Neighborhood Design Standards

H-1 Zone

Historic Downtown

Paducah, Kentucky

February 2022

Adopted by the Historic and Architecture Review Commission

City of Paducah

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1.0 Introduction

1.1 Statement of Significance

Paducah's historic buildings play a major role in the city's distinct sense of place and character. Built heritage provides a sense of continuity and community through the many memories people have associated with them. Preserving historic resources reinforces the unique qualities of a place. Moreover, Paducah's built heritage is more valuable than the cost of the materials alone. Distinction and sense of place are marketing and economic tools to draw visitors and investors to Downtown Paducah. Therefore, it is imperative that the community take appropriate steps to preserve and protect its historic buildings within Historic Downtown.

1.2 Purpose and Benefits of Design Standards

What are Design Standards?

This Design Standards document regulates historic and architectural standards for exterior changes and new construction to properties within Paducah's H-1 Zone of Historic Downtown (see district boundaries on pg. 5). Standards are technical directives that contractors, commission members, city staff, and property owners within the district will follow regarding proposed changes/additions to a historic property within the district. Standards protect the historical climate of Downtown Paducah while allowing alterations to be compatible and architecturally appropriate to existing structures.

The Historic and Architectural Review Commissions (HARC) will use the outlined standards to evaluate the appropriateness of exterior changes and new construction within the district, which results in a Certificate of Appropriateness (COA).

Benefits of Having Design Standards

- Educates and equips the community with a strong tool for protecting the distinct identity of the district.
- Provides a framework for ensuring the compatibility of new construction with the authentic character of the district.
- Establishes a climate of confidence for those who have invested (or plan to invest) in the historic district because of the appeal of its distinct atmosphere.

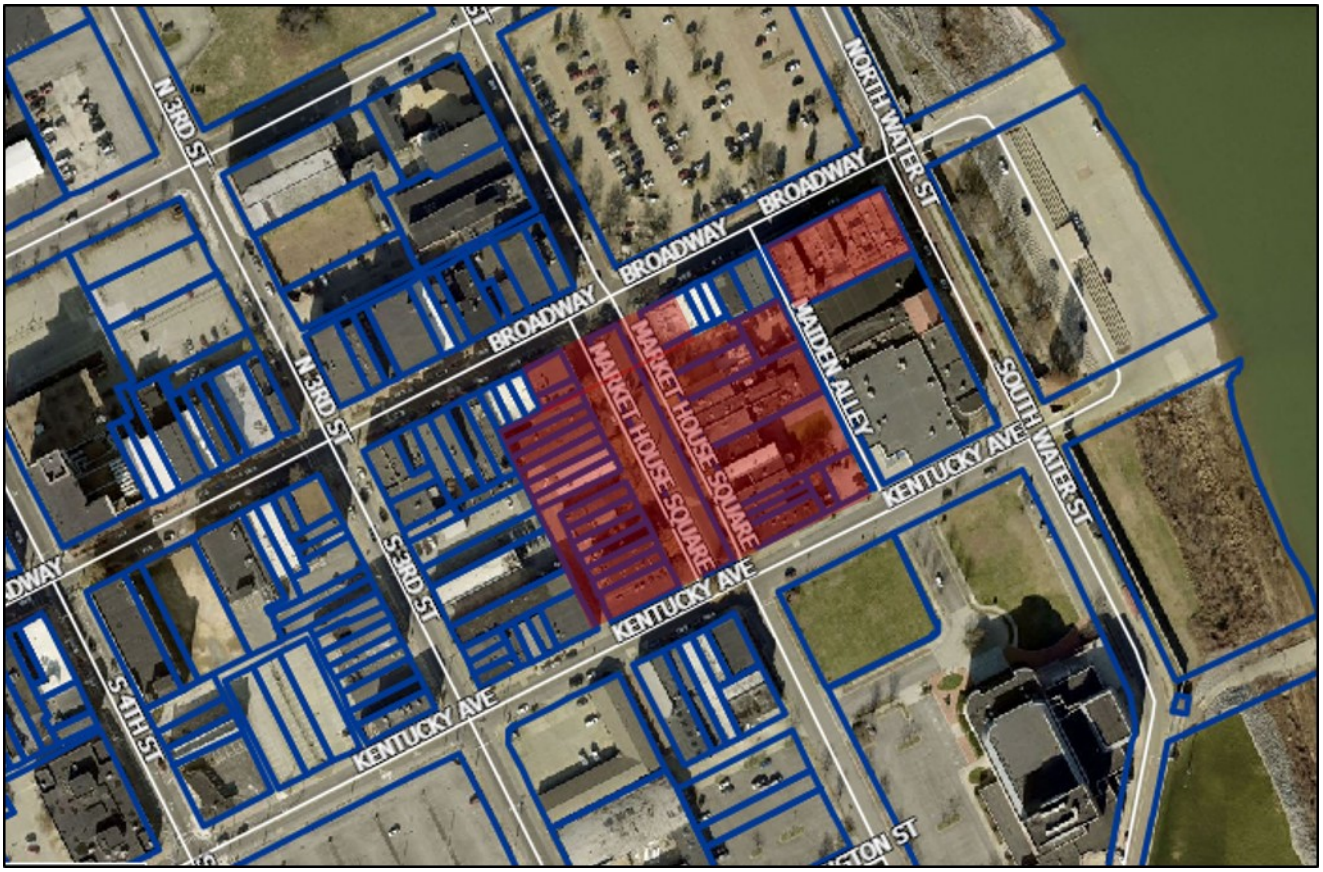
1.3 Secretary of Interior's Standards for Rehabilitation

