

# ***WINDOW STANDARDS***

***CITY OF SHAKER HEIGHTS  
LANDMARK COMMISSION***

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## **SECTION I: INTRODUCTION**

These rules are issued to assist the public in applying to the Landmark Commission for approval of repair, rehabilitation, restoration or replacement of windows in buildings that are designated landmarks or are within designated local historic districts. These rules, which hereinafter will be referred to as “standards,” enunciate Commission policy with respect to such repair, rehabilitation, restoration or replacement and also explain the procedures required to apply for a permit.

Windows are an important and integral part of the design of most buildings. They typically comprise 30% to 40% of the surface area of a building’s principal façade. In most historic buildings, the window sash, window framing, and the architectural detail surrounding windows were carefully designed as an integral component of the style, scale and character of the building. It is important to retain the configuration, operation, details, material and finish of the original window as well as to maintain the size of openings, sills, decorative moldings, and the sash itself.

Therefore, the Commission, in making a determination on proposed repair, rehabilitation, restoration or replacement to windows, evaluates the effect of the proposal on the aesthetic, historical and architectural values and significance of the landmark or of the building in an historic district. The Commission considers, among other matters, the architectural style of the building and the design, texture, material and color of the proposed work.

These window standards are based on the following principles:

1. The distinguishing original qualities or character of a building’s structure, or site and its environment, should not be destroyed. The removal or alteration of any distinctive architectural feature should be avoided whenever possible.
2. If replacement is necessary, the new window should match the window being replaced in design and other visual qualities.

## SECTION II: DEFINITIONS

- A. The word “Commission” shall mean the Landmark Commission as established in Chapter 137 of the Administrative Code of the City of Shaker Heights.
- B. The words “Certificate of Appropriateness” (CoA) shall mean a letter from the Landmark Commission notifying an applicant that proposed window changes conform to the Landmark Commission Design Standards.
- C. The words “local historic district” refer to a collection of buildings determined to have significance in accordance with one or more of the criteria as listed in Chapter 137 of the Administrative Code of the City of Shaker Heights. All properties located within a local historic district fall under the jurisdiction of the Landmark Commission and are subject to Certificate of Appropriateness Review.
- D. The words “National Register Historic District” refer to a collection of buildings that are listed on the National Register of Historic Places. This is a federal designation; therefore properties within the National Register district do not need to receive Certificates of Appropriateness.
- E. The words “historic windows” shall mean: (1) windows installed at time of construction of the building; or (2) windows of a type installed at time of construction of similar buildings in similar periods and styles; or (3) windows installed at time of major façade alterations 50 or more years ago.
- F. The words “existing windows” shall mean the windows existing at the time of designation or windows, which have been changed subsequent to designation, pursuant to a Certificate of Appropriateness issued by the Commission.
- G. The words “special windows” shall mean: (1) those windows in which the complexity of the muntin pattern or the molding profiles is one of the characteristics of the style and age of the building; or (2) windows having one or more of the following or similar attributes, including but not limited to:
  - 1. Bay or oriel window
  - 2. Curved glass
  - 3. Multi-pane sash, i.e., 12 or more panes in a single sash
  - 4. Multi-sash units with a combination of casement, fixed, and transom sash.
  - 5. Stained, leaded, or otherwise crafted glazing for artistic effect
  - 6. Highly decorated (carved or otherwise embellished) sash or frame
  - 7. Non-rectilinear sash or frame
  - 8. Small windows considered to be ocular, bull’s eye, elliptical, or fanlight in shape with decorative muntin patterns

See Appendix 1 for illustrations of some of these and other types of “Special Windows.”

- H. The word “match” shall mean either an exact or an approximate replication. If not an exact replication, the approximate replication shall be so designed as to achieve a suitable, harmonious and balanced result.
- I. The word “repair” shall mean any work done on any window to correct any deterioration or decay of, or damage to a window or any part thereof and to restore, as

closely as may be practicable, to its condition prior to the occurrence of such deterioration, decay or damage. The term “ordinary repair” shall refer to work that does not require a CoA (See Section III, A)

- J. The word “restoration” shall mean the process of returning, as nearly as possible, a building or any of its parts to its original form and condition.
- K. The word “story” shall be defined as a habitable floor level, including a basement but not including a cellar.

