HISTORIC WINDOW GUIDELINES

BallardVale Historic District Commission
Andover Preservation Commission

Original and old windows are critically important character-defining features of historic buildings. Sadly, they are one of the most threatened elements in the historic built environment today, as evidenced by their inclusion on the endangered lists of preservation organizations nationwide.

The removal and replacement of old and original windows with factory-made models destroys the detail and texture that makes an historic building unique. The loss of original windows detracts from a building's appearance, compromises its historic authenticity, and devalues it irreversibly. Historic windows possess aesthetic attributes – the beauty deriving from correct proportions, craftsmanship, traditional materials, and old glass – that simply cannot be replaced by modern replacement window units. Retention of original and old wood windows is the sustainable choice, conserving both building character and the environment.

Three general approaches to the revitalization of historic windows are described below ***in order of preference*** by the BallardVale Historic District and Andover Preservation Commissions:

1. Repair/refurbishment of windows with addition of interior/exterior storms for energy efficiency

A professionally restored wood window will outlast any modern replacement window unit several times over, in large part because the first growth lumber used in period construction is far more stable, dense and rot resistant than any wood now available, at any price. The replacement window industry is extremely aggressive in promoting the durability, energy efficiency, and cost-effectiveness of its products. In reality, there is no more durable, energy efficient, or cost-effective window than a sound, weatherized wood window with an interior or exterior storm. A refurbished historic window can last another century, while a modern replacement window unit will last only 15 (most vinyl) to 25 (medium quality wood) years. There is a reason replacement window units are called "replacement" windows – they ultimately fail and need to be replaced.

2. Retention of window casing and replacement of window sashes only

Historic windows can often be saved by replacing only the sashes (see illustration page 3). Refer to the guidelines in the next section to assure that the replacement sash design is historically appropriate.

3. Removal of windows (including casings) and installation of new windows

It is almost never necessary to replace <u>all</u> the windows in a house; assess the condition of each window individually. If historic windows must be replaced, the replacement window units should be historically appropriate — true to the original windows and true to the character of the house. The Commission offers the following guidelines for replacing old windows.

- Windows should be wood or aluminum-clad wood with a paintable surface
- Window style should remain the same as the original (eg., double-hung, casement, etc.)
- Window opening should be identical to original window (no spacers to allow for installation of a stock-size window). One of the most character-destroying features of replacement window units is light reduction. Up to 20% of the light transmitted through an original window is lost when a full replacement window unit is set inside the existing casing.
- Sash area should be substantially similar to the original window (no reduction in glass area)
- The lower sash must rest upon the sill, as in the original window
- Multi-light configurations should match the original windows or be historically appropriate
  - true divided lights are preferred
  - grids (muntins = strips of wood separating glass panes) should be substantially similar to the originals in width/depth

- if true divided lights are not employed, grids should be permanently attached to the window exterior

4. The use of replacement window inserts that fit inside the existing window casings is strongly discouraged.

Window Energy Efficiency
An engineer[1] contracted by Bay State Gas and National Grid to perform energy audits in the Boston area states that there are only two valid reasons for replacing windows – noise and ease of use. This same engineer reports that the energy payback for replacement window units is 15 years at minimum (the life span of most vinyl replacement windows).

- Refurbished windows with weather stripping and storms (interior or exterior) are equivalent or superior in energy savings to replacement windows
- Only appropriately-installed Energy Star windows provide valid comparison and acceptable payback
- The majority of a building's heat loss (80%) is through the roof; insulating the attic (at an average cost of $1,200) achieves the same energy savings as replacing all the windows in a house

The BallardVale Historic District Commission and Andover Preservation Commission recommend that historic windows be restored whenever possible and supplemented with unobtrusive storm windows. Applicants to the BallardVale Historic District Commission must provide a window repair estimate for all window replacement requests.

VENDOR RESOURCES
Inclusion in this document does not imply endorsement or approval by the BallardVale Historic District Commission or the Andover Preservation Commission.

