



# MEMORANDUM

PLANNING DIVISION  
DEPARTMENT *of* COMMUNITY *and* NEIGHBORHOODS

**To:** Historic Landmark Commission

**From:** Lex Traugher, Senior Planner

**Date:** May 4, 2023

**Re:** Work Session: Window Requirements for New Construction in the City's Local Historic Districts

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## WORK SESSION

### ***Action Requested***

Planning staff requests that the Historic Landmark Commission consider the issue of window requirements in new construction projects in the City's local historic districts. Planning staff is seeking direction regarding appropriate types of windows, in terms of materials and installation, and how we can better clarify requirements in the various documents (Zoning ordinance standards and design guidelines) used to evaluate new construction project requests. Specifically, Planning staff is seeking input from the HLC on the use and installation of vinyl windows in new construction projects in local historic districts.

### ***Issue Background***

Planning staff brought this issue to the HLC for a work session on March 2, 2023. The staff memorandum and minutes for that work session are included for review as Attachments A & B. The HLC directed Planning staff to address questions that arose from the discussion at the work session as follows:

- What is meant by the use of the word "Hybrid" in terms of the use of vinyl windows?
- Similarly, what is meant by the "reasonable" use of vinyl windows?
- Are there different types of vinyl windows or differences in quality?
- Similarly, are vinyl windows a "durable" window?
- Are there differences in vinyl window profiles (dimensions)?
- Charleston and New Orleans allow vinyl windows in their historic districts?

### ***Discussion***

#### What is meant by the use of the word "Hybrid" in terms of the use of vinyl windows?

Planning staff has used the term "hybrid" in a manner similar to other jurisdictions to refer to a combination of the use of vinyl windows with other more historically appropriate and durable windows such as wood clad, fiberglass, or wood windows, in any given new construction. Hybrid is not a type of window in and of itself, rather the use of the word is a reference to using multiple types of windows in newly constructed buildings. For example, it may be appropriate to use vinyl windows on a building façade that is not readily visible from the public right-of-way, while using more historically appropriate windows where they are readily visible on the same structure. The term hybrid will not be used when it comes to composing new zoning ordinance text nor amending the City's historic district design guidelines.

What is meant by the “reasonable” use of vinyl windows?

This leads into the use of the word “reasonable” in terms of where and how vinyl windows could be used. Planning staff asserts that it may be reasonable to allow the use of vinyl windows where they are not readily visible, perhaps on rear or secondary facades. Developers typically will propose vinyl windows because they are in general less costly than other types of windows that are more historically appropriate or durable; again clad wood windows, fiberglass or real wood windows. Planning staff envisions writing regulations that include the “reasonable” use of vinyl windows if that is the direction provided by the HLC.

Are there different types of vinyl windows or differences in quality?

On March 29, 2023, in response to question raised by the HLC in the work session on March 2<sup>nd</sup>, Planning staff conducted an afternoon of field research and went “window shopping”. Planning staff visited two window showrooms to look at vinyl windows in particular, but other types of windows were observed in order to make comparisons. What Planning staff discovered in both showrooms (one showroom was actually at the manufacturing location of vinyl windows) is that “yes” there is a difference in “quality” of vinyl windows but not in the sense that they are more historically appropriate or durable. What staff discovered is that the quality of a vinyl window has to do with the number of chambers in a window frame and what may or may not fill said chambers, and the number of layers of UV protection on the glass panes. Staff observed three distinct types of vinyl windows which are attached and labeled in a photo (Attachment D) as follows:

1. Vinyl window with multiple chambers (no fill) (Window 1)
2. Vinyl window with fiberglass inserts (Window 2)
3. Vinyl window with foam fill (Window 3)

What is interesting and most pertinent in this case is that no matter the number of frame chambers or fill (fiberglass or foam), the profile dimensions are almost exactly the same; within a few millimeters of one another. The vinyl window with no fill was a few millimeters narrower than the windows that had some kind of internal fill. This is what the sales person with whom we spoke referred to as the difference in “quality” in terms of vinyl windows. The quality has to do with the number of chambers in a frame, any chamber fill, and the number of coats of UV blocker on the glass itself. Notice in the attached photo that all three of the various vinyl windows have two panes of glass.

The vinyl windows that staff observed all had qualities that are unlike a traditional or historic window. The vinyl windows noted do not have the same profile depth, the depth is narrower or more slim than a traditional window, and the rails and stiles are of a slimmer width. For reference, please see the attached window component visual (Attachment C) labeling the various parts of a typical window. In addition, the vinyl windows observed have little if any detail, such as rounded corners or multiple planes, that one would typically observe in a more historic window. The vinyl windows were of a simply configuration, angular and boxy, lending to a very “flat” appearance.