Additional definitions are found in Appendix 3, “Glossary of Terms.”

### **SECTION III: REPAIRS, REHABILITATION AND RESTORATION**

#### **A. Repairs:**

Deteriorated windows can often be repaired and made sound and fully operational. A CoA is not required to undertake ordinary repairs including:

1. Replacement of broken glass, together with replacement of associated moldings, muntins and glazing compound with material of matching characteristics.
2. Scraping, priming and repainting of window sash and/or frame to recoat with the same color and finish that exist at the time such work is undertaken.
3. Caulking around frames and sill.
4. Repair and replacement of window hardware, including pulley chains.
5. Installation of weather stripping.
6. Straightening of metal window members.
7. Rebuilding of portions of sills, sash and other window members, using the same material and to the same configuration, size and shape.
8. Consolidating wood members with cellulose wood fillers.

#### **B. Rehabilitation and restoration:**

A CoA and a Building Permit are required for:

1. changes in configuration, and
2. any change in the shape and size of any member.

### **SECTION IV: STORM WINDOWS**

- A. A CoA is not required for the installation of secondary glazing units (“storm windows”). Exterior storm windows should fit tightly within openings without the need for subframe or panning around the perimeter.

- B. The Commission recommends the following: (1) The frame color of an exterior storm window should match the color of the primary window frame. (2) Clear glass is installed. (3) Muntins should not be installed. (4) The operation of the storm window should match the operation of the window. (5) The storm sash should be set as far back from the plane of the exterior wall surface as practicable. (6) Meeting rails should only be used in conjunction with double-hung windows and should be placed in the same relative location as in the primary sash.

## **SECTION V: REPLACEMENT OF SASH AND FRAMES**

If the windows have deteriorated to a condition that warrants replacement, new windows will be permitted under the following conditions:

- A. A CoA and a Building Permit are required for the installation of new sash in existing frames. In cases where the sash is deteriorated to a point precluding repair, rehabilitation or restoration, replacement sash may be installed subject to the issuance of a permit. In determining whether sash cannot be repaired, the Landmark Commission will consider the percentage of the window that is deteriorated, the practicality of repair, trade practice and such other factors as the Commission may deem appropriate. The new sash shall match the existing sash in dimensions, configuration, operation, details, material, and finish except as provided below. If the rehabilitation of frames is required in conjunction with an application for new sash, that work shall be part of the application.
- B. A CoA and a Building Permit are required for the installation of new sash and frames in landmarks and buildings in local historic districts.

### **1. INDIVIDUAL LANDMARKS:**

- a. If historic windows have deteriorated to a point precluding repair, rehabilitation, or restoration, based on a condition report submitted by the applicant, or a field inspection by the staff, or other evidence, including the percentage of the window that is deteriorated, the practicality of repair, trade practice and other factors, replacement windows may be approved if they match the historic windows in terms of:
  - i. Configuration,
  - ii. Operation,
  - iii. Details,
  - iv. Material, and
  - v. Finish
- b. However, variations in details may be permitted if such variations do not significantly affect the visual characteristics of the historic window, including the shadow effect of muntins and sash members on the glazing. In evaluating “significant effect”, factors to be considered shall be the age of the building and its architectural quality, as well as the extent of diminution in the total glazed area of sash. True divided lights are preferred, simulated lights are acceptable. Muntins sandwiched between the glass, and snap-in muntins are not allowed. Regardless of window type and material, the diminution in glazed area shall be limited to 10%.

- c. With respect to matching of materials, the following shall be understood: a wood historic window shall be replaced in wood, but not necessarily of the same species. A metal historic window shall be replaced with metal but not necessarily of the same metal. In the case of buildings of high architectural quality, replication of exact materials may be required.

