

## ***The TRUTH About - WINDOWS and Storm Windows too!***

***Before reading this page, please go Back and read the sections on Vinyl and Artificial Siding and Shutters.***

As discussed on these pages, the windows, the eyes of the house, are the most important feature creating the greatest visual impact on the overall appearance of the house. You saw how shutters effect the appearance of a window and the house in the Shutter section at this site; and in the Vinyl and Artificial Siding section, you saw how altering the frame around the window harms the building's balance. **Contrary to brain-washing advertisements**, here, you will learn the truth about replacement windows and storm windows; and, more importantly, how the actual window effects your home's appearance.

The following information is an overview. For more information on Repair, Replacement, or the many types of Storm Windows, please send \$3.00 (US residents) for the cost of postage and handling to: OldHouseGuy, 19 Lincoln Place, Freehold, NJ 07728 and I will mail you some very detailed information. The information I send is a collection of many articles used as reference for this write-up. For better How-To information, I would suggest contacting [www.Historichomeworks.com](http://www.Historichomeworks.com) (Write this site down and check it out later)

*Excerpts below by Preservation Salem, Inc., Salem, NJ*

### **REPLACEMENT WINDOW MYTHS**

You may have received a phone solicitation from companies selling replacement windows. Slam down the phone! They are smooth talking sharks, trying to make a sale. Most property owners do not notice their windows until they perceive a problem. When a problem is noticed, they may get their information on solutions from contractors or window manufactures who are in the business to make money. Reading the following will not only save you a lot of money but your house will retain its beauty.

#### **MYTH 1: NO MAINTENANCE**

A principal myth is that replacement windows will eliminate maintenance. Don't you believe it! The public has been sold on the myth of no maintenance, but there will always be maintenance. For appearance sake alone, you certainly will be painting those windows at some point, just as it is common to see aluminum siding, once touted as "maintenance-free," now being painted. And to paint vinyl, you must use an expensive epoxy-base product.

**When wood is continually painted, its life expectancy can be about 200 years.** On the other hand, according to studies, **vinyl has a life expectancy of about 20 years.** The plasticizers in vinyl will evaporate over time, making the vinyl brittle and subject to cracking. And what cost are you imposing on future owners when your venture doesn't last? Go with time-tested materials: paint on wood.

How are you going to replace a double-glazed pane of glass when it breaks? Manufacturers occasionally modify their product line. You may therefore need to replace the entire sash and frame. Many other components of replacement windows deteriorate relatively quickly. The seal around double glazing can fail within ten years resulting in condensation between the panes of glass which will then require replacement. Many of the plastic and neoprene seals, which hold the glass in place in vinyl and aluminum windows also degrade in ultraviolet light. These seals have a life expectancy of 10 years or less. Try to imagine locating replacement vinyl gasketing 10 years from now, or the problem of replacing a bent aluminum channel.

#### **MYTH 2: LESS EXPENSIVE**

The cost of replacing an original window is usually NOT justified. Your initial cost will be high. The City of Bridgeton Community Development Agency found that to REPAIR the existing window sashes for one house cost \$700. To REPLACE the same windows would have cost \$3,000. That cannot be justified in the light of the unknowns about the longevity of the materials and the inevitable costs of maintenance.

Repair is easier than you think. **Old windows were made to be repaired.** They can be taken apart to insert new rails or muntins (cross pieces separating the panes). Broken parts can be remade or whole sashes duplicated fairly cheaply. Rotted wood can be repaired to look like new with easy-to-use epoxy fillers. In many cases, these windows have been in service for over a hundred years with much of their deterioration resulting directly from a lack of maintenance. **With repairs and regular maintenance, the life of these windows can potentially be extended for an additional 50 or 100 years.**

**The quality of the wood your old windows are made of will not be seen again.** That virgin forest wood is close-grained and resinous. Today's young lumber cannot match the longevity of the historic wood. To trash your old windows is to trash a superior material that can no longer be bought. A replacement window will need replacement before the old one would have needed simple maintenance.

### **MYTH 3: HIGHER R-VALUE**

A common and often exaggerated reason for replacement windows is that new windows will significantly reduce heating costs. Studies have indicated that in most cases approximately 20% of the heating loss of a building is through windows. The remaining 80% is through roofs, walls, floors and chimneys, with roofs being the greatest culprit. Following this model, reducing the heat loss through windows by 50% will only result in a 10% decrease in the overall heat loss in the building.