Planning staff asserts that in the City’s local historic districts, the use of vinyl windows may or may not be appropriate given the nature of the dimensions of vinyl windows which are typically not similar to a traditional window. Further, the use of vinyl in the City’s local historic districts has specifically been excluded, particularly in terms of cladding, as it is not durable nor environmentally friendly, and Planning staff has discouraged the use of vinyl windows as replacement windows in existing construction as well as new construction. Planning staff is seeking direction from the HLC to better define in City code if and when the use vinyl windows is appropriate in new construction and if so, where is it appropriate and how should it be installed.

### Are vinyl windows a “durable” window?

In terms of durability, vinyl is not as durable as other window types such as wood clad windows, fiberglass or real wood, particularly given the local climate. Wood or composite windows are much more durable in this climate whereas vinyl windows (especially dark colored vinyl) are prone to warping in the heat and sun.

### Charleston and New Orleans allow vinyl windows in their historic districts?

In Planning staff's research, two cities (Charleston and New Orleans) allow the use of vinyl windows in their historic districts for new construction. A question arose at the previous work session regarding the written policy of these cities. Charleston has a written policy indicating that vinyl windows are appropriate for new construction and is included in Attachment E; see point number one. New Orleans does not have a written policy but the contact person with whom Planning staff spoke, indicated that vinyl windows are allowed in new construction. The representative from New Orleans also indicated that vinyl windows are allowed in certain instances on a case-by-case basis for replacement windows as some of the city's historic districts are low income areas where the cost of wood clad or real wood windows is prohibitive for residents.

### ***Moving Forward***

Because there is pressure at both the staff level and at the HLC level to allow the use of vinyl windows in new construction in the City's local historic districts, Planning staff requests that the HLC make a directive to staff to compose ordinance and guideline language to allow the use of vinyl windows in a “hybrid” fashion in new construction. In other words, allowing vinyl windows where they are not readily visible from the right-of-way (public or private), on secondary and rear facades or on upper or recessed building stories, and requiring traditional wood clad, fiberglass, or real wood windows where they can be readily seen. Planning staff would also propose code language that specifies how windows in new construction are installed, in particular the manner in which a window is recessed in a wall plane in relation to the wall cladding material.

### ***Attachments***

[A – Work Session Memo 3/2/2023](#)

[B – Work Session Minutes 3/2/2023](#)

[C – Components of a Typical Window](#)

[D – Window Photographs](#)

[E – Charleston Written Window Policy](#)

**Attachment A –  
Work Session Memo 3/2/2023**



# Memorandum

Planning Division  
Community & Neighborhood Department

**To:** Historic Landmark Commission

**From:** Lex Traugher, Senior Planner

**Date:** March 2, 2023

**Re:** Work Session: Window Requirements for New Construction in the City's Local Historic Districts

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## WORK SESSION

### ***Action Requested***

Planning staff requests that the Historic Landmark Commission consider the issue of window requirements in new construction projects in the city's local historic districts. Planning staff is seeking direction regarding appropriate types of windows, in terms of materials and installation, and how we can better clarify requirements in the various documents (Zoning ordinance standards and design guidelines) used to evaluate new construction project requests. Specifically, planning staff is seeking input from the HLC on the use and installation of vinyl windows in new construction projects in local historic districts.

### ***Issue Background***

Like many historic districts throughout the United States, new infill construction is a regulated design subject to review by local municipalities. In many cases, cities have created design guidelines that help define common elements of historic buildings that should be reflected in new construction. Many cities and towns also have specific ordinance standards addressing new construction as opposed to standards for the treatment of historic structures. This is the case for Salt Lake City. The approach to the design of alterations to historic structures, where it is critical to incorporate and conserve historic materials, forms, and details naturally vary from approaches toward new construction, in which the primary goal is to integrate the new building into the surrounding historic environs that create the character of the historic property or district.

