

City of Alexandria, Virginia

MEMORANDUM

DATE: October 20, 2010

TO: Old and Historic Alexandria District Board of Architectural Review

FROM: BAR Staff

SUBJECT: Boards of Architectural Review Window Policy

During the March 2010 appeal of the BAR decision regarding slate roofing at 211 North Patrick Street, City Council asked staff to work with both Boards of Architectural Review to develop a policy for the appropriate use of modern and sustainable materials. As a result, Staff formed the Modern Materials Ad Hoc Work Group composed of members of local preservation organizations, members from each BAR, as well as industry representatives and contractors, to help guide Staff in developing an appropriate policy for roofing, windows and siding. The Work Group has met on two occasions to specifically address the subject of windows. Staff has also met with window industry representatives to fully understand the vast window nomenclature, which is often different from window manufacturer to window manufacturer. (See Attachment 1 for a list of Ad Hoc Work Group Members and the meetings attended by Staff)

PURPOSE AND GOALS

As with roofing and siding, the purpose of the BAR policy for windows is to supplement the existing BAR *Design Guidelines* to:

1. Provide more clarity for both the public and industry prior to submissions;
2. Provide more consistency in Staff's recommendations and the Board's actions;
3. Streamline the Certificate of Appropriateness and administrative approval application process, thereby reducing the cost and time required for both applicants and Staff; and,
4. Encourage the use of readily available modern and environmentally sustainable materials, where appropriate, pursuant to the City's Green Building Policy.

BACKGROUND

The most frequent question BAR Staff receives is whether existing windows can be replaced with new windows. Property owners, no doubt spurred on by the federal tax credit for energy efficient products and the prevalence of replacement window advertisements, complain that they are unsatisfied with their existing windows for a variety of reasons besides energy efficiency (air infiltration, noise, wood rot, operability) and see replacement as the only alternative.

Staff found in researching the subject of windows was that there is a voluminous amount of information available, ranging from articles touting the energy-efficiency and sustainability of replacement windows to those that argue the importance and nearly equal energy benefits of restoring historic windows. Staff has compiled some of the more useful recent articles and they are available to the public on the Planning Department's Historic Preservation website.

Staff also looked at how other jurisdictions with local historic districts address requests for window replacement. Some jurisdictions have not yet addressed this changing landscape of window replacements head on, while others have created very detailed and step-by-step guidelines for homeowners and contractors, such as San Francisco, CA and Leesburg, VA. Some jurisdictions go as far as allowing vinyl replacement windows on the rear of properties, while a few will not approve double glazed windows on historic buildings under any circumstance. Staff used the San Francisco and Leesburg guidelines as a model, as well as information gathered from industry representatives, the Ad Hoc Modern Materials Work Group, and the BAR, to create the proposed window policy. Window technologies and products have expanded significantly since the *Design Guidelines* were adopted in 1992, and Staff believes that the new window policy will provide both clarity and consistency for homeowners, the Boards and Staff.

PROPOSED WINDOW POLICY

Staff has been working on the windows policy concurrently with the roofing policy over the last few months. Initially, BAR Staff and some members of the Work Group proposed a definitive building construction cut-off date - 1932 - after which the use of certain modern materials would be appropriate. The identification of a specific date raised concern among a few Work Group members because they felt that it implied that only pre-1932 buildings were historic and therefore worth preserving, while buildings dating from after that time were not significant. **There was also substantial confusion between the proposed local policy and how it would impact state and federal rehabilitation tax credits, as well as National Register periods of significance.**

This was not the intention of Staff and our discussions with both Virginia Department of Historic Resources and National Park Service staff have confirmed that local district guidelines have no effect on the state or federal determination of eligibility for rehabilitation tax credits. This is a separate process which must be approved in advance of any work performed and it is incumbent on the property owner to verify that a project complies with both local design guidelines and Department of the Interior and IRS standards for a certified rehabilitation.

The 1932 date previously proposed was based on a number of factors, including an informal survey of the past practice of the Boards. Buildings constructed in the 18th and 19th centuries have generally been required to repair or replace existing historic materials in kind, while 20th century buildings have frequently been allowed to install insulated glass windows or synthetic roofing and siding. However, in response to the concern over the 1932 date, Staff has recently modified the draft roofing policy to reflect this new approach and written the proposed window policy such that applicants may generally use modern materials on their buildings only if the specific materials (such as simulated

divided lights or aluminum cladding) were available when that portion of the building was originally constructed.