## 2. BUILDINGS IN LOCAL HISTORIC DISTRICTS:

### 1. HOUSES:

- a. If historic windows have deteriorated to a point precluding repair, rehabilitation or restoration, based on a condition report submitted by the applicant, or a field inspection by the staff, or other evidence, including the percentage of the window that is deteriorated, the practicability of repair, trade practice and other factors, replacement windows may be approved if they match the historic windows in terms of:
  - i. Configuration,
  - ii. Operation,
  - iii. Details,
  - iv. Material, and
  - v. Finish
- b. Variations in details will be permitted if such variations do not significantly affect the visual characteristics of the historic window, including the shadow effect of muntins and sash on the glazing. In evaluating “significant effect”, other factors to be considered shall be the age of the building and its architectural quality, as well as the extent of diminution in the total glazed area of sash. True divided lights are preferred, simulated lights are acceptable. Muntins sandwiched between the glass, and snap-in muntins are not allowed. Regardless of window type and material, the diminution in glazed area shall be limited to 10%.
- c. With respect to matching of materials, the following shall be understood: a wood historic window shall be replaced in wood, but not necessarily of the same species. A metal historic window shall be replaced with metal but not necessarily of the same metal although in the case of buildings of high architectural quality, replication of exact materials may be required.

### 2. APARTMENT BUILDINGS:

- a. In apartment buildings and other types of multiple dwellings, originally built as such, replacement windows may be approved if they match the historic windows in terms of:
  - i. Configuration,
  - ii. Operation,
  - iii. Details,
  - iv. Materials, and
  - iv. Finish.

- b. Variations in details and materials will be permitted if such variations do not significantly affect the visual characteristics of the historic window, including the shadow effect of muntins and sash on the glazing. In evaluating “significant effect”, factors to be considered shall be the age of the building and its architectural quality, as well as the extent of diminution in the total glazed area of sash. True divided lights are preferred, simulated lights are acceptable. Muntins sandwiched between the glass, and snap-in muntins are not allowed. Regardless of window type and material, the diminution in glazed area shall be limited to 10%. Regardless of window type and material, the diminution in glazed area shall be limited to 10%.

3. OTHER BUILDINGS:

For buildings that do not fall into any of the previously described categories, the finding of appropriateness of window replacements will be made on a case-by-case basis. Variations in design of these specialized buildings preclude the applicability of standards.

Such special building types include churches and synagogues, schools, libraries, commercial buildings, gas stations, and banks. Also included in this category are buildings, which, unless specifically noted in the text of these standards, have been converted from their original use.

**SECTION VI: REPLACEMENT OF SASH AND FRAMES WITH AN ALTERNATE MATERIAL**

If windows have deteriorated to a condition that warrants replacement, and replacement sash in the same material as the original is not available, replacement sash that meets the following conditions will be allowed in buildings in local historic districts (not individual local landmarks), except for special windows:

- A. A CoA and a Building Permit are required for the installation of new sash in an alternative material in existing frames. The applicant must demonstrate that the existing sash has deteriorated to a point precluding repair, rehabilitation, or restoration, and that replacement in materials such as aluminum and steel is not available. In determining that replacement sash in the original material is not available, the Landmark Commission will consider the design of the original windows, number of windows requiring replacement sash, the cost of custom-made units, and other factors that affect the practicability of replacing sash in-kind and its effect on the historic building. The new sash in an alternative material shall match the existing sash in dimensions, configuration, operation, details, and finish as provided below.
- B. A CoA and a Building Permit are required for the installation of new sash and frames in buildings in local historic districts.

1. BUILDINGS IN LOCAL HISTORIC DISTRICTS

For residential and other building types in local historic districts the following standards apply, except where special windows are present:

- a. If historic windows have deteriorated to a point precluding repair, rehabilitation, or restoration, based on a condition report submitted by the applicant, or a field

inspection by the staff or members of the Landmark Commission, or other evidence, including the percentage of the window that is deteriorated, the practicality of repair, trade practice, and other factors, replacement windows may be approved if they match the historic windows in terms of:

