obtain a **Certificate of Appropriateness**, homeowners must**:**

1. Download an application from the Historic District Commission's website (www.cityofnewport.com/departments/zoning-inspections/hdc/home.cfm). The City's Historic Preservation Planner is available to guide homeowners through the application and approval process, so do not hesitate to ask for help!

2. File the form with the Office of Planning, Zoning, Development, and Inspection in Newport City Hall (43 Broadway, Third Floor).

3. When the application is complete, the project is placed on the agenda for the Historic District Commission's next monthly meeting.

4. Once the Committee approves an application, a Certificate of Appropriateness is given to the property owner, allowing the construction project to proceed.

Newport's heritage is fundamental to its economy and sense of place. For residents, property owners, and investors, it is the basis for high property values. The Historic District Commission acts as the guardian of Newport's unique physical identity, protecting the investment of past historic preservationists and fostering livability for generations to come.

National Register of Historic Places

The National Register of Historic Places, authorized by the National Historic Preservation Act of 1966, is a list of structures and places across the country that contribute to our national heritage and are worthy of preservation. For a property to be eligible for the National Register, it must be **at least fifty years old**, must have **integrity** (it looks much the way it did in the past), and must be considered historically **significant**. To be considered significant, it must meet at least one of the four National Register criteria, although exceptions are sometimes made.

National Register Eligibility Criteria:

- *Criterion A: The site is associated with a significant past events or activities.*

  This guideline can cover both one-time events, such as a war battle, or relate to a broader historic trend like farming, railroad development, or a civil rights movement.

- *Criterion B: The site is associated with a famous person.*

  Places connected to a famous individual's life and work are welcome additions to the Register. While someone's birthplace might be significant, places connected to the individual's accomplishments are ideal.

- *Criterion C: The site has historically significant characteristics.*

  A structure's design or architecture can qualify it for the National Register. While most people only think of particularly fancy houses or especially old buildings as Register-worthy, many common-looking buildings exemplify specific architectural trends of a certain time period and are therefore eligible.

- *Criterion D: The site can help us learn more about the past.*

  This criterion is usually used for archaeological sites where further excavation could uncover artifacts and help historians better understand past cultures.

Getting a site listed on the National Register is a process which starts with an interested individual contacting the Rhode Island Historical Preservation and Heritage Commission, the state agency responsible for overseeing nominations. The Commission helps property owners complete the nomination application and navigate the revision process. Once a building is listed, homeowners can apply for state tax credits and possibly low-interest loans.

Even though being included on the National Register is a great honor, the designation **does not** forbid the property owner from making changes to the interior or exterior, or even demolishing their house if they so wish. A National Register listing simply recognizes the property's cultural importance and may help protect the site from negative impact from federally-funded projects.

To learn more about the National Register, the nomination process, or Rhode Island properties already listed, visit National Register of Historic Places website (http://www.nps.gov/nr/) or the Rhode Island Historical Preservation and Heritage Commission's National Register page (http://www.preservation.ri.gov/register/).

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How to Research Your Home in Rhode Island

Every house has a story to tell, and uncovering that story is like a treasure hunt. Take the time to sift through the records and the history of your property will slowly unfold. You will come to learn more about the history of the structure, its residents, and its role in a larger neighborhood story.

1. Determine what research has already been completed on your property.

a. If your house is listed on the National Register of Historic Places, thorough research is on file with the Rhode Island Historic Preservation and Heritage Commission (RIHPHC). Check the electronic RI National Register Search (www.ri.gov/preservation/search/) to see if your property is included. If it is, contact the RIHPHC office (150 Benefit St., Providence or 401-222-2678), to receive a copy of your property's National Register nomination form.

b. Your local historical society may also hold a completed history or architectural survey of your property, especially if it is located within a local historic district.

2. Determine an approximate date of construction for your property.

a. Start your research at home, using what you already have. Your house's **architectural style and building materials** can give you hints about its past. Use an architectural field guide such as Virginia & Lee McAlester's *Field Guide to American Houses* to identify features that may reveal a date range in which your house was built.

b. Consult **historic maps and atlases**. Maps are a great way to determine an approximate date of construction. Search for a map on which your building *does not* appear and then the first subsequent map on which it *does* appear. The years between the publication dates of these maps will most likely be the time period in which your property was constructed.