Below is a brief description of each section of the proposed window policy:

Section A

The primary function of this section is to make clear that BAR Staff must do a thorough site visit to determine the age, architectural style and condition of existing windows, and from the information learned make a determination of whether the existing windows are historic or replacement windows would be permitted. Section A also reminds applicants that a building permit is required for window replacement, that vinyl windows of any type of not permitted and that storm windows can be installed to protect historic windows, without BAR or BAR Staff review.

Section B

Section B outlines the factors which Staff will consider to determine which windows may be replaced and which windows must be repaired or replicated. Generally, it is based on: 1. the age of the building and whether the existing windows are original or whether they were replaced at a later date, 2. the visibility of the windows from a street, and 3. when the proposed replacement materials became commercially available. Certain buildings may be eligible for new replacement windows with double glazing, such as buildings constructed after 1930, because Thermopane insulated glass windows were invented at this date. Early buildings with previously replaced windows, where 1-over-1 or 2-over-2 sash windows are historically appropriate, may also use insulated glass because the internal spacer bars are much less visible behind on these muntins. Still others constructed after 1969 may use replacement aluminum clad wood windows because they were commercially available at that time. A number of other factors, such as the visibility of replacement windows, their location (i.e. facing the street), and the existence of historic window trim, may also impact window replacement requirements.

Section C

The final section of the policy is the Alexandria Window Performance Specifications. These specifications were developed over the last few months in consultation with window manufacturer representatives, as numerous window replacement cases went to both Boards and Staff had to become very familiar with the specific details of many different window products. The specifications are broad enough that they can be applied to all window replacement cases, regardless of the window manufacturer, should Staff determine that replacement is appropriate. They will also be used by Staff to recommend appropriate and compatible windows for Board review of new construction and additions.

Other Windows Documents

In addition to the window policy, Staff created two additional documents to help facilitate the window replacement and/or repair/replication process. The Window Field Survey Form (Attachment 4) will be used primarily by Staff to evaluate the condition and age of windows on a particular house, and Staff will use that information to make a determination whether the windows are original and need to be repaired or replicated, or whether replacement windows may be acceptable. The other document, A Check List for Replacement Window Applications (Attachment 5), was developed from the Alexandria

Windows Performance Specifications and is intended to make it easier for Staff, and applicants, to determine if their proposed replacement windows meet the Specifications prior to approval of a building permit.

AUTHORITY

As noted earlier, one of the main goals of the policy is to clarify where Board approval of a Certificate of Appropriateness is required, and when window repair and/or replacement can be approved administratively by BAR Staff. Staff authority for administrative approval comes from Zoning Ordinance Section 10-109 (Attachment 3), which gives staff the authority to approve repair or replacement materials, as long as they are considered to be appropriate and compatible with the historic surroundings by Board of Architectural Review policy. With the Board's adoption of the roofing, windows and siding policies, administrative approval will allow a significant reduction in time and cost for property owners in the historic districts.

NEXT STEPS

Staff recommends that the BAR adopt the Boards of Architectural Review Window Policy as an addendum to the relevant sections of the existing *Design Guidelines*. Staff will take the proposed window policy to the Parker-Gray BAR on November 17th for their adoption. Once the policies for all of the replacement materials are approved, Staff will make the information available on the City's website and will develop handouts for the public and contractors. The City will produce – with the help of a graphic designer – an illustrated administrative approval guideline for common replacement materials.

Staff: Stephanie Sample, Urban Planner
Al Cox, FAIA, Historic Preservation Manager

Attachments:

1. Modern Materials Ad Hoc Work Group
2. Draft Boards of Architectural Review Window Policy
3. Zoning Ordinance Section 10-109
4. Window Survey Form
5. Check List for Replacement Window Applications