- i. Configuration,
  - ii. Operation,
  - iii. Details, and
  - iv. Finish
- b. Replacement materials shall be used as necessary as long as the new sash varies only in details that do not significantly affect the visual characteristics of the historic window. True divided lights are preferred, simulated lights are acceptable. Muntins sandwiched between the glass are also allowed. Snap-in muntins are not allowed. Regardless of window type and material, the diminution in glazed area shall be limited to 10%.
  - c. It is widely recognized that less expensive stock/standard windows do not often meet this standard for similar glazed area, pane size, and muntin width, and therefore are not acceptable replacement sash and shall not be routinely approved. Applicants must demonstrate an effort to obtain replacement sash that matches original sash in such critical details.
  - d. The replacement of sash with replacement materials should not also significantly affect the width and detailing of mullions in window groups, framing, and sill elements. Consequently, any panning elements must replicate the width of such elements and have a similar profile.

## **SECTION VII: APPLICATION PROCEDURE**

### **A. Application**

#### **1. Application Form**

An application consists of a completed application form and supporting documentation. The owner of the property must sign the Landmark Commission application although the applicant may be the lessee or owner's agent. A properly authorized official of the corporation must sign an application from an apartment or condominium building. The form also requires the name of the occupant, lessee or shareholder who is proposing the alteration as well as the name of the person filing the application (if not the owner).

The Landmark Commission application is available at the Commission office at 3400 Lee Road, Shaker Heights, OH, 44120, or by mail by calling (216) 491-1430.

#### **2. Supporting Documentation**

An application must include photographs, elevation drawings and descriptive material of the existing conditions of the windows and the building. For buildings located in historic districts, photographs of adjacent buildings should also be submitted. In addition, a description of the proposed work, manufacturers' catalogue cuts or drawings with comparative dimensions, details of construction, configuration, color and finish are required. Proposals for metal replacement windows should include material samples.

### **B. Procedure**

1. All applications received by the Landmark Commission staff will be docketed and reviewed for completeness. The applicant will be notified if additional documentation is required.
2. When the application is complete, the Landmark Commission staff will review the application for conformance with these standards. Upon determination that the criteria of the standards have been met, as listed in Section V, a CoA will be issued.
3. If the application does not meet the aforementioned standards, (Section VI) the application must be considered by the Landmark Commission at a formally scheduled meeting.
4. If the Commission does not approve the application, the Commission may impose and enforce a waiting period of six (6) months from the date of its notice of disapproval, during which period the Landmark Commission shall conduct negotiations with the applicant and any other party in effort to find a means of preserving the property.
5. If the Landmark Commission and the applicant do not agree on a means of preserving the landmark within the waiting period or any extension thereof, the Landmark Commission, upon the expiration of such period or extension thereof, must grant permission with respect to the proposed environmental or building change and give written notice of such action to the applicant. Prior to the issuance of a building permit, the window replacement must have received approval from the Architectural Board of Review.

## **APPENDIX 1: WINDOW STYLES**

## **APPENDIX 2: PARTS OF WINDOWS**

### **APPENDIX 3: GLOSSARY OF TERMS**

The following definitions shall apply to terms used in the text of the Standards.

**AWNING:** A window that is hinged on the top of the window, allowing the bottom edge of the window to swing outward.

**BAY WINDOW:** A composite window of three windows; usually a center window flanked by two units set at 30 or 35 degrees to the wall.

**BOTTOM SASH:** The lower half of a double-hung style window.

**CASEMENT WINDOW:** A window type in which a single sash cranks outward, to the left, or to the right. OR A window sash, which swings open along its entire length, on hinges, fixed to the side of the opening into which it is fitted.

**CASING:** Molding applied to the framework of the window and door units, can be of varied thickness, widths, and shapes.

**CLERESTORY:** A venting or fixed window that is located about others in a room or on the upper outside wall of a room.

**COLOR:** Sensible perception of hue, value and saturation characteristics of surfaces of window components.

**CONFIGURATION:** Number, shape, organization and relationship of panes (lights) of glass, sash, frame, muntins, or tracery.

**DETAILS:** The dimensions and contours of both the stationary and moveable portions of a window and moldings. Details are shown in graphic form in Appendix 2.

**DOUBLE-HUNG WINDOW:** A window type that has two operable sashes that move vertically in the frame.

- a. **COTTAGE DOUBLE-HUNG WINDOW:** A double-hung window type in which the upper sash is shorter than the lower sash, or vice versa.