- The Rhode Island Historical Society Research Library (121 Hope Street, Providence) holds a number of Rhode Island and city atlases.
- City maps and atlases are also typically found at your local city or town hall, historical society, and/or public library.

3. Create a chain of title for your property.

A chain of title is the progression of a property's ownership from the present to the original owner. To create one, read the deeds of all past transactions. Deeds are the legal documents that record land transfers.

a. The first step is to determine the location of your property's current deed.

- This can typically be found at your City/Town Tax Assessor or Clerks Office. Here you should find an index that will provide you with the deed book volume and page number of your property's current deed. This index may be searchable by address, current owner's name, or your property's plat and lot number.

b. Next, locate and read through this deed to learn more about your property.

- Deeds are typically stored at your City/Town Clerks Office.
- From each deed you can gain insight into the features of the property being transferred, such as the boundaries of the property, number of buildings on the lot, or if the property was previously part of a larger parcel of land. Often you can also learn more about the individuals transferring the land, such as the buyer and seller's occupations and their relation to each other.

c. Finally, read the deeds of past transactions to complete your chain of title.

- Typically, each deed will reference the previous transaction and the correlating deed book volume and page number. If it does not, most City/Town Clerks Offices hold a "Grantor/Grantee" index. Search this index for the name of the grantor (seller) in the deed you are currently reading. You should find a reference to a deed in which the grantor (seller) is the grantee (buyer) in an earlier transaction. You should read the deed to confirm that the boundaries described include the property you are researching.

4. Explore additional documents to learn more about your property and its past owners.

City Directories

City directories are similar to today's phone books. They list the city's residents and businesses, and their corresponding addresses.

- Historic directories are typically located at your local historical society and/or public library.

Directories are a great source of information and will provide insight into the building, the neighborhood, and its residents over time. You can learn, for example, if the building was a single-family home or contained separate apartments. Who owned and/or who rented the property, and what their occupation was.

Census Records

The U.S. Census has been taken every ten years since 1790. There are also 1774 and 1782 Rhode Island censuses.

- The U.S. and Rhode Island censuses are available through Ancestry.com, which is likely accessible online at your local public library.
- The Rhode Island censuses, and any city specific census, may also be accessible at your local historical society.

The range of information offered by censuses differs depending on the year. Among other things, you can gain insight into whether the building is being owned or rented, the value of the house, the number of household members and their occupation, age, race, or place of origin.

Newspapers

There are a number of Rhode Island newspapers that can provide insight into your property and its residents.

- Rhode Island newspapers are available through an online database called *Newsbank*, likely accessible at your local public library.

- Historic newspapers are also typically located at your local historical society.

Newspapers have the potential to offer a wide range of information. Anything from an advertisement for the rent or sale of your property, to the obituary of one of its residents. Be creative in what you search for and how you connect the dots!

Probate Inventories

A probate inventory is the complete listing of the property owned by an individual at the time of their death.

- Probate Inventories are typically located at your City/Town Clerks Office.

Probate Inventories are a great way to learn more about the interior of your property. The individual's possessions are listed in the order they were found, and often the room in which they were found. From this you gain insight into the number and type of rooms within the house. Compare this to your property's current floor plan and discover what has changed over time!

Building Permits

Building permits record physical changes made to a property, including new construction or changes to a pre-existing structure.

- Permits are typically located at your City/Town Building and Zoning, or Planning Office.

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How to Research Your Home in Newport, RI

Every house has a story to tell, and uncovering that story is like a treasure hunt. Take the time to sift through the records and the history of your property will slowly unfold. You will come to learn more about the history of the structure, its residents, and its role in a larger neighborhood story.

2. Determine what research has already been completed on your property.

a. If your house is listed on the National Register of Historic Places, thorough research is on file with the Rhode Island Historic Preservation and Heritage Commission (RIHPHC). Check the electronic RI National Register Search (www.ri.gov/preservation/search/) to see if your property is included. If it is, contact the RIHPHC office (150 Benefit St., Providence or 401-222-2678), to receive a copy of your property's National Register nomination form.

b. If your house is located within the Hill, Point, or Kay-Catherine-Old Beach neighborhoods, the Newport Historical Society will have a Historic House Survey that describes its architecture and history.