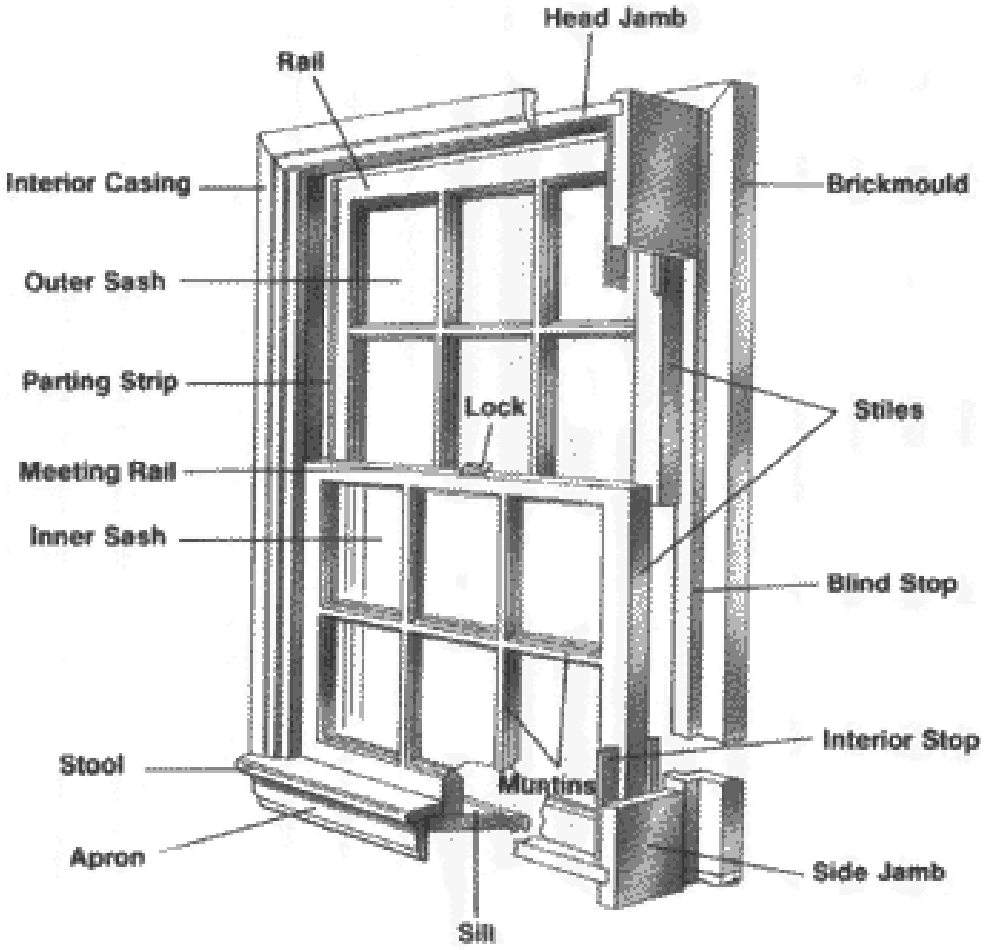
Window Repair
Windowrepair.com - Lawrence, MA 978-975-3400
Residential Window Service/Bill Miller – Haverhill, MA 978-372-0303
Window Woman of New England – Topsfield, MA 978-561-1062
Leo Greene – Andover, MA 978-475-3445*
Cleary Window Restoration – Waltham, MA 800-893-0728
OldTown Repair – Marblehead, MA 781-631-5145
Heartwood Building & Restoration – Hawley, MA 413-339-4298
Old Bostonian Stripping & Refinishing – Boston, MA 617-282-9300

Wood Replacement Window Models
Harvey - Majesty
Pella - Enduraclad
Marvin
J.B. Sash (custom windows)

Storm Windows
NOTE: Many "invisible" exterior and interior storm window models are available. Exterior storm windows are preferred because interior storms will not prevent condensation on the inside of the original windows.
Advanced Energy Panels - http://www.windotherm.com/index.htm
Innerglass Windows – Simsbury, CT 800-743-6207
Georgetown Door and Window – Georgetown, MA 978-352-2804
Spencerworks.com – Lincoln, NE 402-499-7848

* Member of BallardVale Historic District Commission; services not available to BallardVale Historic District residents

Anatomy of a Window



REFERENCES & RESOURCES

1. Robert Given, Honeywell Corporation Energy Auditor
2. Lynch, Michael. "Caring for Your Old Windows", Historic New England Magazine, June 2000
3. Sedovic, Walter & Gotthelf, Jill. "What Replacement Windows Can't Replace: The Real Cost of Removing Historic Windows", APT Bulletin Journal of Preservation Technology/36:4, 2005
4. Window Replacement Guidelines, Springfield Historical Commission, Springfield, MA
5. Cambridge Historical Commission's Window Information Guide, Cambridge, MA
http://www.cambridgema.gov/~Historic/windowguide.html
6. "The TRUTH about WINDOWS – and Storm Windows too", Plainfield Historic Preservation Commission, Plainsfield, NJ http://www.plainfieldhistoricpreservation.com/articles/oldhouseguy_3.htm
7. National Park Service Preservation Brief #9 - The Repair of Historic Wooden Windows
http://www.nps.gov/history/hps/tps/briefs/brief09.htm