**FANLIGHT:** A semicircular window with radiating bars in the form of an open fan.

**FENESTRATION:** The arrangement, proportioning and design of windows in a building.

**FINISH:** The visual characteristics, including color, texture and reflectivity of all exterior materials.

**FLASHING:** A thin strip of metal or synthetic material used to divert water from windows. OR A thin, impervious material used to prevent water penetration and provide drainage over or under windows.

**FRAME:** The stationary portion of a window unit that is affixed to the façade and holds the sash or other operable portions of the window.

**GLAZIER'S POINT:** A small, thin piece of metal used to hold a piece of glass in a window frame while glazing compound is being applied.

**GLAZING:** Material, usually glass, that fills spaces between sash members (rails, stiles and muntins), commonly referred to as panes or lights.

**GLAZING COMPOUND:** A heavy paste or putty used to hold window glass in place.

**HEAD:** The upper horizontal part of a window frame or window opening.

**HOPPER:** A window in which the bottom of the window is hinged, allowing the top part of the window to swing inward.

**JAMB:** The side parts of a window frame or window opening, as distinct from head and sill.

**LIGHT:** A pane of glass; a window, or a compartment of a window (also see: Glazing).

**MATERIALS:** Substances used to fabricate windows.

**MEETING RAIL:** Sash rail in a double-hung window designed to interlock with adjacent sash rail.

**MEMBER:** A component part of a window.

**MOLDING:** A piece of trim that introduces varieties of outline or curved contours in edges or surfaces as on window jambs and heads. Moldings are generally divided into 3 categories: rectilinear, curved and composite-curved.

**MULLION:** A vertical framing member that separates (and often supports) paired or multiple windows within a single opening.

**MUNTIN:** A framing member that subdivides the sash into individual panes, lights or panels; lead “canes” are often used in stained glass windows. (Note: grids placed between two sheets of glass are not considered muntins.)

**OPERATION:** The manner in which a window unit opens, closes, locks, or functions, e.g., casement, double-hung, etc. If non-operable, a window unit (such as a side light) is identified as “fixed.”

**ORIEL WINDOW:** A bay window that projects from the wall of an upper story.

**PALLADIAN WINDOW:** A composite window of a large central window with an arch at the top, flanked by a small flat-topped window unit on each side. OR A large window divided by columns or piers into three lights. The central light is arched and wider than the two flanking lights.

**PANNING:** An applied material, usually metal, that covers the front (exterior) surface of an existing window frame or mullion.

**PARTING STRIP:** The small member, usually wood and usually removable, that separates the upper and lower sash pockets in the jamb of a double-hung window.

**RAIL:** A horizontal sash member.

**RIBBON:** A series of windows in a row across the face of the building.

**SASH:** The secondary part of a window which holds the glazing in place; may be operable or fixed; usually constructed of horizontal and vertical members; sash may be subdivided with muntins.

**SASH CORD:** In double-hung windows, the rope or chain which attaches the sash to the counterbalance.

**SASH WEIGHTS:** In older double-hung windows, the concealed cast-iron weights used to counterbalance the sash.

**SIGNIFICANT ARCHITECTURAL FEATURES:** An architectural component of a building that contributes to its special historic, cultural, and aesthetic character, or in the case of a historic district reinforces the special characteristics for which the district was designated.

**SILL:** The lower horizontal part of a window frame or window opening; also the accessory member that extends as a weather barrier from the frame to the outside face of the wall.

**SINGLE-HUNG:** A double-hung style window in which the top sash is fixed or inoperable.

**STILE:** A vertical sash member.

**STORM WINDOW:** An extra window on the outside to protect an existing window but mainly to increase the window's thermal resistance.

**TOP SASH:** The upper half of a double-hung style window. It may be fixed (single-hung window) or it may be operable (double-hung window).

**TRANSOM WINDOW:** A small window that fits over the top of a door or a window; it is primarily for additional light and aesthetics.

**TRIM:** The decorative parts of a building that finish or cover construction joints and changes in materials.

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