Salt Lake City has followed many of its peers in creating a dual set of standards for historic and new buildings in its historic districts, as well as creating design guidelines to specifically address new construction. A rudimentary set of standards were included in the city's first preservation ordinance in 1976, with most design reviews of new construction reviewed by the then Historic Landmark Committee informally using unadopted, externally developed guidelines, usually developed based on national thinking at the time. In many cases, standards for additions were adapted for new construction. Issues of consistency raised their heads at times. Efforts to standardize both the approach and processes used by the HLC culminated in a new set of standards set forth in the 1995 zoning ordinance rewrite, shortly followed by published design

guidelines completed in 1998, which included an extensive section on new construction. Consistent application and interpretation, particularly regarding design details such as window design, continued to be a problem. This factored into a larger reexamination of the city's preservation program, in which clear and consistent, easy-to-understand standards and guidelines were cited as a goal by stakeholders including residents, developers, and policymakers. In 2012, the city rewrote its design guidelines for residential buildings, greatly expanding the guidelines for new construction. Guidelines for multi-family residential and commercial new constructions soon followed in 2015. Later, the city updated its ordinance standards for new construction, again with the goal of increased clarity and consistency.

This evolution has gradually improved the success of projects, both in design and length of review processes and required design revisions. In particular, the new ordinance standards in 21A.34.020.H provide vastly improved clarity for applicants, planning staff, and the members of the HLC in the course of evaluating new construction. While the concepts of the earlier ordinance remain, the new standards elaborate on these concepts and provide clearer standards of approval that can be tied to adopted design guidelines.

### ***Evaluation***

While broader issues such as building scale, massing, form, and primary materials are being successfully addressed with recent changes, it is increasingly apparent that the standards and guidelines could be improved for clarity when it comes to the design details of new buildings. In particular, issues have emerged in how the existing ordinance standards and guidelines are applied in the case of windows on new principal buildings (single and multifamily), particularly in terms of window material and the manner in which a window is installed.

### ***Issues with Current Standards and Design Guidelines***

In general, there is ample direction in the city's standards and guidelines regarding window size, shape, types, fenestration pattern, and location. All of these attributes are clearly apparent in the building design when it is submitted for review. Planning staff is able to make findings for the HLC, who can then determine whether the project meets these standards and determine whether the windows are appropriate.

At present, inconsistencies arise in review in terms of window material and window installation. The issue is actually three fold:

- First, the current design standards and guidelines somewhat dance around the use of vinyl as an appropriate window material. The design guidelines "discourage" the use of vinyl windows as they are not considered to be an historically appropriate nor a durable material, but they do not outright prohibit their use. There is little guidance toward consistency in what determines an appropriate window material, other than discouraging the use of vinyl as a non-durable material, and encouraging the use of "durable materials" (presumably wood, metal clad wood, composite, etc). As a result, the HLC has required wood or metal clad wood windows on some projects, fiberglass or composite on others, has approved vinyl in many instances, and in rare cases not addressed a window material at all in their final approval.
- Second, design standards and guidelines are somewhat vague regarding the requirement for windows to be set back from the primary wall plane. Section 21A.34.020.H(6)(c) of the zoning ordinance states, "Windows and other openings are incorporated in a manner that reflects patterns, materials, and detailing established in the district and/or setting." This is based on traditional building patterns and is also intended to provide variation in the wall plane, creating visual interest, and again references traditional design and construction methods. In response to this zoning requirement, planning staff has typically asked developers to include a 2-3 inch window reveal and the HLC has approved this window installation detail many times. That said, nowhere in the design standards and guidelines is the depth of a window reveal outlined or stipulated.

- Finally, the manner in which the issues of appropriate window materials and installation in new construction projects is not consistent between the various design guideline documents (Residential and Historic Apartment & Multifamily Buildings), and therefore they cause confusion and uncertainty. The Historic Apartment & Multifamily Building Guidelines are in fact more extensive and descriptive than the Residential Design Guidelines in terms of windows in new construction, however both documents could be ameliorated to provide more clarity. Consistency and clarity is needed between these documents, as well as the zoning ordinance, to further address windows in new construction projects.

### ***Scope and Severity of Problem***

The problem outlined here is most apparent in large-scale multi-family residential projects which take up more and more time on each HLC agenda. Again, this is not a new phenomenon; ordinance revisions, new design guidelines, and process changes dealing specifically with window approvals are evidence that the HLC has wrestled with this many times before. However, the HLC is wrangling with an approach to windows in a broader building climate in Salt Lake City that has seen a record number of large-scale, multifamily residential projects proposed throughout the city. Logically, it also follows that the larger the building, the more windows the building will have. The window cost in multifamily buildings typically takes up a larger proportion of the overall budget than in smaller projects, making it an attractive line item on which to make changes or opt for less expensive, often vinyl, windows.