Even with this in mind, keeping the heat in and the cold out are still prime wintertime goals. Both goals can be met with your existing windows. Keeping the heat in means insulation, measured in R-value. The R-value of windows is a function of the air space between window panes, because air does not conduct heat very well.

**An old window coupled with a storm window will give you a higher R-value than a double-glazed replacement.** This is because there is more air space between the storm and the inside window than between the two panes of a replacement window.

Let's look at this another way. One measure of heat transfer is the **U-value**, the number of Btu's per hour transferred through a square foot of material. When comparing thermal performance, **the LOWER the U-value the BETTER the performance.** According to ASHRAE (American Society of Heating, Refrigeration and Air-conditioning Engineers, 1977 & 1997 Chapter 26), the U-value for single glazed wooden windows range from 0.80 to 0.89. **The addition of a storm window proudly reduces these figures to a range of 0.44 to 0.49.** A double-glazed metal window has a U-value of about 0.60 and a double-glazed wood with vinyl was 0.51 to 0.55. **Therefore, if you do not have storm windows, install them instead of replacing your windows. You will spend less money and get more insulation.**

What about drafts? **You can feel the same draft with brand new "top of the line" windows as you can with your old windows.** The reason for this is *Convection*. This is how it works. Glass is a great conductor. The warm air in your house contacts a cold window glass where it cools and then draws more warm air to it. This continues on and on until convection currents are created throughout the room and, perhaps throughout the house. This draft feeling, is created only because the product GLASS is used in a window and not wood (wood is a great insulator) which, of course, would prevent the ability to see outside. Use of interior shutters, shades, or curtains, can solve this problem by blocking off the glass from the warmed room air. An additional layer of glass (storm window) which creates an air space between the glass will help, however you're still using glass and heat will still be drawn to it although not as much. Pretty

interesting, huh.

## THE VISUAL IMPACT OF WINDOWS

If appearance is important to you, and as a homeowner I would hope it is, **replacement windows will give your house an entirely different look and feel.** Because of differences in their material and construction characteristics, wood, vinyl and aluminum windows do not look the same. Wood windows tend to have articulated moldings. Vinyl and aluminum windows, however, tend to have flat or square profiles. While a “divided light” look, in multi-pane window is possible, muntins for vinyl and aluminum replacement windows often are “snap-in”, creating a very shallow or flat appearance.

**One of the biggest mistake people make is replacing their windows with a style that’s wrong for the house.** An example follows. Most homes built during the later part of the 1800’s through the early 1900’s had two-over-two windows. (See the example below). Unfortunately, most of the time these windows are replaced with one-over-one (double hung) windows, or worse yet, six-over-six, creating a colonial (federal) look on a Victorian house. What an awful look. To some people this looks fine, just like a lava lamp on their antique oak sideboard.

picture pending

If the degree of deterioration necessitates the replacement of windows, wood replacement windows are recommended. **It is extraordinarily important that every effort be made to match the style, muntin grids, size and profiles of elements whenever possible.** Altering these features will make a dramatic change in a building’s overall historic character.

**The replacement windows you are being peddled are most likely very inappropriate for your house** and will degrade its historic value. The size, configuration, materials, and milling of the windows tell a story about your house. They are a visual record of the period in which your house was built.

There is also a direct correlation between historic integrity and market value of houses. **A preserved old house will bring a higher price than an old house remodeled to look like something it never was.** Please be very careful in deciding on a window strategy.

## IF YOU MUST REPLACE

*The following information is taken from The Old House Journal Magazine (Nov./Dec. 1999, page 40, by Jennie L. Phipps)*

A wood window has to be pretty far gone before it needs to be replaced. Modern weather-stripping can be installed, sashes can be rebuilt, reproduction period glass can be reinstalled. Even severely rotten wood can be strengthened and rebuilt with durable epoxy fillers.

However, as important as old windows are, there are cases when a window must be replaced due to extreme deterioration. In such cases **you should duplicate the original exactly in number and size of panes and overall size.** A two-over-two pane configuration should not be replaced with a one-over-one or a six-over six. Also, never cut down a window opening to take a smaller window.

Today there are alternatives for replacement windows. Most window manufactures offer at least three options: the cheapest is and it most definitely LOOKS the CHEAPEST is the *snap-in, removable grille or muntins*, designed to fit a sash with a single large pane of glass. **DO NOT settle for fake snap-in muntins sold by Anderson** and other manufacturers.