Modern & Sustainable Materials for Historic Buildings Ad Hoc Work Group

MEMBERS

Old and Historic Alexandria District BAR

Arthur Keleher
John von Senden

Parker-Gray BAR

Christina Kelly

Historic Alexandria Resources Commission

John Sprinkle
Bill Hendrickson

Alexandria Historical Restoration & Preservation Commission

Charles Trozzo

Historic Alexandria Foundation

Gail Rothrock
Laura Trieschmann

Old Town Civic Association

Poul Hertel

Industry

Master Roofing, Suzanne Floyd
Old Town Windows and Doors
Smoot Lumber

P&Z Staff

Al Cox
Stephanie Sample

MEETINGS

Modern Materials Ad Hoc Work Group 5/10/10

Modern Materials Ad Hoc Work Group 8/17/10

Modern Materials Ad Hoc Work Group 10/5/10

ADDITIONAL MEETINGS ATTENDED BY STAFF

OTCA Preservation Committee 3/19/10

HAF Advocacy Committee 4/5/10, 5/17/10

Presentation to the OHAD BAR 4/7/10

Presentation to the PG BAR 4/28/10, update 5/26/10

Restoration & Preservation Commission 5/12/10

OTCA Membership Meeting 6/9/10

HARC meeting 9/21/10

Boards of Architectural Review
Window Policy
DRAFT for OHAD BAR Review 10/20/10

A. General

1. Direct replacement of any window requires an administrative finding of appropriateness from the Board of Architectural Review (BAR) Staff, under sec. 10-109 and 10-209 of the Alexandria Zoning Ordinance. A building permit from Code Administration is also required per the exception to 2006 USBC sec. 108.2(10) and a City Code amendment, effective June 1, 2010.
2. BAR Staff may administratively approve the direct replacement of windows in the existing openings which comply with all of the policies stated in section B, below, and with the Alexandria Window Performance Specifications listed in section C, below. Prior to any approval, BAR Staff must first survey and confirm the existing window's age, architectural style and condition in the field.
3. Where BAR Staff makes a written finding that a window is not visible from a public right-of-way, the window is not regulated by the BAR and may be replaced with any suitable window allowed by the Uniform Statewide Building Code (USBC). However, whether visible or not, a building permit is required from Code Administration to replace a window in the historic districts.
4. Proposed replacement windows not in compliance with the Board's adopted policies, or found by Staff to be architecturally incompatible or historically inappropriate, require review and approval of a Certificate of Appropriateness by the BAR. The BAR will evaluate such cases as to the appropriateness of the window product on that particular building.
5. Vinyl or vinyl clad windows, and windows with removable muntins ("grilles") or muntins sandwiched between the glass, are not considered appropriate or compatible by the Boards and may not be approved administratively as replacement windows.
6. The use of storm windows is encouraged to protect historic windows and to conserve energy. According to the BAR's adopted *Design Guidelines*, storm windows are not regulated by the BAR and do not require a building permit but they should be installed so as not to damage historic material and to be visually minimally obtrusive. Energy panels may be used on single glazed replacement window sash.
7. Any appropriate and compatible modern windows may be used on new buildings and additions approved by the Board as part of the overall building's Certificate of Appropriateness approval. Refer to the chapter on Windows in the BAR's *Design Guidelines* for additional information.
8. These policies may be amended by the Boards as new materials become available but will be reviewed by the Board and updated at least every five years.

B. Administrative Approval of Replacement Windows

Staff may administratively approve direct replacement of windows if the proposed windows comply with the Alexandria Window Performance Specifications and all of the policies stated below.

1. Original Windows

All original or previously replaced windows having either mortise and tenon (“pegged”) sash joinery, or with cylinder (“wavy”) glass must be repaired and retained. This generally applies to all 18th or 19th century buildings. Where staff confirms in the field that these elements are too deteriorated to repair, they may be replicated to match exactly on a case by case basis. Original window frames from the 18th and 19th centuries must also be preserved and repaired or replicated.

2. Previously Replaced Windows

Windows, or window sash, previously replaced with modern frames and smooth (sheet, plate or float) glass may be replaced with one of the following:

- a. Single glazed painted wood sash must be used on the street facades of 18th and 19th century buildings with multi-light windows. Painted wood simulated divided light insulated glass windows may be used on the secondary elevations of these buildings. Energy panels may be used on single glazed replacement windows.
- b. 1-over-1, or 2-over-2 sash windows with modern float glass may be replaced with double glazed painted wood windows on any façade.
- c. Appropriate sash replacement kits may be used in buildings whose sash was previously replaced but which retain the historic frame.

3. Double Glazing

Double glazed (insulated) and simulated divided light painted wood windows may be used throughout on buildings or additions constructed after 1930, when Thermopane insulated glass windows were invented.

4. Aluminum Clad Wood

High quality, appropriately detailed aluminum clad wood replacement windows may be used on buildings constructed after 1969, when these windows became commercially available. Aluminum clad wood windows may also be used on any 20th century commercial building more than four stories in height and on multifamily projects with more than four units. Aluminum clad wood windows may generally replace steel sash windows on any building when using the same light configuration, color and operation, except where staff believes an architecturally significant building has intact and restorable existing steel sash.

C. Alexandria Window Performance Specifications

Windows may be provided by any manufacturer but the manufacturer's construction materials and form must comply with the specifications below in order to be approved administratively by BAR staff.