Likewise, current design trends tend toward the use of materials that do not create a change in depth between the face of the wall plane and the face of the window. While the design guidelines call for materials that “provide a solid masonry character for lower floors and for the most public facades of the building.” (Guideline 12.69) it is typical to use another material such as siding or stucco on the upper stories of a large multifamily building, particularly those in which several levels of stick-built construction sit on a two or three-story concrete framed base. It is much more difficult to place a recessed window in these types of walls. Problems such as those enumerated above are much more common on these upper stories, and it is in these locations where problems are most apparent.

Taking the observational or anecdotal data as well as the data analysis above into account, it is apparent that a goal for further reviews of new construction is to:

- Ensure that the ordinance standards and design guidelines are met with regard to windows installed in new construction projects;
- Provide consistency in windows approved for new construction projects; address the specific use of vinyl windows and window installation.

Photos are attached (Attachment A) showing window installations and materials in several new developments around the city. These photos demonstrate the issue surrounding the use vinyl windows, window installation, and associated siding materials. Both good and bad examples are included for reference.

### ***Analysis of Alternatives***

The HLC is the policy-making body that would analyze and adopt alternatives to achieve the aforementioned issues, and this memo is intended to begin that process. Staff is in the process of evaluating several alternatives for analysis to address various aspects of the broader issue.

As part of our analysis, Staff reviewed current design guidelines for the use of vinyl windows in new construction from the following cities: Charleston, SC; Savannah, GA; Boise, ID; Boston, MA; Los Angeles, CA; Charlotte, NC; Denver, New Orleans, LA; Portland, OR; South Bend, IN; Nashville, TN; Ogden, UT. The

vast majority of these cities do not allow vinyl windows in new construction. Some however do all them, surprisingly Charleston, SC and New Orleans, LA.

Some cities have a sort of “hybrid” policy regarding vinyl windows, depending on the location, visibility from the street, and installation of a proposed window vis-à-vis siding materials, a vinyl window may be appropriate in some instances. Planning staff asserts that perhaps a “hybrid” use of vinyl windows in new construction may be appropriate for the city, and would like to explore this option in greater detail with the HLC. A summary of the findings from the above referenced cities is attached in Exhibit B.

### ***Potential Alternatives***

#### Macro level – big picture considerations:

- Should we allow the use of vinyl windows in new construction?  
*Planning staff notes that the use of vinyl windows across the board would be detrimental to the city’s preservation program and would not be in line with best practices.*
  
- Should we prohibit the use of vinyl windows in new construction?  
*Planning staff notes that a total ban on vinyl windows is probably not reasonable particularly in instances where said windows would not be visible from public right-of-way.*
  
- Should we allow a for a ‘hybrid’ use of vinyl windows in new construction based on location, installation, and siding materials?  
*Planning staff asserts that perhaps a “hybrid” use of vinyl windows in new construction may be appropriate for the city, and would like to explore this option in greater detail with the HLC.*

#### Micro level – Potential Next Steps

- Revise the Zoning Ordinance and Design Guidelines, as appropriate, to include more specifics on windows in new construction, including more on materials and specifics on information currently only referenced;
- Coordinate the language regarding windows in new construction project to be consistent across all adopted Design Guidelines (Residential, Historic Apartment & Multifamily Buildings, and Commercial Properties).
- Require more detailed window sections than currently accepted in new construction applications. Require detailed sections for each wall type or window type;
- Create standards or checklist for planning staff to review window sections including what to look for;
- Provide additional training on appropriate window design and materials to stakeholders. This could include Staff, HLC Commissioners, Developers, Architects and Applicants;
- Maintain a list of appropriate window models that will likely be approved;
- Require any changes in design or specs to be reviewed prior to installation – and require planning staff review of mock-up on site prior to window installation; and/or,
- Require verification of installation as approved in CoA or building permit before Certificate of Occupancy is issued.



**Attachment A –  
Photos**



Original wood windows in the historic structure. Notice the recessed nature of the window installation and how this provides depth and shadow lines.

Example of a vinyl window installed flush with the exterior wall plane. Trim is provided to create a more finished look however the window appears to be flat unlike the original windows in the left of the photo.

Although this is an addition on a single-family residence, the difference in window material and installation is obvious.



Again, the windows in this addition were installed flush with the wall and have no depth like an historic window.



These vinyl windows on a street facing facade were installed with a minimal reveal. The reveal is created by the depth of the brick cladding material. A further issue is the configuration of the window (casement style) which is not a typical historic design.

These vinyl windows were installed flush with the stucco wall and appear very flat.

This vinyl sliding door is also installed flush with the stucco wall and appears very flat.