All standards presented in this document are based on the Secretary of Interior's Standards for Rehabilitation. The National Park Service created these ten basic principles in 1976 to guide property owners in preserving the historic integrity of a building.

The Secretary of Interior's Standards recognize the need for adapting historic structures to modern times and therefore allow for changes and new construction that are compatible with the building and/or the historic district. They are broad enough to apply to all architectural styles, time periods, and building types. Detailed standards are included in this document.

1	A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.
2	The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.
3	Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.
4	Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.
5	Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a historic property shall be preserved.
6	Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.
7	Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.
8	Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.
9	New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.
10	New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

1.4 Boundary for H-1 Historic Downtown Neighborhood Design Standards



1.5 District Background and Fabric

Established in 1827 by explorer William Clark, Paducah rapidly became a critical trading port and flourishing town where the Tennessee River flows into the Ohio River. Continual growth followed along with the town's first financial institution, Market House, hospital, numerous churches and courthouse. By 1860, Paducah's business environment grew rapidly with the help of the tobacco, lumber, iron, and bottling industries.

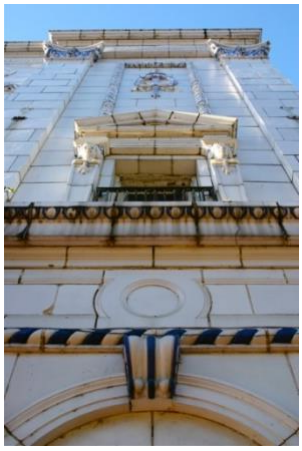
Along with this economic growth came an expansion of Paducah's architectural resources from 1870 to 1900. Development naturally occurred along the riverfront and migrated westward. Building materials utilized local resources and craftsmanship. The most common building form constructed downtown was the two-part commercial block. The majority of these are brick structures are two to four stories in height characterized by a division into two distinct zones. The lower portion indicates a public space such as retail stores. The upper portion represented a private space for residential, storage, or office use.

Common architectural details found in Downtown Paducah include cast iron storefronts (many of which

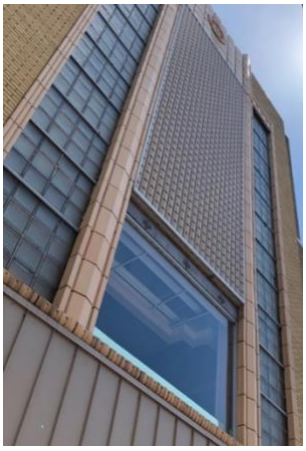
were manufactured in Paducah's foundries), cast iron sills, and stone lintels. After the turn of the century, Paducah architecture began to be influenced by the national trends including Romantic Revival, Beaux Arts, Art Deco, and Tudor Revival. These styles were often defined by unique architectural details such as brackets, pediments, dentil molding and pilasters.

Cast iron storefront and sill

Cast iron sill


Romantic Revival


Beaux Arts


Art Deco


Tudor Revival


Bracket


Pediment


Dentil Molding


Pilaster

1.6 Define Your Process

The first step when undertaking a project is to analyze the unique characteristics of a historic property before making decisions about rehabilitation, alterations, or the design of new construction. Depending on the significance of the property, its condition, and intent for use, one of these three different treatment strategies will be most appropriate:

- Rehabilitation – the process of returning a property to a state of utility, through repair or alteration, which makes possible an efficient contemporary use while preserving those portions and features of the property which are significant to its historic, architectural, and cultural values.
- Preservation – focuses on sustaining the existing form, materials, and integrity of a historic property through ongoing maintenance and repair of historic materials/features rather than extensive replacement or new construction. New exterior additions are not consistent with this treatment approach. However, limited and sensitive upgrading of plumbing, electrical, and mechanical systems and other code-required work is appropriate.
- Restoration – involves accurately depicting the form, features, and character of a property as it appeared in a particular period of time. This typically involves the removal of features from other periods in its history and the reconstruction of missing features from the restoration period. Limited and sensitive upgrading of utility systems and other code-required work is appropriate.

