R. J. ALEY BUILDING CONTRACTOR L.L.C.

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Replacing or Restoring Old Wood Windows Frequently Asked Questions

Q: What is the cost of window restoration?

A: There are two different levels of window restoration that R.J. Aley can provide, Mechanical Restoration and Full Glass Out Restoration. Please note that the more panes of glass per window the more labor intensive the work and the more costly the restoration will be. If there are fewer panes of glass the restoration takes less labor and will be less costly. Below are some typical window restoration costs.

Mechanical Restoration of a 100-year-old double-hung wood window that is 30" wide by 52" high with 6 panes of glass on the upper sash and 6 panes of glass on the lower sash can cost from $400-$600 per window. This estimate includes the following:

- Making both sashes operational so they open and close easily
- Adding Spring Bronze weather stripping if none exists
- Removing only loose and peeling paint, or paint that interferes with the smooth opening and closing of the upper and lower sash.
- Replacing any missing or broken sash chains or ropes
- Replacing any broken or badly cracked glass and missing glazing putty
- Adjusting the window so the center meeting rails match and the sash lock functions as it should.
- Install a Harvey brand True Channel triple track storm window.
- Painting the window after a mechanical restoration would add additional costs.

Full glass Out Restoration can cost as much or often more than replacement windows. In general, a full glass out restoration of a 100-year-old double-hung wood window that is 30" wide by 52" high with 6 panes of glass in the upper sash and 6 panes of glass in the lower sash can cost $1000-$1,400 per window. This price includes all of the following:

- Safely remove the window sash from their frames using EPA mandate Lead Paint Work Standards
- Steam strip lead-based paint from the two window sashes
- Remove all existing glazing putty and replacing it with new putty.
- Make minor repairs to the sash.
- Prime all sides of the sash with oil based primer
- Replacing any broken or cracked glass
- Installing new spring bronze weather stripping.
- Install new brass weight chains.
- Install new brass sash locks.
- Install a Harvey brand True Channel triple track storm window.
- Painting the window after restoration would add additional costs.
- **Note:** In most cases we can proved historically correct reproductions of your existing antique window sash for the same cost or slightly less than a full glass out restoration.

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Q: I want to save money on my home's energy bills. Is replacing my windows the first thing I should do?

A: Absolutely not. Your first step should be to schedule a Whole House Energy Audit completed by a Building Performance Institute certified professional. R.J. Aley provides this service, which among other things, identifies where your home is leaking air. In our experience most of the air loss is not through the walls or windows. It is likely that most of your home's heat loss is through your attic due to inadequate insulation. Another possible cause of high heating bills may be an outdated furnace or boiler that is not operating efficiently. Only after you have increased your attic insulation, sealed your home's air leaks, and updated or tuned up your boiler or furnace, should you consider restoring or replacing your doors and windows. Bear in mind that if you choose to restore or replace your doors or windows, it is likely you will never recoup your investment.

Q: I want to live more sustainably and use less energy. Doesn't it make sense to replace my windows?

A: The "greenest" windows are the ones that already exist in your house. If you replace your original wood windows they will go into a landfill. By restoring your windows you're not adding to the waste stream, and they will have very few, if any, petroleum-based products in them. Vinyl replacement windows are made from oil, as are the jamb liners on high-quality wood replacement windows. If we want to reduce our dependence on foreign oil, we need to reduce demand for it in all its forms—including vinyl windows. In addition, the manufacturing process, and emissions from transporting the windows, all add to global warming.

Q: Are replacement windows more energy efficient than wood windows?

A: If installed incorrectly, cheap vinyl replacement windows will leak more air than the original wood windows with aluminum, or wood storm windows. This leads to higher heating bills than if you had left the original wood windows in place. Restored wood windows with modern weather stripping and a good quality aluminum triple track, or wood storm window, are *almost* as energy efficient as high-quality replacement windows if installed correctly. A new double pane replacement window may have a rating of R-5 at the glass if installed correctly, whereas a restored wood window with an exterior storm window may have an R-Value of 3.75.

Q: Why is it so important that old wood windows have exterior storm windows? How long do they last?

A: A restored single pane wood window must have some kind of exterior storm window to come close to the performance of a properly installed high-quality replacement window. The air space between the window and the storm window creates the insulating factor; therefore, exterior storm windows are a necessity. Further If you don't install an exterior storm window then in 2-5 years the freeze/thaw cycle, rain, snow, and sun will degrade the putty and paint of your newly restored windows dramatically shortening their useful life span.

Q: Which type of storm windows are the best?

A: Over the years we have tried many different types of storm windows. We have found that fixed sash wood storm windows are the most energy efficient because they have fewer cracks and gaps for air to leak through or around. Furthermore, they can be ordered with double pane glass to increase the insulation factor. However, these windows can be expensive and are labor intensive. The storms will need to be removed in summer and replaced by screens, and in autumn the screens need to be replaced by the storms. If you don't want to make this kind of a commitment, this is not the right window for you.

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Q: I don't want to deal with the hassle of installing and uninstalling exterior storms and screens twice a year. Can I install interior storm windows instead?

A: We strongly discourage the use of any type of interior storm window on antique windows. Over the years we have been asked many times to repair rotted antique wood windows that are 75 to 100 years old or more. The windows functioned perfectly and never suffered any rot problems until interior storms were installed. The space between the interior storm and the original wood window traps household humidity, which results in condensation and moisture build up on the wood window, which leads to rot. For more information on this problem contact our office.

Q: Is there a storm window brand you recommend?

A: Harvey Brand Tru-Channel Storm windows are economical and convenient. This triple-track white aluminum storm window has a built-in screen, and also has one of the lowest air leakage rates of any triple track storm window.

Q: If I replace all my windows, won't I save more on energy costs and recoup my investment?

A: Not necessarily. If you replace or restore all the wood windows it typically reduces a home's energy use a minimal amount. Let's say your investment in your windows saves you $400 per year (this is higher than average, and the amount saved could be as low as $50.00). If you spend $10,000 on 10 high-quality wood replacement windows, or the restoration of 10 original wood windows, it will take you 25 years to see a return on your investment ($10,000 ÷ $400 = 25). Unfortunately, after 25 years, your gas-filled replacement windows will most likely be leaking and will need to be replaced again, so you never actually save any money. In contrast, 25 years after your wood windows have been restored they should last another 25 years, as long as you maintain them by painting as needed, and keeping the storm windows closed in winter.