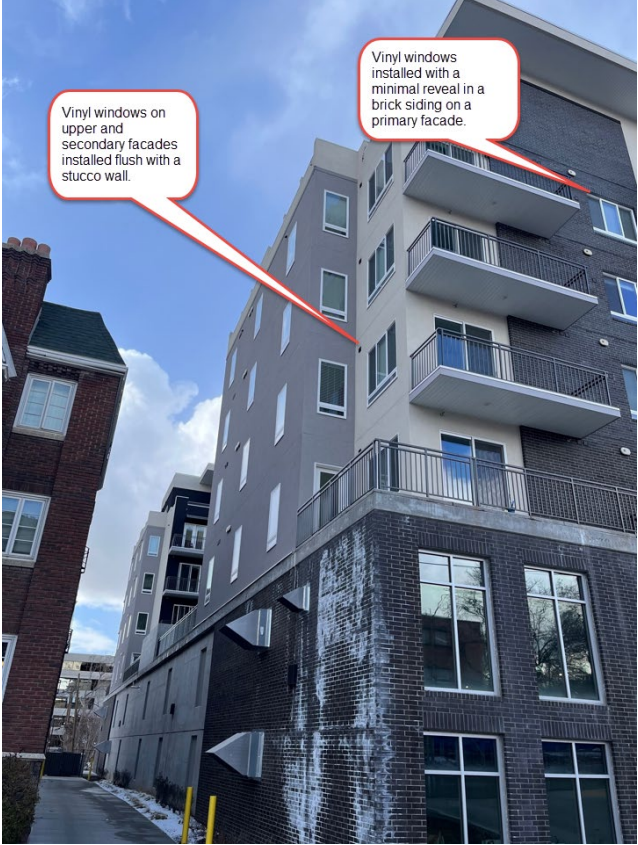
Window examples from a recently approved and constructed multifamily development in one of the city's local historic districts. Notice the difference in installation with the two different siding materials.



Vinyl windows installed on a primary facade in a brick cladding with a minimum reveal.

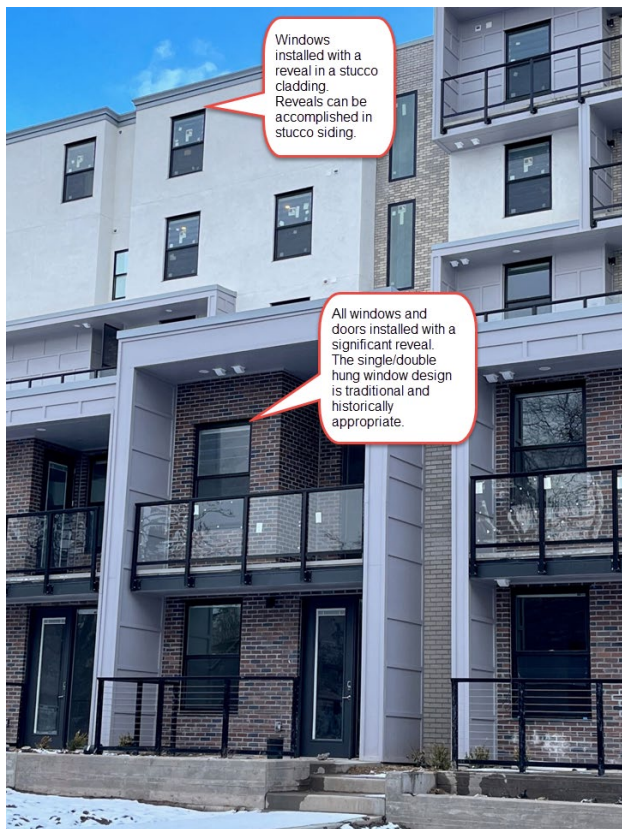


Vinyl windows installed flush with the wall on a recessed upper level.



Vinyl windows on upper and secondary facades installed flush with a stucco wall.

Vinyl windows installed with a minimal reveal in a brick siding on a primary facade.



Good examples of appropriate windows installed in a recently approved multifamily development in a local historic district. These windows have been installed with a 2-3" reveal in a variety of façade claddings (brick, cementitious panel, and stucco). Planning staff also notes the traditional style of the window and also notes that these windows are fibrex, a composite material.





Traditional style, single/double hung window installed with a significant reveal in both a stone and stucco siding.

Another good example of appropriate windows installed with a reveal in a variety of façade materials.