Rehabilitation is most often the strategy for a property; therefore, it is the primary focus of this document.

As stated in the definition, the treatment "rehabilitation" assumes that at least some repair or alteration of the historic building will be needed in order to provide for an efficient contemporary use; however, these repairs and alterations must not damage or destroy materials, features, or finishes that are important in defining the building's historic character.




Place photos of examples of rehabilitation projects.

2.0 Design Standards: Existing Buildings in the H-1

2.1 Tips for Planning the Rehabilitation of Your Historic Storefront

- Conduct pictorial research to determine the design of the original building or early changes, when necessary.
- Conduct exploratory physical investigation such as removing plywood from transom windows to see if the original windows still exist or removing metal from the façade to determine the condition of original masonry.
- Remove inappropriate features, materials, signs, or canopies that have been added over time and cover the original storefront.
- Determine condition of all original elements and retain materials that are original to the building if they can be repaired or replace with appropriate replacement (like-kind) materials.
- Reconstruct missing original elements such as cornices, windows, and storefronts if documentation is available. If not, design new elements that respect the character, materials, and design of the building and surrounding buildings.
- Avoid creating false historical appearances or other designs that include inappropriate elements such as pent eaves between floors, added elements at cornice, recessed balconies, plastic shutters, or shutters where they never existed previously.

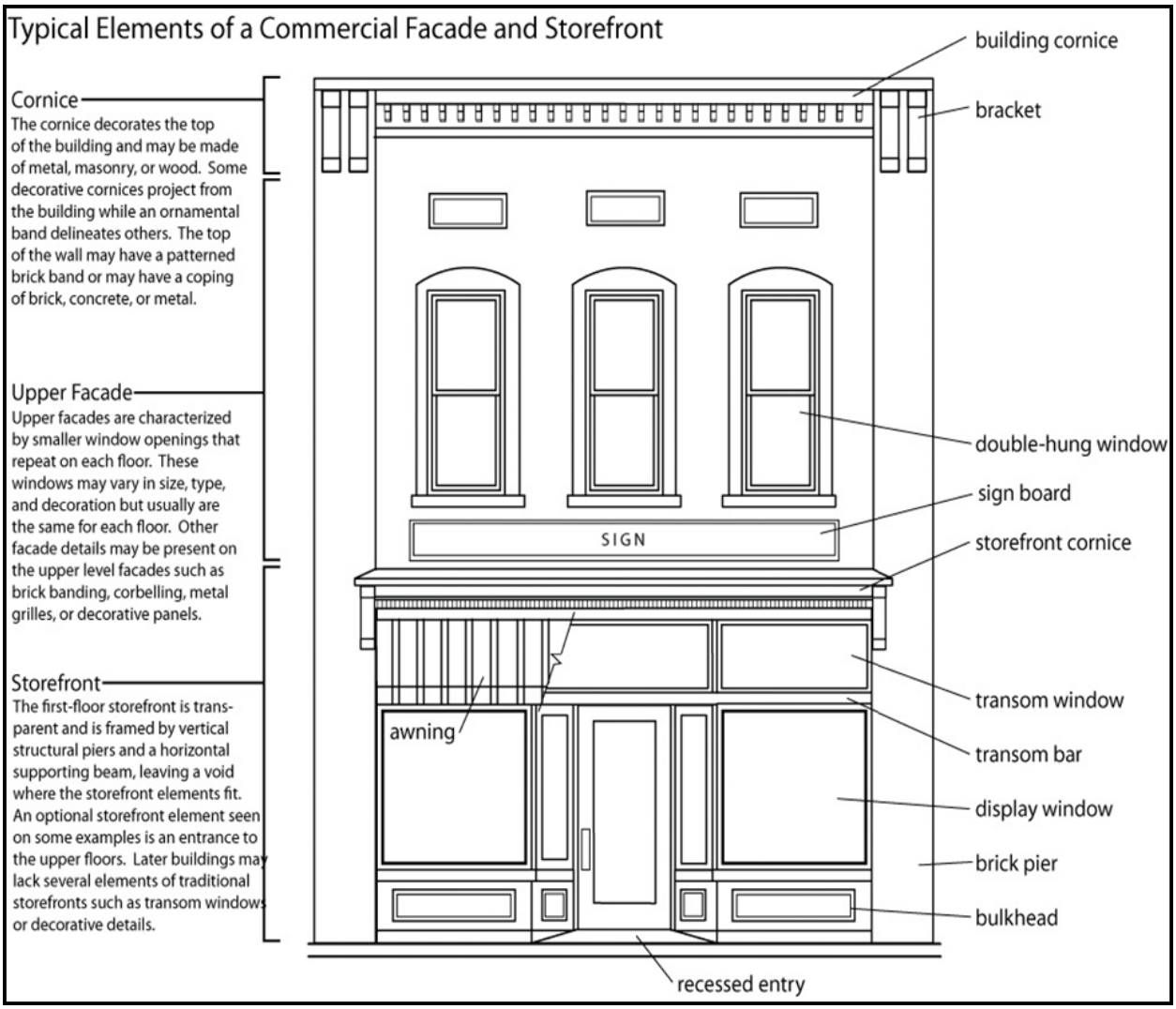
128 Broadway - an example of pictorial research to determine original or early design of a storefront. It would be optimal if the original right window were still intact. Keeping the materials and designs that are still intact—cast iron columns, sills, and bulkhead design—reflect proper treatment.

