

FastFacts

About Repairing Wood Windows

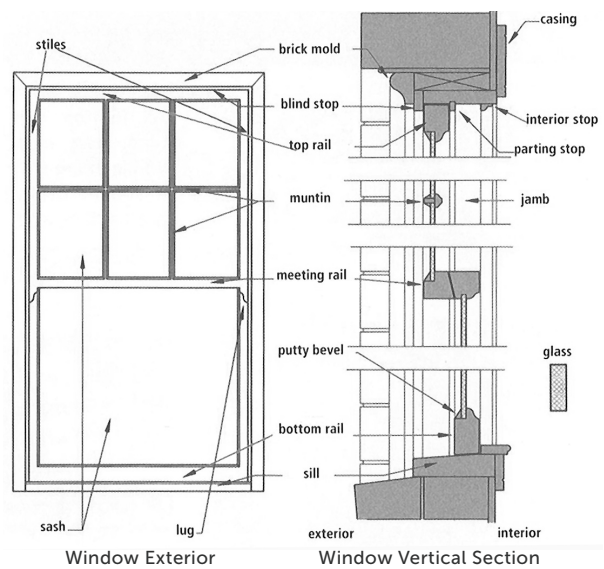
by Scott A. McIntosh

Historic wood windows are an important character-defining feature of most old buildings. The profiles created by the different components of a historic window create shadow, depth, interest and complexity that modern windows usually cannot replicate. It's often argued that historic windows must be replaced because of the need for routine maintenance or because it's assumed that they are not energy efficient. Many studies have shown that a properly weatherized repaired window is at least as energy efficient as a modern replacement window, particularly if a compatible storm window is added.

Original windows that have lasted for decades will, if kept in good repair, last for many more decades. Most modern replacement windows cannot be repaired and are often described as "maintenance-free" because they cannot be maintained and must be replaced after only a few years of use.

Before replacing wood windows and starting a cycle of window replacement, consider investing in your existing windows and helping them last for many more decades. Historic windows also have embodied energy (the materials and energy required in the original manufacture) that is conserved when the window is maintained and repaired for continued use. The "greenest" window is one that already exists.

Wood window repair is labor intensive but uncomplicated. Routine maintenance will eliminate much of the need for major repairs. If you hire someone to repair the windows, it's a good idea to learn the basics of window repair so that you will choose the right person for the job. Also, be aware of the dangers of lead paint. Many historic windows have been painted with lead paint and your personal safety and the environment should be considered when removing lead paint. Be careful in handling heavy window sash, sash weights and glass.



Drawing courtesy of the National Park Service

Study your windows and determine exactly what is wrong with them. Has the paint failed? Is the glazing putty severely cracked or missing? Is any of the glass broken or missing? Is the window painted or nailed shut? Is the window not functioning properly because the sash cords have broken? Are any of the wood components soft or splintered?

When parts of the window are severely deteriorated or beyond repair it may be necessary to stabilize or replace these components. Usually, a carpenter or woodworker is required to replace parts of the window but stabilization can be accomplished relatively easily by the do-it-yourselfer. Wood that is deteriorated can be strengthened and stabilized with an epoxy consolidant that saturates the porous decayed wood and then hardens. The surface of the consolidated wood can then be filled or built up with an epoxy patching compound and sanded smooth.

Some basic tools and supplies to accomplish this job of window repair include a paint zipper (to free the sashes and stops from the frame), utility knife, screwdriver, small pry bar, infrared heat gun, paint scrapers, glazing putty, putty knife, caulk, linseed oil, sandpaper, tack cloths, hammer, weather stripping, vacuum cleaner, mask, primer and paint.

Depending on the type and condition of the windows, the usual steps involved in simplified form are:

1. After removing the sash locks and other hardware, carefully remove the interior molding (if present), the interior and parting stops and the access panels for the weights (small doors that are typically screwed in place in the jamb).
2. Take the sashes out of the window frame after removing the sash cords to release the weights. Clean any debris out of the weight pockets.
3. Carefully use your heat gun or other method and remove the paint from the jambs and interior stops, then remove the paint, glazing putty and glass from the sashes, taking care not to break the glass. Be sure to mark the glass for correct reinstallation.
4. Make any repairs to the sashes and frames and sand as needed.
5. Prime all sashes, jambs, interior stops and parting stops.
6. To seal out air around movable sash, install rubber weather stripping on the top rail, bottom rail and meeting rail.
7. Apply a small bead of caulk on the interior of the stile, rail and/or muntin where the glass will rest, reinstall the original glass on top of the caulk, insert the glazing points, apply the glazing putty and bevel it.
8. After a "skin" has formed on the glazing putty, apply two coats of paint to the sashes, jambs and stops. The first coat should dry overnight before applying the second coat.
9. Carefully clean any excess caulk, glazing putty and paint off of glass using a razor blade.
10. Thread new sash cords from the top, tie them securely to the weights and attach them to the sashes, being sure that the cords are the correct length for proper operation of the sash. Reinstall the access panel.
11. Reinstall the repaired upper sash, parting stop, lower sash and interior stop, in that order.
12. Reinstall the sash locks and hardware.

There are many resources available online and elsewhere to help you repair your historic wooden windows. *Preservation Brief 9: The Repair of Historic Wooden Windows*, published by the National Park Service, provides a detailed explanation of wooden window repair. You can find this brief and other information at [nps.gov/history/hps/tps/](https://www.nps.gov/history/hps/tps/).

For help in finding additional resources or if you have questions, contact the Ohio History Connection's State Historic Preservation Office.

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