**Attachment B –  
City Window Research**

City	Allow Vinyl?	Hybrid	Contact	Notes
Austin	No			
Boise	No		Richard Jarvis	
Boston	No	Yes	Nicholas Aramata	No vinyl in general, but can use on "exempt" unseen facades
Charleston	Yes			See written policy statement
Charlotte	No		Candace Leite/Laura Bandara	
Denver	No		Abigail Christman	
Indianapolis	No			
Los Angeles	No		Shannon Ryan	Unless an economic burden, wood framed windows are req on all facades
Memphis	No	Yes		Does allow vinyl and aluminum clad. Composites on 3rd story and above
Nashville	No/Yes		Robin Ziegler	Generally vinyl is not ok, however some vinyl brands have been approved
New Orleans	Yes		Eleanor Burke	Provided a list of approved windows
Ogden	No regs			
Portland	No		Brandon Spencer-Hartle	New construction - Wood, metal clad wood, fiberglass
Savannah	No			See written policy statement
South Bend	No regs		Adam Toering	SB experiences little to no new construction in LHDs



**Attachment B –  
Work Session Minutes 3/2/2023**

## **MOTION**

**Commissioner Amanda De Lucia stated, “Based on the information presented and discussion, I move that the Commission deny this application based on staff’s recommendation.”**

**Commissioner Emoli Kearns seconded the motion. Commissioners Amanda De Lucia, Michael Abrahamson, Emoli Kearns, Mike Vela, and Chair Babs De Lay voted “aye”. The motion to deny the petition was passed.**

Vice-Chair John Ewanowski and Commissioner Carlton Getz rejoined the meeting.

## **WORK SESSIONS**

- 1. Window Requirements for New Construction in Local Historic Districts** - Planning staff requests that the Historic Landmark Commission consider window requirements for new construction projects in the city’s local historic districts. Planning staff is seeking direction regarding appropriate type of windows, particularly in terms of materials and installation, and how we can better clarify requirements in the various documents including the Zoning ordinance standards and design guidelines that are used to evaluate new construction project requests. (Staff Contact: Lex Traughber at 801-535-6184 or [lex.traughber@slcgov.com](mailto:lex.traughber@slcgov.com))

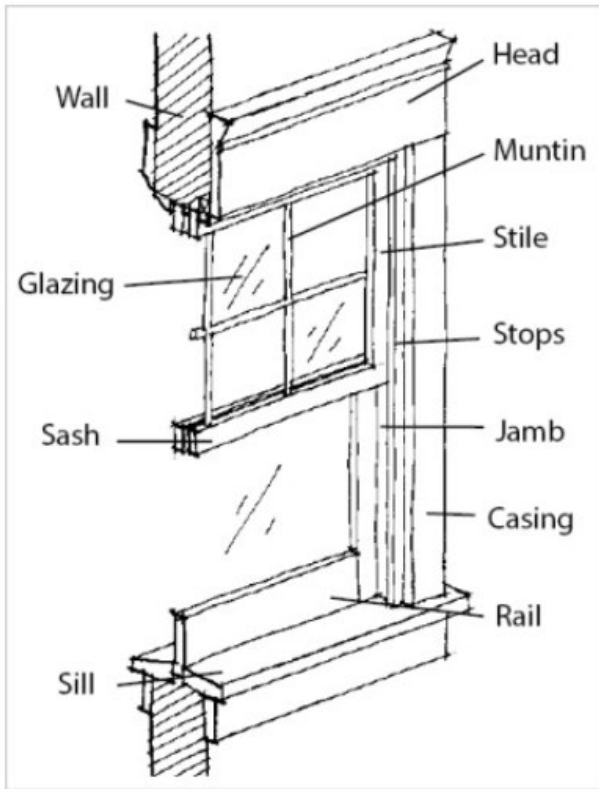
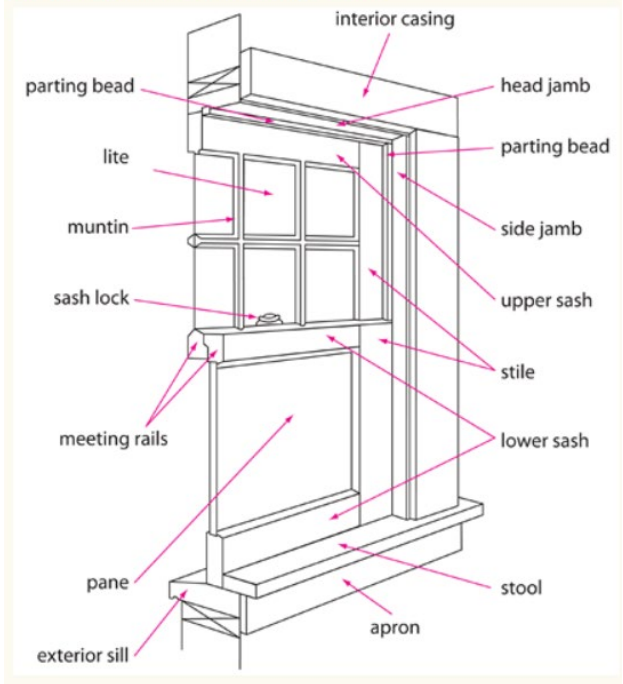
Planning Manager Amy Thompson, standing in for Senior Planner Lex Traughber, reported that Staff was seeking input from the Historic Landmark Commission regarding window requirements in the City’s local historic districts. She said that Staff wanted to know what types of materials and window installations the Commission felt were appropriate and how to better clarify the requirements in the zoning ordinance and design standards. She reported areas of the code that Staff feels are unclear and provided examples of other cities requirements throughout the country. She shared examples of not preferred and preferred window installations.