2.2 Importance of Facades & Storefronts

The storefront is usually the most prominent feature of a historic commercial building, playing a crucial role in a store's advertising and merchandising strategy. Street level facades should provide visual interest to the passing public and be aesthetically and historically appropriate for the district and adjacent buildings.

The design of a historic storefront varies depending on the period, size and scale of the building, but it is usually composed of large glass display windows with transoms and a bulkhead or kick-panels below.

Upper stories are visually related to the storefront through a unity of form and detail. The removal of inappropriate, non-historic cladding, false mansard roofs, and other later alterations can help reveal the historic character of a storefront. Protecting and maintaining masonry, wood, and architectural metals which comprise storefronts through appropriate treatments such as cleaning, rust removal, limited paint removal, and re-painting is recommended.



Storefront Materials

Keep the storefront materials simple and unobtrusive. If original materials exist, repair or replace with like material. There is no need to introduce additional types of building materials that would have not originally existed on your building.

Exterior Doors
When the original front or secondary doors exist, they should be repaired, refinished and refitted with appropriate hardware. If the doors are to be replaced, new doors should closely resemble the design and proportions of the original door. Mirrored and deeply tinted glass should be avoided as well. Very lightly tinted glass or low-energy glass can be acceptable to offer some protection from heat gain. Avoid unfinished anodized metal, bright aluminum or stainless-steel frames. Residential type doors shall not be used.

Transom Windows
Transom windows were smaller windows above the display windows that functioned as early energy savers. They allowed daylight to enter deep into the interior of the space. Transoms also continued the transparent quality of the storefront up to the top "frame" of the front façade. They are often found hidden beneath drop ceilings or applied exterior panels. They should be retained whenever possible.

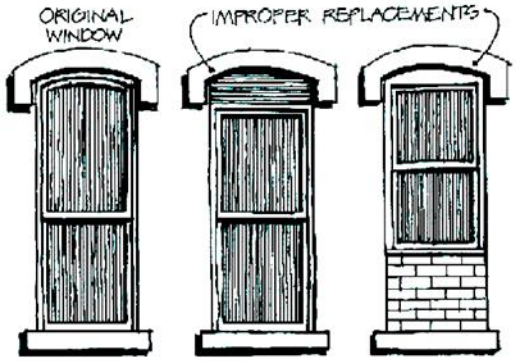
Upper Story Windows
Property owners are encouraged to repair and retain existing historic windows, as reflected in this example of original 19th century arched windows on Market House Square. The last option is window replacement. Replacement windows for missing or non-historic windows must be compatible with the historic appearance and character of the building.

2.3 Window and Door Standards

- Whenever possible, retain and preserve original windows and doors including their size, number, and arrangement. Deteriorated window and door elements should be repaired rather than replaced whenever possible.
- Preserve original window and door details including sash, trim, muntins, clear glass, shutters,

sills, mullions, side lights, and hardware.

- If replacement of an original window or door is approved, use materials that match the original as closely as possible in design, material, pane configuration, glazing, detail, and profile. Substitute window materials such as aluminum-clad windows may only be considered if it matches the original in its dimension, profile, design configuration, and finish.
- Removing an existing upper floor window for the installation of an inset balcony is inappropriate and not allowed.
- Enclosing an original window or door opening or adding a new window or door opening to a character-defining façade will alter the historic character of the building and is not appropriate. New or replacement windows should be designed to fit within the original window openings.
- Window and door openings on a primary façade should not be bricked-in or covered in plywood. Windows on secondary facades, if enclosed, should be done in a manner that is set-back within the window opening and can be removed in the future.