2. Determine an approximate date of construction for your property.

a. Start your research at home, using what you already have. Your house's **architectural style and building materials** can give you hints about its past. Use an architectural field guide such as Virginia & Lee McAlester's *Field Guide to American Houses* to identify features that may reveal a date range in which your house was built.

b. Consult **historic maps and atlases**. Maps are a great way to determine an approximate date of construction. Search for a map on which your building *does not* appear and then the first subsequent map on which it *does* appear. The years between the publication dates of these maps will most likely be the time period in which your property was constructed. See below for a list of Newport maps and the repositories at which you can obtain them.

Newport City Hall = NCH, Newport Historical Society = NHS, Newport Public Library = NPL, Redwood Library = RL, Salve Regina University Library = SRU
Copies of a few maps are available in *The Architectural Heritage of Newport Rhode Island*, by Antoinette F. Downing and Vincent J. Scully, Jr., 1967. = DS (Page #)

Stiles, Ezra, *Map of Newport* (**1758**) –DS (34), NHS (copy), RL (original)

This map does not delineate building footprints. Instead it identifies properties and their use using a number and letter system; a legend is included on the map.

de Barres, J.F.W., *Map of Newport* (**1776**) -DS(97), NHS

This map identifies the location of public buildings, streets, and wharfs. It does not delineate the footprints of private residences.

Blaskowitz, Charles, *Map of Newport* (**1777**) –DS(93), NHS

This map delineates the footprints of private residences unless there is a large concentration of structures in one area. While the map may not identify your property individually, it may tell you if it was part of a dense neighborhood.

Dripps, M., *Map of Newport, Rhode Island* (New York: M. Dripps, **1850**). -NHS

Dripps, M. & B.J. Tilley, *Map of the City of Newport, RI* (Newport, RI: M. Dripps & B.J. Tilley, **1859**). -NHS

D.G. Beers & Co., *Atlas of the State of Rhode Island* (Philadelphia, PA: D.G. Beers & Co., **1870**). –NCH

Hopkins, G.M., *City Atlas of Newport, RI* (Philadelphia, PA: G.M. Hopkins, **1876**). –NHS, NPL

Atlas of the City of Newport, Rhode Island (Philadelphia: G.M. Hopkins, **1883**). –NCH, NHS, NPL

Newport, R.I. (New York: Sanborn Map and Publishing Co., **1884**). – RL, SRU

Newport Rhode Island (New York: Sanborn-Perris Map Co., **1891**). –RL, SRU

Elliot, Charles L. and Thomas Flynn, *Atlas of the City of Newport, RI* (Massachusetts: L.J. Richards and Co., **1893**). –NHS

Atlas of Rhode Island (Everts and Richards,**1895**). - NCH

Insurance Maps of Newport, Rhode Island (New York: Sanborn-Perris Map Co., **1896**). –RL, SRU

Insurance Maps of Newport, Rhode Island (New York: Sanborn Map Company, **1903**). –RL, SRU

Atlas of the City of Newport and Town of Middletown and Portsmouth, Rhode Island (Massachusetts: L.J. Richards and Co., **1907**). –NCH, NHS, NPL

Atlas of Newport, Jamestown, Middletown and Portsmouth Rhode Island (New York: Sanborn Map Company, **1921**). –NCH, NHS, NPL, RL, SRU

Insurance Maps of Newport, Rhode Island (New York: Sanborn Map Company, **1953**). –RL, SRU

5. Create a chain of title for your property.

A chain of title is the progression of a property's ownership from the present to the original owner.

a. The first step is to determine the property's **plat and lot number**. This can be done in one of two ways:

- Online
  - Visit the Tax Assessor's "Maps and Plans" webpage; www.cityofnewport.com/departments/planning-zoning/maps-plans/home.cfm.
  - Here you will find the "Plat Map Key." Locate your property and its correlating plat number from this map.
  - Next, go back to the "Maps and Plans" page and find the plat map you just recorded. This will download a .pdf on which you will find the lot number for your property.
- Tax Assessor's Office, first floor of Newport City Hall. Here a plat map key is posted on the wall where you can locate your property and its correlating plat number. Next use the maps on the desk below, organized by plat number, to determine your property's lot number.

b. The next step is to locate your property's **title card**. To do this you will need to visit the Tax Assessor's Office.