The Commissioners discussed whether they felt there was validity to banning vinyl or having a hybrid option. Staff presented potential alternatives for window use. Staff clarified that the word hybrid would not be used in the zoning code. The commission asked staff to research different types of windows to determine their quality, durability, fail rate, and dimensions.

The meeting was adjourned at approximately 6:57 PM.

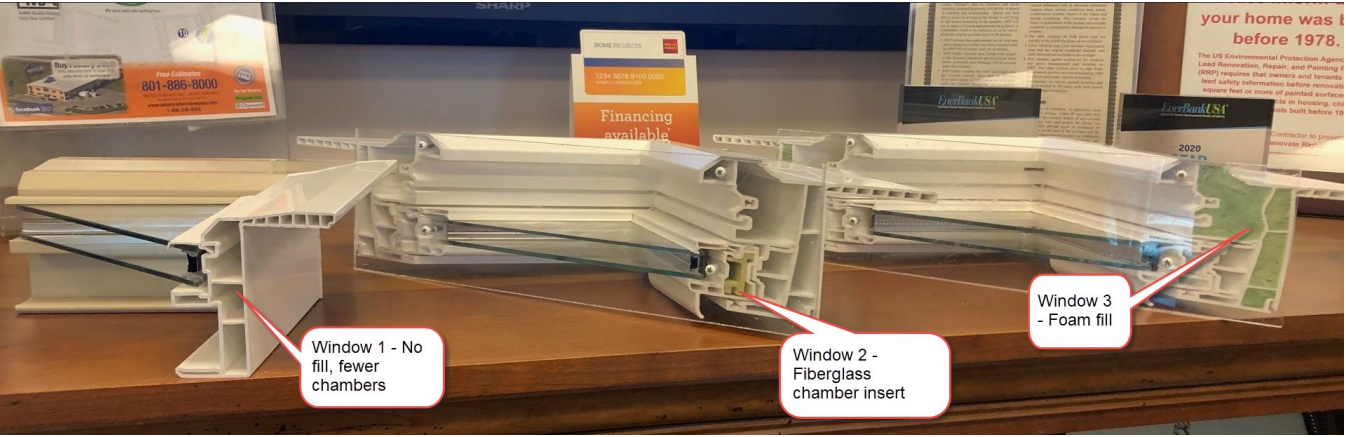
**Attachment C –  
Components of a Typical Window**

