

Preservation Points
Alameda Architectural Preservation Society (AAPS)
By Randy Horton

Windows: Restoring or Replacing? Second in a Series

The previous issue of Preservation Points discussed the esthetic and functional reasons for retaining or restoring the original windows of older buildings. In this issue energy conservation will be discussed.

Growing awareness of energy conservation and increased heating costs are major factors in determining whether to replace original windows. Before making this decision, first consider all areas where heat loss or gain is possible. Attics, crawl spaces, fireplace openings and doors are all areas of maximum heat loss or gain. Proper weather-stripping and insulation of these areas will help in making your home more energy efficient.

Preservation Point: The condition of your existing window may affect its energy efficiency.

Window heat loss and gain occurs through infiltration. The condition of the window should be evaluated for potential areas of infiltration. Replace all cracked or broken panes of glass. Ensure a good seal of putty around the glazing at the muntins and sash. Strengthen corners of the sash and check that the sash and window frame are square to each other. Weather-strip around the sash to ensure a tight seal. Proper caulking can eliminate infiltration through cracks along the outside and inside trim as well as under the sill. Infiltration can be more difficult to eliminate on double hung and casement windows due to the clearances needed to operate the window. No matter how carefully they are installed, moving windows are vulnerable to infiltration unless properly weather-stripped. Weather-stripping wood sash windows are well within the capabilities of the homeowner but aluminum and vinyl windows are weather-stripped at the factory and replacement can be difficult.

Preservation Point: Double glazed windows are more cost effective in extreme climate zones.

Double glazed windows are very popular for energy efficient replacement windows. Double glazed windows are comprised of two panes of glass separated by a space which is filled with argon or other inert gas or a thin reflective film. Taking into consideration the cost of purchasing and installing the new window, and the temperate climate of Alameda, the anticipated energy cost savings may not be as great as expected. For example, a recent "whole house" replacement window offer was priced at \$2,995. The estimated annual cost saving on heating and cooling was 30%. A typical Alameda heating bill is about \$600 annually. A 30% cost savings for the year is about \$180; therefore, it will take about 16 years to recoup the initial investment.

Depending on the window manufacturer, the warranty on the efficiency of the double-glazed window may be only 10-15 years. The inert gas can escape allowing the void between the panes of glass to collect condensation and fog up the window. Dust may also collect between the panes of glass when the seal leaks or is broken leaving the glass with a hazy film. The only way to correct this problem is to replace the window.

Preservation Point: Consider interior storm sash to prevent condensation and improve energy efficiency.

Condensation, when water vapor turns to liquid, is another factor when considering restoring or replacing original windows. Condensation occurs during the winter months when warm, moist air inside the building comes in contact with a cool surface such as glass. Double glazed windows do prevent condensation on interior glass. During the winter months, a removable, weather-stripped sheet of plastic or storm sash can be installed, which fits the interior opening of the window frame, and can prevent condensation on single glazed windows and increase energy efficiency.

The Alameda Architectural Preservation Society is dedicated to the preservation of Alameda's historic structures and neighborhoods.
For further information on AAPS, phone (510) 986-9232; write P.O. Box 1677, Alameda CA. 94501; or visit www.alameda-preservation.org.