- Wooden shutters are permitted on those buildings which historically would have had shutters. Shutter dimensions should reflect the proportions of the window unit.
- Energy conservation is an important consideration for all buildings, including historic structures.
- Maintain caulking and weather-stripping to prevent air and water infiltration
- Keeping a sound paint film on all windows and doors.
- Reflective, mirrored, and tinted glass windows are not appropriate on historic buildings. Plexi-glass is also an inappropriate window material.

2.4 Awnings

- Awnings should be designed to fit the storefront opening to emphasize the building's proportions and should not obscure or damage architectural details.
- To be historically appropriate, and to allow ample clearance above the sidewalk areas, awnings may need to cover or conceal decorative transoms containing prism glass or stained glass only visible from the underside of the awning. The use of bubble, concave, or convex awning forms were not common to early storefront design and should be avoided. Vinyl-coated fabric, fixed metal, transparent or opaque vinyl or wood awnings are inappropriate. Awnings that are backlit are not acceptable.
- Awning color should be coordinated with the color scheme of the entire building façade and chosen from approved color palate. Stripes and solids are permitted.

- The valance may be used for a sign if allowed pursuant to Section 126-76 of the Paducah Zoning Ordinance. Other awning regulations can be found in Section 126-85 of the Paducah Zoning Ordinance.

2.5 Paint & Color

- Unpainted historic brick and/or stone masonry shall not be painted.
- In general, a color scheme that will visually link the building to its past as well as to others in the area should be selected. Colors that are compatible with the building's predominant materials, such as red brick or stone, should take first consideration.
- A single color establishes a uniform background. One color on similar elements, such as window frames or kick-plates, should be used to show that they are all part of the same façade. Brighter colors may be used for small special accents to emphasize entryways and to highlight special structural ornamentation.
- When in doubt on an appropriate palette, refer to the link below for suitable color series. Authentic color schemes from respective historic era: www.sherwin-williams.com/architects-specifiers-designers/color/find-and-explore-colors/color-collections/residential-exterior-palettes/americas-heritage

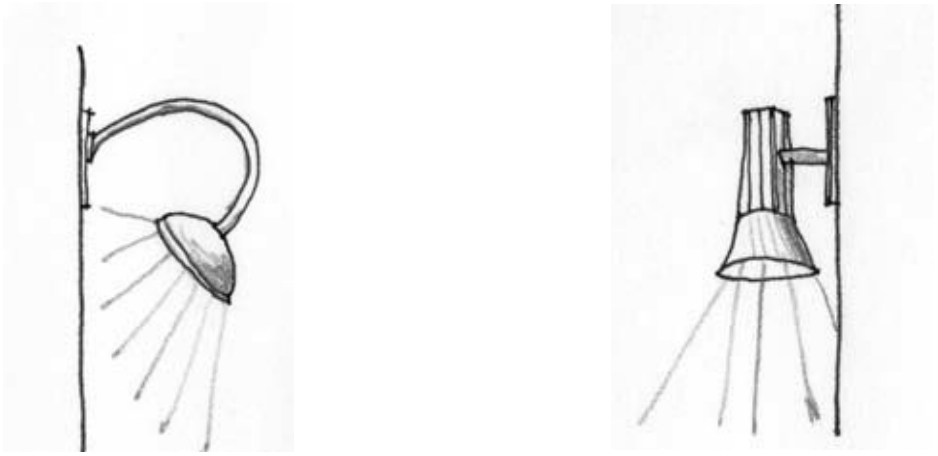
Sampling color different authentic paint schemes.

Uniform background with small, bright accents.

- If paint or heavy grime must be removed, a chemical cleaner may be required. There are a wide range of chemical cleaners available, and a qualified cleaning contractor should be consulted to evaluate your building and recommend a treatment. A test patch should first be applied and allowed to weather for a few weeks. If the results of the test are satisfactory and no damage is observed, it should be safe to proceed.
- Any technique that erodes the hard, outer surface, especially sandblasting, is prohibited. For pressure washing, 2000 psi or lower is mandated. Be aware that sandblasting and painting unpainted brick disqualifies a project from state and federal historic tax credits.

2.6 Lighting

- Replacement in kind does not require a COA but will be reviewed as part of an infill or addition project.
- Retain and maintain historic light fixtures.
- If contemporary fixtures are being added to an existing building, those fixtures must be contextually related to the existing building. New light fixtures should be unobtrusive.