**Names and Parts of a Typical Window**



*Typical double-hung window components.*

**Attachment D –  
Window Photographs**



Window 1 - No fill, fewer chambers

Window 2 - Fiberglass chamber insert

Window 3 - Foam fill

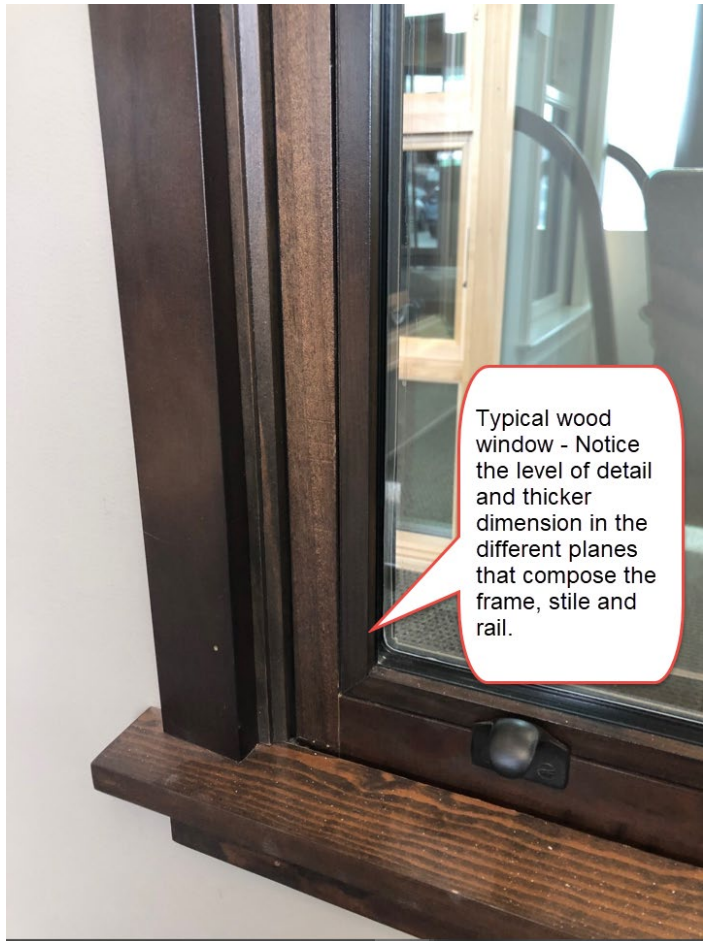


Typical vinyl window - Notice the narrow rail and stile. Also boxy with no decorative detail like one would find with wood.



Wood clad window  
- Notice the thicker dimension of the rail and stile as compared to the vinyl window on the right.

Vinyl window  
- Narrower rail and stile.



Typical wood window - Notice the level of detail and thicker dimension in the different planes that compose the frame, stile and rail.

**Attachment E –  
Charleston Written Window Policy**





## DESIGN REVIEW BOARD

# POLICY STATEMENT FOR WINDOWS

CITY OF CHARLESTON  
2 George Street, Third Floor

DEPARTMENT OF PLANNING, PRESERVATION AND SUSTAINABILITY  
Charleston, South Carolina 29401 843-724-3781 Fax: 843-724-3772 www.charleston-sc.gov

Windows are a major character defining feature of a building and should be of good quality, have sufficient relief and depth, and good materials and details.

1. Materials:

- a. New construction and non-historic structures may utilize vinyl, aluminum, aluminum clad, vinyl clad or solid wood windows.

2. Lite Divisions:

- a. New construction and non-historic structures may utilize simulated divided lites provided an exterior and interior muntin bar and thermal spacer bar (between the two panes of glass) is used. Exterior muntins shall have a profile and a minimum depth of ¼".
- b. Sashes shall be deep enough to allow for appropriate simulated divided lites to be applied.
- c. Lite division patterns are to be appropriate to the individual building and neighborhood context.

3. Trim and Positioning within Openings:

- a. Window trim is to be appropriate to the context of its installation. Brick moulding is encouraged in masonry installations. Window casings used in wood or cementitious siding installations should be of an appropriate thickness to provide relief from the siding.
- b. Windows are not to be flush mounted with the exterior walls. Windows are to be recessed into the wall to maximize depth and shadow. This is particularly important in stucco or brick applications; alternate detailing should be explored to provide a maximum window recess.

4. Glazing:

- a. Generally, glazing is to be clear with no tinting.
- b. New construction and non-historic structures may utilize insulated glazing.
- c. Historic structures are to utilize single pane glazing.

5. New Windows in Historic Structures:

- a. Historic windows in historic structures shall be repaired when possible and only be replaced when absolutely necessary.
- b. New windows in historic structures shall be appropriate to the historic building in size, material, lite cut, detailing and cannot be clad.
- c. Plastic jamb liners are not permitted in historic windows.

6. Exterior Finishes:

- a. All finishes, including jamb liners, are to be appropriately applied and durable.

7. Sills, Check Rails and Sashes:
  - a. All sills are to be sloped as an architectural and waterproofing detail.
  - b. All check rails are to be in keeping with the look and proportions of a double hung window. The check rail should be the thickness of the bottom rail of the top sash.
  - c. All windows are to be double hung with a frame and sash of appropriate thickness.
  - d. Jamb liners are to match the color of the window sashes.
  
8. Window Sample:
  - a. A full size window is to be presented to the Board when submitting for Preliminary review.

The above criteria are intended as general guidelines. Applications for windows shall be considered on a case by case basis.

This Policy Statement was adopted by a majority on the June 27, 2013 meeting of the Design Review Board.

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Chair