The title card records all legal transactions regarding your property between 1889 and the present.

Obtaining the complete title card for your property is a two-step process.

- Transactions between 2001 and the present are recorded in the *Assessor's Taxpayer Information System* database accessible on the computer in the Tax Assessor's Office.

- Transactions between 1889 and 2001 are recorded in the file cabinet below the Tax Assessor's desk. The files are organized by plat and lot number
- Transactions before 1889 have not been recorded onto title cards and can only be established through more detailed deed research as described below.

c. You now have the preliminary chain of title for your property and you can begin **deed research**. To do this, visit the Recorder of Deeds Office in the basement of City Hall.

Deeds are the legal documents that record land transfers.

i. Begin by finding the deed for the most recent transaction using the deed book volume and page number that was recorded on your property's title card. This deed will represent the transaction between the current and most recent property owners.

ii. Read through the deed to learn more about your property. From each deed you may gain insight into the features of the property being transferred such as the boundaries of the property, number of buildings on the lot, or if the property was previously part of a larger parcel of land. Often you can also learn more about the individuals transferring the land such as the seller and buyer's occupations and their relation to each other.

iii. You can continue reading the deeds of past transactions by referencing the book volume and page numbers from your property's title card. The location of deeds recorded prior to 1889 can be found in one of two ways.

- Typically, each deed will reference the previous transaction and the correlating deed book volume and page number.
- If it does not, you can use the "Grantor/Grantee" index to find where a transaction was recorded.
  - The index for deeds recorded between 1910 and the present is located on a computer in the Recorder of Deeds Office in a database searchable by the grantor (seller) or grantee's (buyer) name.
  - For deeds recorded between 1774 and 1910 you will want to search the card catalog also located in the Recorder of Deeds Office.
  - Deeds recorded between 1700 and 1774 are located at the Newport Historical Society (NHS). The NHS also has a card catalog "Grantor/Grantee" index similar to that at the Recorder of Deeds Office.

6. Explore additional documents to learn more about your property and its past owners.

City Directories

City directories are similar to today's phone books. They list the city's residents and businesses, and their corresponding addresses.

Newport City Directories, between 1858 and 2005, are located at the Newport Historical Society. Years 1856 to 1989 are also available at the Newport Public Library.

- Between 1858 and 1922, and after 1986 a property can be searched only by the last name of the present owner or resident.
- Between 1922 and 1986 a property can be searched by its owner or resident, as well as by street address.

Directories are a great source of information and will provide insight into the building, the neighborhood, and its residents over time. You can learn, for example, if the building was a

single-family home or contained separate apartments. Who owned and/or who rented the property, and what their occupation was.

Census Records

The U.S. Census has been taken every ten years since 1790. There are also 1774 and 1782 Rhode Island censuses, and an 1889 Newport census.

- The U.S. and Rhode Island censuses are available through Ancestry.com, accessible online at the Newport Public Library.
- The 1774 and 1782 Rhode Island censuses, and the 1889 Newport census are available at the Newport Historical Society.

The range of information offered by censuses differs depending on the year. Among other things, you can gain insight into whether the building is being owned or rented, the value of the house, the number of household members and their occupation, age, race, or place of origin.

Newspapers

There are a number of Rhode Island and Newport specific newspapers that can provide insight into your property and its residents, including; the Newport Mercury, Newport Herald, Providence Gazette and Rhode-Island Republican.

- Rhode Island newspapers between the years 1732 and 1913 are available through an online database called *Newsbank*, accessible at the Newport Public Library

Newspapers have the potential to offer a wide range of information. Anything from an advertisement for the rent or sale of your property, to the obituary of one of its residents. Be creative in what you search for and how you connect the dots!

Probate Inventories

A probate inventory is the complete listing of the property owned by an individual at the time of their death.

- The index for probate inventories is located in the City Clerk's Office in the basement of City Hall; it is organized alphabetically by last name. The corresponding documents are located in the Recorder of Deeds Office.

Probate Inventories are a great way to learn more about your building's interior. The individual's possessions are listed in the order they were found, and often the room in which they were found. From this you gain insight into the number and type of rooms within the house. Compare this to your property's current floor plan and discover what has changed!