***This is a photo of a bank.***

***In this photo you can compare beautiful divided light windows to cheap looking snap-in grids.***

***The actual photo doesn't look much better.***

***These plastic windows are what homeowners are using - they say and think these windows make their house look nice - ha ha!***

***How would you like to live across the street from this?***

***Do you hate these windows too? Call Freehold Savings and tell them (732)462-6700***

**A second option** is what is called a *simulated divided light*, which consist of muntins that are permanently attached to the interior

AND exterior panes with a durable adhesive - - a compromise for homeowners who want dual-paned windows.

Then we have the **third and best option** ASSIDE from restoring your originals. **For true divided lights, look for a manufacturer that makes all-wood windows.** Cedar Windows by Bergerson, for example custom-manufactures windows in rot-resistant cedar. "The wood goes all the way through and separates the window panes. That's what true divided light means." **Divided light gives windows that sparkle.** There are other manufacturers such as Pella and Pozzi that make matching windows. When I spoke to a representative from Marvin, I was told that they would even install Restoration Glass. (Restoration Glass is new glass made with slight distortions which create that extra sparkle glass had years ago. (800)221-7379 )

Although there are options to choose from and costs to consider, **the lower cost windows will definitely look as if you cut corners.** For such an important feature on your house your dollars will reap more rewards when choosing an exact match. Otherwise, you risk altering the architectural appearance. If the originals are long gone, a historically sensitive choice can dramatically improve the house's appearance. **Before ordering windows from the manufacturers mentioned above,** I would first check your local phone book under Furniture Makers or Carpenters. You will need to do some good investigating. Someone that can do custom woodwork can make windows for you at a **much lower cost** without paying for the manufacturers name.

If you do replace your windows, the best thing to do is to store the old sashes. A future owner may find them very useful. Otherwise, donate them to a historical society so they can be available to old-house restorers who need them.

## THE LOOK OF STORM WINDOWS

Storm windows are an awfully expensive substitute for caulk. Caulking, weather-stripping, and reglazing are all inexpensive do-it-yourself procedures that should be done WHETHER or NOT you buy storms. After

you've stopped the air leaks, you may find that storm windows are not a high priority.

As stated earlier, the use of storm windows will give you the best energy savings. However, they detract from the appearance of your house by covering up the beauty of your original window. Compare a window with and without a storm window. The extra beauty may be worth the extra cost in heating. Also be aware that adding storm windows merely changes the R-value from .9 to 2.0. (The average uninsulated wood-frame wall is R-4.5)

To solve this problem, more and more people are putting their storm windows **INSIDE** the house. **This allows your prime windows to face the world in all their glory, solving the "blank stare" problem encountered by covering divided light windows. The unique thing about all those separate panes of glass is that each reflects light a bit differently, so passers-by see a dancing reflection. That effect - - subtle but important - - is lost when a single sheet of glass is placed over such windows. You lose the sense of depth created by a three dimensional effect.** This problem is also encountered with the use of full glass storm doors and putting a plastic covering over furniture. If the look of one doesn't bother you then the others shouldn't either. Beauty comes with a cost, but the cost isn't what the advertisers say it is. **Nevertheless, it is always better to install a storm window - they are reversible, than to replace the original sash to prevent heat loss.**

**Remember - Windows are the eyes of the house. Beautiful windows/eyes sparkle and send a signal of warmth and create interest. The Door is the mouth of the house which (if there is no storm door), creates a feeling of welcome and a desire to enter as it draws you inside. See for yourself. Does a house with a storm door seem more inviting than one without?**



**Even the old-style wooden hung storms detract from a house. Instead of the window sash being recessed in the window, the storm makes it even and flat with the house. Also, notice that the glare from the second piece of glass in the storm window, results in the inability to appreciate, the**

added feature of true divided light. *(I will try to get some better pictures)*

The following two houses, built by the same builder are located next door to each other. Both have arched Italianate windows and both have good quality storm windows painted to match the sash. One owner took the extra step and installed arched storm windows so that this beautiful feature can be enjoyed, while the other used rectangular storms and filled in the gap with wood at the arch.



Much more detailed information on the types of storm windows, window repair, etc. exists. For information on Restoration and Repairs, go to [www.HistoricHomeWorks.com](http://www.HistoricHomeWorks.com)

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