Simple metal extended-arm fixtures are appropriate for illuminating commercial buildings and signs.

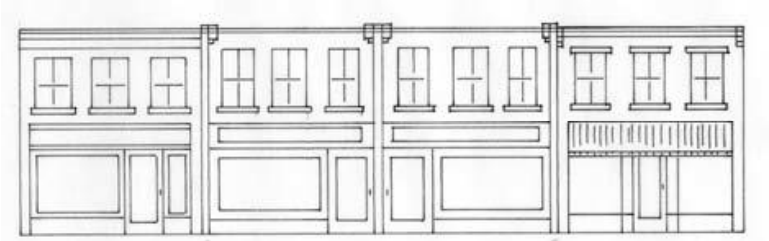
2.7 Signage

- See the City of Paducah Zoning Ordinance, Section 126-76(j) for additional details
- Signage should be placed at the top of the storefront, applied to the storefront window, hung over the sidewalk projecting no more than five feet or located on the edge of an awning. The placement of signage should be coordinated with adjacent storefronts to avoid visual confusion.
- For signs used on awnings, letters or logo should be configured with contrasting letters painted or sewn onto the awnings valance.
- Large hanging plastic signs and oversized signs are not appropriate for historic buildings. Any sign placed over features on the second story façade is not historically appropriate. Some lettering styles evoke different time periods; therefore, the architectural time period and style of the building should be considered when selecting sign faces.
- Some signage has gained historic significance in its own right. Whenever possible, retain and preserve and retain historic signage.
- Permanent neon or back-lit signs are generally prohibited in the district.
- Understated lighting should be used when directed at a sign from an external source (see standard for Façade Lighting).
- Wall signs on commercial buildings should be flush-mounted in appropriate locations in the wall space above the storefront.

3.0 Design Standards: New and Infill Construction

3.1 New Construction

- Differentiate new construction in the commercial area from the old.
- Make new buildings compatible with adjacent buildings through massing, size, scale, and architectural features. Avoid historic reproductions.

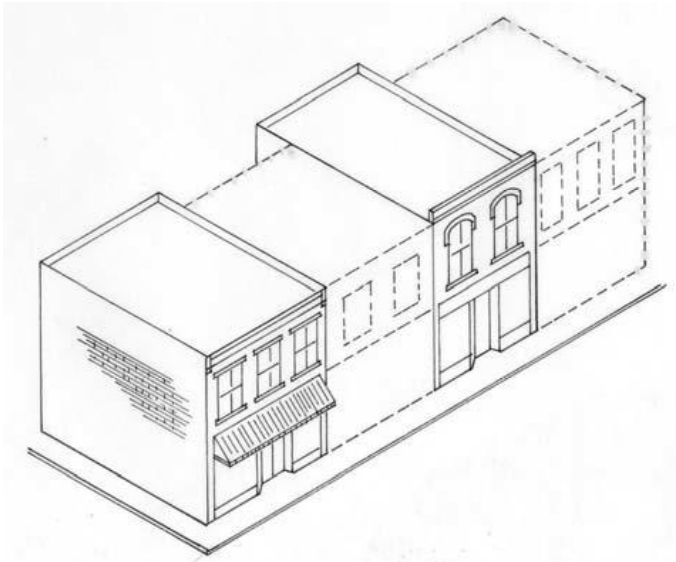


The buildings at the center of this row appropriately reflect historic trends in mass, scale, size, and features.

- Construct new buildings that are clearly of their own period. Avoid direct imitation of historic designs such as through window lintels or elaborate sheet metal cornices. Direct reproductions may cause observers to confuse the old with the new.
- Reconstruct historic buildings, if desired, only if on their original site and if a direct copy.
- Construct reconstructed buildings with materials, detailing, and decorative features to match or closely approximate the original building.
- Clearly designate reconstructed buildings with a marker applied to the exterior of the building, freestanding sign, or other method of designation.
- Retain and preserve freestanding façade walls which may be left following a fire or internal demolition and encourage new construction which maintains the original design and appearance of the building.
- Respect and maintain the existing configuration of storefront and upper façade arrangements.

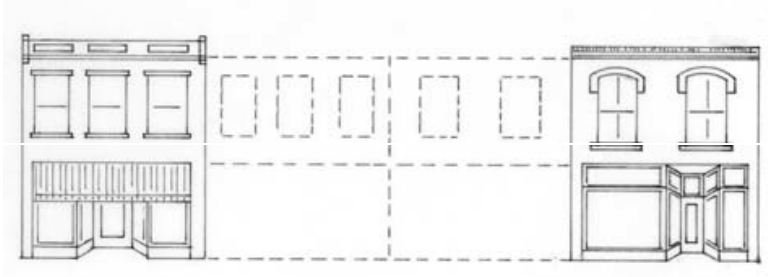
The new building at the center respects the traditional division of the façade into upper and lower sections and maintains the traditional arrangement of storefront and upper elements.