Building Permits

Building permits record physical changes made to a property, including new construction or changes to a pre-existing structure.

- Permits between 1970 and the present are located at the Planning and Zoning Office at City Hall. While permits prior to 1970 no longer exist, reference to the work completed on your property as early as the 1940s will be available in card catalog form.

Resources

General Preservation Titles

- Diane Barthel. Historic Preservation. Rutgers University Press, 1966.
- Stuart Brand. How Buildings Learn. Penguin Books, 1994.
- James M. Lindgren. Preserving Historic New England. Oxford University Press, 1995.
- Howard Mansfield. The Same Ax, Twice: Restoration and Renewal in a Throwaway Age. University Press of New England, 2000.
- William J. Mutaugh. Keeping Time: The History and Theory of Historic Preservation in America. Wiley, 2005.
- Norman Tyler, Ted. J. Ligibel, and Ilene R. Tyler. Historic Preservation: An Introduction to its History, Principles, and Practices. W.W. Norton, 2009.

General Architectural, Eighteenth Century (1700s)

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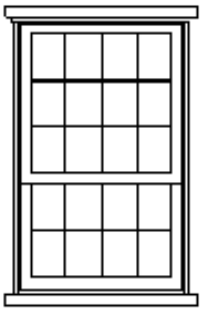
Helpful Websites

Preservation Organizations

- National Trust for Historic Preservation: www.preservationnation.org
- Rhode Island Historic Preservation & Heritage Commission: www.preservation.ri.gov
- Historic New England: www.historicnewengland.org; See also Historic New England Property Care White Papers: www.historicnewengland.org/preservation/preserving-historic-sites/property-care-white-papers/preservation-best-practices
- Preserve Rhode Island: www.preserveri.org.
- Newport Restoration Foundation: www.newportrestoration.org
- Preservation Trades Network: www.ptn.org
- Association for Preservation Technology-International: www.apti.org
- National Parks Service Cultural Resources: www.cr.nps.gov
- National Institute of Preservation: www.heritagepreservation.org

Preservation Products & Resources

- Old House Journal: www.oldhousejournal.com
- Vernacular Architecture Forum: www.vernaculararchitectureforum.org
- National Trust Book Catalogue: www.preservationbooks.org
- Preservation Resource Group: www.PRGinc.com
- Old House Web: www.oldhouseweb.com
- Traditional Building: www.traditional-building.com



NEW ENGLAND WINDOW RESTORATION ALLIANCE

NEWRA

Top Ten Reasons to Restore or Repair Wood Windows

1. Because your windows fit your house.

- Quirky as they might be, your older windows fit your house. Care was taken to match the weight and style of window to the building, the trim, etc. They have expanded and contracted with the seasons. With proper weather stripping they can be made to fit and seal even better. Replacement windows have a rigid structure that fits within your window openings. Old houses move and shift over time and frequently the gaps that open up around replacement windows and the window openings result in more drafts that the original windows.

2. Because you appreciate good craftsmanship

- The true mortise and tenon construction of antique windows is incredibly strong and even when it begins to weaken is easily repaired. Many unique window shapes were created because of the craftsmanship with wood joinery. Antique windows were built to last and not land in landfill.

3. Because you value good materials.

- Antique wood windows are constructed of old growth timber. The wood is much denser and more weather resistant than today's tree farmed softwoods. Delicate profiles are possible because of the density of the wood. The reason these windows are still around, even with years of neglect, is because the wood is of very high quality requiring no cladding or additional materials to give them weather resistance. Minus all the ugly paint your wood windows are usually quite beautiful, graceful, and strong.

4. Because you love the character of antique glass.

- Even the glass in antique windows tells a story. It may be roundel or cylinder glass, each indicating a certain era of manufacturing. Old glass has varieties of color and texture that are a delight to the eye. Two layers of glass are better than one, and in an antique home that second layer of glass should be the storm window that protects the original window.

5. Because you think a warranty should be more than 20 years.

- Chances are your windows have done their job for fifty or more years already. Sure, they may be a little creaky and may not be as attractive as they once were, but it's a far better investment to repair a proven performer than to sink money into a new window that only has a 20 year warranty at best. With proper maintenance your antique windows should last another 100 years. Heck, even without maintenance they may last that long!

