



Subject: Selecting New Windows to Replace Non-Historic Windows

- Applicable Standards:**
- 2. Retention of Historic Character
 - 6. Repair/Replacement of Deteriorated or Missing Features Based on Evidence

Issue: The windows of a historic building are central to defining its character. Identifying and preserving the functional and decorative components of a window is often crucial to maintaining the character of a property. The style of window is particularly essential to the character of the primary facade. Different shapes, frames, muntin profiles, numbers of panes and their configuration make a window distinctive. Where historic windows exist they should be retained and repaired. When no reparable historic fabric remains and functional replacement windows are in place, a number of options exist. Existing windows may be retained, despite their lack of historic character. If replacement is chosen, the new windows must be based on existing fabric, on historic documentary or pictorial evidence or, they must be compatible with the historic character of the building. As explicitly stated in **Standard 6**, when a historic feature is missing or is too deteriorated to repair, “the new feature shall match the old in design, color, texture and other visual qualities and, where possible, materials.”

Application 1 (*Incompatible replacement*): An 1880s Italianate commercial building was rehabilitated for use as an office building. The main elevation of this small building is dominated by the fenestration on the second floor. Prior to rehabilitation, the four large, second-story windows contained incompatible replacement, three-part fixed sash. The owner had the option to retain these windows or replace them with compatible sash. While historic photos did not clearly illustrate the configuration of the original windows, double-hung sash with segmental arched tops or double-hung sash with a small transom would have been historically appropriate. Instead, the owner replaced the windows with three-paned pivot windows, similar to the windows in place before rehabilitation with heavy frames and meeting rails, that were not compatible with the historic character of the building. These replacement windows did not meet the **Secretary of the Interior's Standards**.



The second story of the primary facade showing non-historic fixed sash before rehabilitation.



After rehabilitation, the new windows have a three-part configuration that is inappropriate to the historic style of the building.



Before and after rehabilitation, one-over-one sash helped retain this commercial building's historic character.

Application 2 (*Incompatible treatment, later modified to meet the Standards*): A 1903 limestone Romanesque revival building was rehabilitated for use as apartments. Extant frames and multi-paned transoms were in place on the primary facade, but all sash had been replaced with one-over-one double-hung sash. Though the windows were not original, the one-over-one configuration was compatible with the building. A secondary facade revealed some remaining two-over-two double-hung sash. Owners had the option to retain the windows or replace them with historically appropriate sash. They installed two-over-two wooden sash on the primary facade based on the secondary elevation window configuration. Since there was no evidence that the front windows had ever been two-over-two, this treatment failed to meet the **Secretary of the Interior's Standards**. In order to meet the Standards, the owner subsequently changed the windows on the primary facade to one-over-one sash. The resulting fenestration is compatible with the historic character of the building.

Application 3 (*Compatible replacement based on physical evidence*): A 1920, seven-story commercial warehouse located on a corner was rehabilitated for use as a hotel. Both street facades were heavily fenestrated. At the time of rehabilitation, the historic windows had been replaced with three-part, horizontal sliding windows, inappropriate to the building. One original window, a multi-pane steel industrial sash, was still extant. Based on this, the owner was able to reproduce the historic windows using fixed, steel, multi-paned sash, thereby reintroducing these distinctive features and reestablishing the historic character of the building.



Prior to rehabilitation the building had inappropriate modern windows.



Installing multi-pane steel sash helped restore the building's historic appearance.

Application 4 (*Compatible replacement based on historic documentation*): A large brick apartment complex, built in 1927, was rehabilitated for its original use. The windows in the buildings had been replaced in the 1960s with one-over-one steel sash, out of character with the buildings. Because these windows were in place when the owners purchased the apartment complex they could retain the existing windows, use historic photographs to recreate the original windows, or install windows appropriate to the building. The owners chose to use photographic evidence to replicate the historic, multi-paned configuration of the apartment windows using vinyl-clad wood windows. The decision satisfied Standard 6 which requires that “replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.”



Prior to rehabilitation showing one-over-one sash. Similar sash is concealed by plywood covers on the first and second floors.



Historic pictorial evidence shows the original multi-pane configuration of the windows.



After rehabilitation the new multi-paned sash are appropriate to the historic style and character of the apartment buildings.