- Reinforce the appearance and rhythm of historic vertical divisions to maintain consistent facade widths.



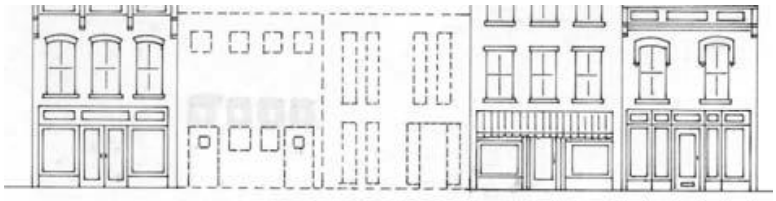
The width of these new buildings, shown with dashed lines, is appropriately similar to existing buildings.

- Do not construct buildings with upper facades of solid brick, glass walls or strong horizontal lines.
- Build buildings which are constructed over several lots or are 50 feet or more in width with designs to reinforce the spacing and arrangements of adjacent buildings. New buildings in the center of this row appropriately reflect historic trends in massive, size, scale, and features.
- Strive to continue the existing alignment and proportions of upper facade windows.



These new buildings respect the existing height pattern and horizontal & vertical window alignment.

- Use appropriate window shapes, rectangular and arched with vertical, rather than horizontal, proportions on new buildings. Do not use square windows, narrow width horizontal windows, and other designs out of keeping with traditional window forms and shapes.



Shape & placement of upper windows & storefront elements do not reflect traditional patterns & are inappropriate.

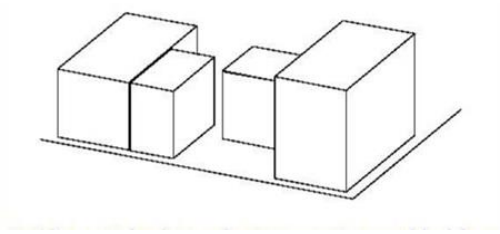
- Do not add historically typical details such as bay windows or sheet metal cornices to new buildings.

- Use minimal brick corbelling or banding of brick or concrete to define or decorate windows.
- Use brick or masonry construction, not exterior surfaces of glass, metal, wood, vinyl or stucco.
- Use masonry materials which are compatible in size, profile and detailing with historic materials.

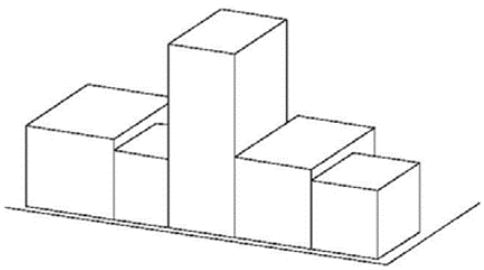
This downtown parking garage follows several historic commercial construction traditions, including brick construction, a flat roof, regularly spaced arched upper windows, and larger lower openings. It also respects the existing height pattern of surrounding buildings. By following these traditional patterns and using minimal detailing and some modern interpretations on the tower, the building avoids dramatically disrupting district character while remaining identifiably modern.

3.2 Juxtaposition of Large Buildings – Height, Mass & Scale

- A large building constructed today can span an entire block and the façade can be constructed of one type of material, such as smooth stone, concrete panels or panels of glass. This type of construction can make smaller, historical storefronts look insignificant or diminished. This practice can detract from the character of downtown Paducah.
- A new building should visually break up its street-level façade, maintaining the same rhythm of the horizontal and vertical patterns of the historic façades. A subtle change in height, material or windows should occur at the same intervals as the façades on each side.
- As with roof additions, any additional floors on the new building should be set back a minimum of 15 feet from the street façade over the third story to reduce the perceived height. This will help the height of the façade of the new building mesh visually with the façades on either side. Visual interest will be invoked, and the historical context of downtown will be maintained.