6. Because you want to avoid vinyl.

- Poly vinyl chloride (PVC) is becoming one of the greatest concerns in the building industry. Not only does the production of it create an environmental nightmare, but the gases it emits over time are becoming a concern. Heaven forbid your house catches fire, and PVC burned will release toxic amounts of dioxin. If you are concerned about lead, please understand that it is used as a stabilizer in the manufacture of PVC. If you are concerned about our planet's health you should read up on efforts to reduce the use of vinyl.

7. Because you want more light.

- Replacement windows are set into the window opening, and the sash is smaller than the originals. You get less viewing area and less light. Who wants less light?

8. Because windows are a functional part of your house.

- Weights and pulleys are the best balance systems every invented. There is a prevalent myth that a lot of cold air comes in through the weight pocket. If there is cold air in the weight pocket it's generally because there is a gap between the outside trim of the house and the siding. It may also indicate a poor seal at the floor joists. Replacing easily serviceable weights and pulleys with vinyl jamb liners or invisible balance systems means installing a system that has a maximum life span of 10-20 years but generally fails in less time. You can't believe how joyful it is to open and close windows easily with one hand when everything is restored to the way it was designed to work!

9. Because you really can save 30-40% on heating costs.

- According to the Field Study of Energy Impacts of Window Rehab Choices conducted by the Vermont Energy Investment Corporation, the University of Vermont School of Civil and Environmental Engineering and the U.S. Army Cold Regions Research and Engineering laboratory the estimate first year energy savings between a restored wooden window with a good storm window vs. a replacement window was $0.60. Yup, less than a buck. In their conclusions section they noted "The decision to renovate or replace a window should not be based solely on energy considerations, as the difference in estimate first year savings between the upgrade options are small." Broken glass, failed glazing, no weather stripping – these small and repairable items are what really effect energy efficiency in windows.

10. Because the greenest building is one that is already built.

- Replacement windows are touted as a way to save energy. But when evaluated from the perspective of the entire production, shipping, installation and removal process replacing windows consumes a whole lot of energy, or viewed the other way an older building has a great deal of embodied energy. If the total energy expenditure to manufacture replacement windows is considered the break even period stretches to 40-60 years. In the words of Richard Moe, President of the National Trust for Historic Preservation "We can't build our way out of the global warming crisis. We have to conserve our way out. That means we have to make better, wiser use of what we have already built." Repairs and restoration work are done by local craftspeople paying local taxes. The use a minimum of materials and resources and a maximum of labor. Restoring windows is the best use of existing materials and the best way to support the local economy.

NEWRA WWW.WINDOWRESTORATIONNE.ORG

Windows in Hard Times:

Do the Math and Save Some Real Money

by Pieter N. Roos

I want to sell you some windows. Unlike many big companies that are also trying to sell you windows, the ones I want you to buy are the old ones that are already in your house. I can't tell you that my product will cost you nothing, repairs cost money, but I will promise that the price will be less than my competition, the giant window company with the massive marketing budget and a load of hogwash to match.

I recently saw a commercial suggesting that replacement windows would save me a lot of cash on heating over those inefficient old clunkers in my house. It's a nice concept but the logic is so flawed that one wonders why the company doesn't get sued for misrepresentation. The math, if you stop to do it, is so outlandish that it defies reason.

Before we go further, a word from your National Trust for Historic Preservation- the old windows in your house are one of its **primary, character-defining features**, if you get rid of them, your house will lose much of its authenticity and charm, in short your house probably won't look much like your house any more, and once completed you really can't go back- end of argument. Let's get on with the savings part.

One fact which I will readily admit to, is that windows *are* a major cause of heat loss in a house. What the window companies won't tell you is that *any window, whether it is a brand new argon-filled-triple-glazed-wonder-of-modern-engineering or a two hundred year-old single glazed piece of sash will cause heat loss.* Glass is a marvelous conductor of heat, and no window is ever perfectly sealed, so even the best and newest windows are going to cost you money- if you can't abide that then live in a house without windows.