1. The applicant must use full frame replacement windows or sash replacement kits in the existing frame rather than insert or pocket replacements;
2. The dimensions and proportions of the window rails, stiles, muntins, frame, sill and exterior trim must match historically appropriate window proportions;
3. Corners of wood or aluminum clad wood sash must be constructed with mortise and tenon style, butt joinery rather than mitered, picture frame joinery;
4. Multi-light insulated glass windows must have permanently fixed muntins on the interior and exterior, with spacer bars between the glass that are a non-reflective, medium value color;
5. LoE glazing is encouraged for energy conservation but glass the must be clear, non-reflective and have a minimum 66% visible light transmission (VLT) through the glass;
6. Muntins must be paintable and have a putty glaze profile on the exterior;
7. Any vinyl portion of the wood window jambs should be minimally visible;
8. The frame for insect screens must match the color of the window frame and the screen mesh must be a neutral color with sufficient light transmittance that the window sash remains visible behind; and,
9. The applicant must submit complete window manufacturer specification sheets and a contractor order form to BAR staff for final approval with the building permit application.

Zoning Ordinance Section 10-109: Permitted maintenance of exterior architectural features.

- (A) Notwithstanding any other provisions of this Article X, exterior architectural features may be the subject of ordinary maintenance, including repair and replacement with the same design, color and material, without the necessity of a certificate of appropriateness if, upon review by the director or his designee, it is found that such maintenance:
 - (1) Does not result in the substantial removal of an exterior feature that is considered to have historic and/or architectural significance; and
 - (2) Does not perpetuate a condition or treatment that is considered to be, by board of architectural review policy, inappropriate or incompatible with the historic surroundings of the Old and Historic Alexandria District.

- (B) The following guidelines shall be used in the determination of historic or architectural significance pursuant to section 10-109(A):
 - (1) The feature is composed of materials or utilizes construction techniques which appear to be original to the building or structure.
 - (2) The feature is not original to the building or structure, but is of such old and unusual design that it cannot be easily duplicated or replaced, and the feature contributes to the overall historic character of the building or structure.
 - (3) The feature is of such high artistic value or is composed of materials of such quality or detail that the feature cannot be easily duplicated or replaced.
 - (4) The painting of a masonry building which was unpainted prior to such painting shall be considered to be the removal of an exterior feature having historic and/or architectural significance requiring a certificate of appropriateness.

Window Field Survey Form

Prior to any replacement of windows, a survey of existing window conditions is required.

Main body of the building

Architectural style: _____

Date of construction: _____

Window type: _____ (SH, DH, Casement, Fixed)

Light pattern: (front) _____ (1/1, 2/2, 6/6, etc.)

(side) _____

(rear) _____

Sash material: _____ (wood, steel, aluminum, vinyl, clad)

Glass: _____ (cylinder, float, art)

Frame & Sill: _____

Trim: _____

Notes:

Ell or Addition

Architectural style: _____

Date of construction: _____

Window type: _____ (SH, DH, Casement, Fixed)

Light pattern: (front) _____ (1/1, 2/2, 6/6, etc.)

(side) _____

(rear) _____

Sash material: _____ (wood, steel, aluminum, vinyl, clad)

Glass: _____ (cylinder, float, art)

Frame & Sill: _____

Trim: _____

Notes:

* submit representative photos

Check List for Replacement Window Applications

9/22/10

Description of Proposed Work

Why are the windows being replaced? (Describe on Page 7 of BAR Application)

Number of windows to be replaced on each facade

- _____ Front
- _____ Side Right (as viewed from Street)
- _____ Side Left (as viewed from Street)
- _____ Rear

Existing Conditions

Existing Window Age? (note differences on each façade)

- Original
- Replacement

Existing Glass Type?

- Cylinder
- Float
- Single glazed
- Insulated

Existing Sash Construction?

- Mortice & Tenon
- Doweled

Existing Sash glazing pattern (# lites/sash: 1/1, 2/2, 6/6, etc.) ?

Existing: _____

Proposed: _____

Manufacturer's Information

- Name of the Window Manufacturer _____ Series Number _____
- Type of replacement proposed?
 - Sash Pack
 - Insert
 - Full Replacement
- Window material proposed?
 - Aluminum
 - Vinyl
 - Fiberglass
 - Solid Wood
 - Clad Wood : Clad in what Material _____
- Type of glazing?
 - Single Glazed
 - True divided light (TDL)
 - Simulated divided light (SDL)
- Muntin bar: Material _____ Width _____ Profile _____
- Spacer bar: Material _____ Color _____
- Glazing tint: _____
- Frame: Material _____ Molding profile _____
- Insect screen size (1/2 or full). Material _____ Color of Framing _____

Screen Material_____

Photos & Graphics

- Overall view of each building façade where window replacement is proposed
- Photo(s) of each size/type of existing window proposed for replacement
- Manufacturer's cut sheets clearly identifying proposed materials and details