Now let's do the math on a window project's savings in an average house. Even the best (and most expensive) replacement windows will only save you about $50 per month on heating in an average size house and even then they only will do that in the coldest five months of the year and will save that much *only* if your current windows are truly dreadful. By dreadful I mean that they have cracks or noticeable drafts around a majority of windows in the house. This is a savings of about $250 per year for the whole house which is a noticeable percentage of your seasonal heating bill but an insignificant fraction of the total expense of a window replacement project.

Now consider the real cost of the replacement windows. This is the 500 pound gorilla in the room that the window company "forgot" to tell you about: The average two-story historic house has between twenty-four and thirty windows. Decent quality replacement windows are between $500-1,000 installed which is a total of $12,000-30,000 to do the whole job for an average home....and you're going to save $250 a year!!???

Unless my calculator is broken, with 24 of the least expensive windows that's about 48 years before you pay off the project and start to see a "savings". (If you go with the most expensive options it takes 120 years to see a return.) Even if you are alive after 48 years, statistics say you probably will have sold the house long since*, so you are really passing the "savings" on to future owners and if you swallowed the window company's marketing I think that is not

why you undertook the project. This also assumes that your new windows will be of a quality and appearance that is equal to the originals, which may not be, and often isn't, the case.

Another word from the preservationist. Modern replacement sash is a complex system utilizing a number of materials sandwiched into a small package that experiences the full range of your local weather conditions. Some of these materials are durable and will last for a long time, others are not so durable and many of those materials do not live comfortably with each other over the long term. My friendly local window salesman (who I believe has a very high-quality product) does not believe that his windows will pass the forty-year mark. Your old windows, on the other hand, are a simple and repairable system that may have, if properly cared for, been around for over a hundred years and more. There are some old sash that have been on the job since before the Civil War and even earlier. Your current windows may be ready to give you at least forty more years if you give them some TLC. Even custom made wooden replacement sash can be had for a cheaper price than a whole replacement window and it is very unlikely that every sash in your house is in irreparable condition. It is much greener (environmentally and monetarily) to replace a few sash and repair the rest than to throw away everything and start over new. All of the embedded manufacturing energy that is built into the existing windows is being discarded for a window that is likely to have a much shorter life cycle. Since replacement windows are not likely to last much more than forty years and you don't start seeing a savings until around 48 years, even if you were still in the house you might need to get all new windows before the others had really realized a savings. Ouch! Reflect too, that you are the one who owns the new windows. The window company is unlikely to give you much attention after the warrantee expires.

Now some good news, the fact is that you ***can*** save money on your heating bill. Any of the following could save you ***more*** than the $50 a month that you might save with replacement windows:

- Lower your thermostat to 68 degrees (cost: free)
- Buy a programmable thermostat (cost: $60)
- Tune your furnace (cost: $150)
- Buy a high efficiency burner for your furnace (cost: under $1,500)
- Improve your attic insulation (varies a lot, but let's call it $4,000)
- Buy a whole new furnace (cost: $7,000)

Most people would laugh if I suggested that they buy a new $7,000 furnace in order to save $50 a month on their heating bill, yet all too many people nod their heads wisely about the far higher cost of replacement windows and without much further consideration they write an enormous check.

The funny thing about my list is that nothing on it has anything to do with windows. It is a well-recognized fact among building engineers (although window manufacturers won't necessarily tell you this) that one of the *least* cost effective ways to save on heating is to throw gobs of money at replacing your windows. In fact energy auditors frequently ignore windows as a means of improving performance in their audit because the cost benefit is so deeply flawed. This is not to say that advances in window technology are bad, or that new buildings shouldn't have new windows. Recent improvements in window technology are many and they are recommended for the appropriate application.

It is also worthwhile to note that the less expensive replacement windows (as well as some pricey ones) generally come in set sizes and require you to change the dimension of your current window openings. This change not only requires expensive carpentry that will further exaggerate the costs, but the new dimensions can have a significant aesthetic impact on the overall appearance of your house, changing the proportions of one of its primary

features. This is an impact that you will have little means of previewing before an unalterable change has been made.

So why do we have this strange concept that replacement is better? It's pretty simple- there are a lot of companies out there with very big marketing budgets that, like me, want to sell you some windows and they've put some pretty clever spin on their marketing. They make money on new windows, but with all the old windows out there, and with rising heating costs and a declining economy they have plenty of public anxieties that they can play on. The more windows they sell, the happier they are- it's their job, but don't be fooled. Theirs cost more. It's cheaper to repair or tune-up the ones you've got.

**The average historic homeowner stays in a house for an average of about twelve to fifteen years (owners of modern homes stay for much less time).*

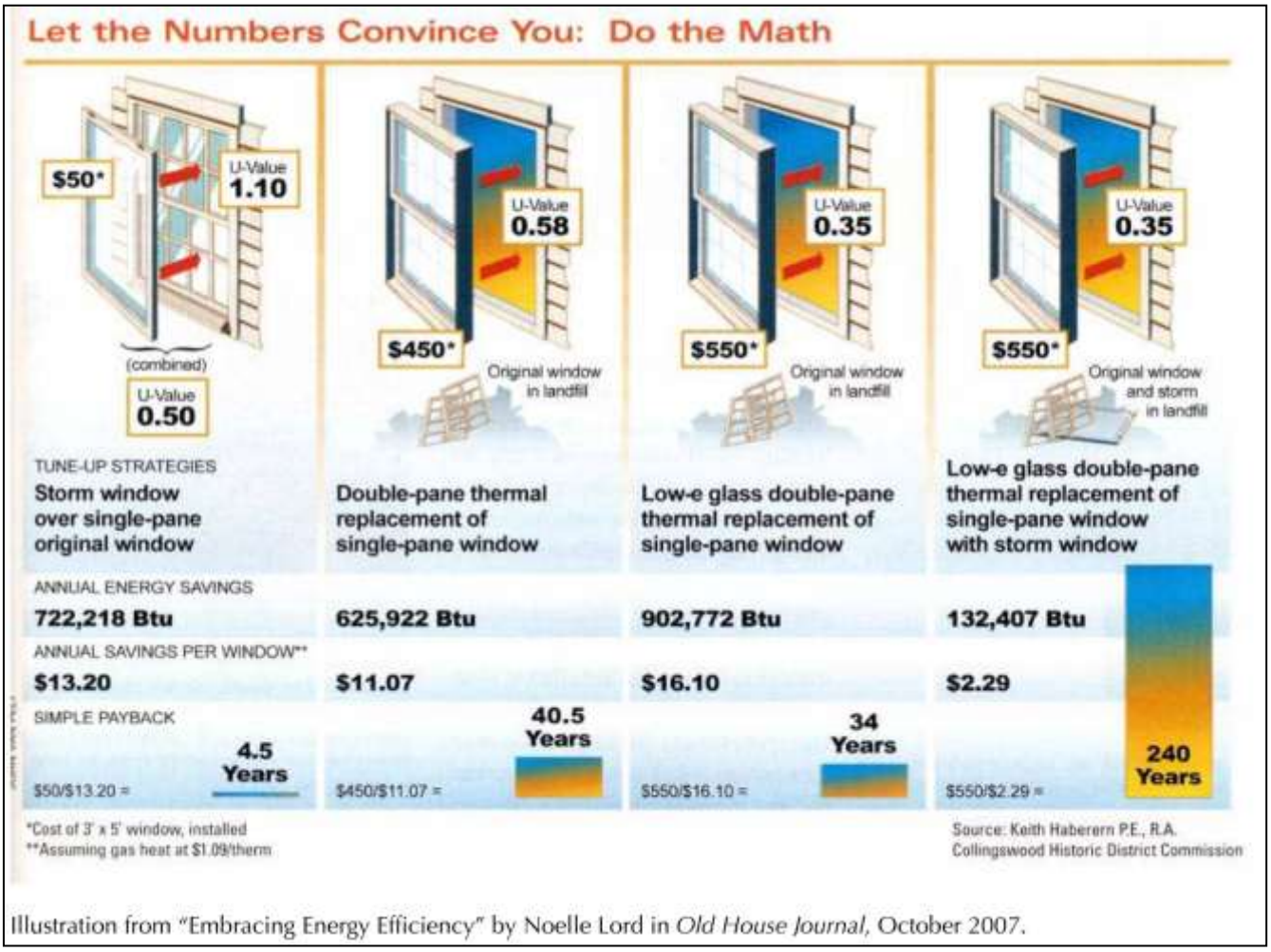


Illustration from "Embracing Energy Efficiency" by Noelle Lord in *Old House Journal,* October 2007.