Inappropriate setback



Inappropriate scale

3.3 Additions to Existing Buildings

- Additions to existing buildings shall follow guidelines for new construction.
- Additions to historic buildings should be subtly distinguishable from the original while maintaining visual continuity through the use of design elements such as proportion, scale, façade set-back or materials that are of a similar color and texture.
- When design elements contrast too strongly with the original structure, the addition will appear visually incompatible. Conversely, when the original design is replicated, the addition is indistinguishable and the historical context of the original building becomes unrecognizable. Two of the Secretary of the Interior's Standards speak to this point.
    - Standard #9 states that new additions, exterior alterations or related new construction shall be distinguishable from the historic structure. Generally, the addition shall resemble the original building, but be subtly different in proportion, scale, façade set-back or materials.
    - Standard #10 states that if the new additions or construction were removed in the future, the historical form and integrity of the original building should be unimpaired.
- Roof Additions – New floors or rooftop patios should be set back at least 15 feet from any street facing façade so that the original building height and façade are clearly distinguishable from the new upper floors as seen from the street.
- Mechanical & Communication Systems – Whenever installing mechanical equipment, such as HVAC or satellite dishes, use whatever means possible to minimize visual impact, and protect the historic character of the structure. Locate these systems on rear elevations or behind parapet walls on the roof. No systems should be visible from the public right-of-way.

Locate mechanical systems on rear elevations or behind parapet walls on the roof. No systems should be visible from the public right of way.

3.4 Infill Building Materials

- Materials proposed for use should be of acceptable contemporary means.
- The façade of new infill development should be constructed of building components that reflect a human scale.
- A human scale will also maintain the integrity of the Downtown Historic District.
- Uniform building components, standard-size brick and standard window sizes are all items used to ensure proper scale.

3.5 Utilities

Utilities are important to the functionality of buildings. Because utilities are modern, they should be placed along rear elevations or otherwise out of view from the public right-of-way and visibility should be further screened through landscaping or fencing.

- Screen HVAC units and service equipment through landscaping or wood and/or brick enclosures, or place units and equipment on roofs out of view from the street.
- Locate mechanical systems behind or on top of buildings.
- Screen grounded mechanical systems from view using fencing or plants. Place roof-mounted systems such that distance or elements like parapets keep them from view.
- Use window mechanical systems only on side or rear elevation where they are minimally visible.
- Locate meters, conduits, and other equipment on rear elevations, to the greatest extent feasible.
- Satellite dishes and solar panels may be placed on roofs where they are not readily visible from the street.

A.1 GLOSSARY OF TERMS

ALIGNMENT (ARCHITECTURAL) The visual alignment and subsequent placement of architectural elements such as windows, cornice elements, soffits, awnings, etc. from one structure to adjacent structures in order to promote frontages continuity.

ARCH A curved structure supporting its weight over an open space such as a door or window.

ARTICULATION Describes the degree or manner in which a building wall or roof line is made up of distinct parts or elements. A highly articulated wall will appear to be composed of a number of different planes, usually made distinct by their change in direction (projections and recesses) and/ or changes in materials, colors or textures.

AWNING A fixed cover, typically comprised of cloth over a metal frame, that is placed over windows or building openings as protection from the sun and rain.

BALCONY A railed projecting platform found above ground level on a building.

BALUSTER The upright portion of the row of supports for a porch railing.

BASE The lowest part of a column, below the shaft.

BAY (STRUCTURAL) A regularly repeated spatial element in a building defined by beams or ribs and their supports.

BRACKET A small projection usually carved or decorated, that supports or appears to support a projecting eave or lintel.

BUILD-TO LINE When placing new buildings in an existing context, it is important to approximately align them with the buildings to its right and left. In these cases, the new building should be " built -to" the line of the existing buildings rather than being considered in terms of setback. See “Setback" herein.

BULKHEAD The space located between the pavement/ sidewalk and the bottom of a traditional storefront window. Sometimes referred to as “Kickplate."

CANOPY A projection over a niche or doorway; often decorative or decorated.

CAPITAL The top member of a column or pilaster.

COLONNADE A row of columns supporting a roof structure.

COLUMN A vertical support, usually cylindrical, consisting of a base, shaft and capital, either monolithic or built-up of drums the full diameter of the shaft.

CONTEXT The surrounding environment (streets, buildings, landscape) in which a building or site exists.

COPING A covering (or capping) course on the top of a wall or parapet.

CORNICE The horizontal projection at the top of a wall; the top course or molding of a wall when it serves as a crowning member.

COURSE In masonry, a layer of bricks or stones running horizontally in a wall.

CURB CUTS The elimination of a street curb to enable vehicles to cross sidewalks and enter driveways or parking lots.

DENTIL A molding composed of small rectangular blocks run in a row.

DETERIORATION LEVELS

- **Mild Deterioration:** Do the surface materials need repair? Is paint flaking? Are metal components

rusting? Do joints need re-caulking where materials meet glass windows? Mild deterioration generally requires only maintenance level treatments.

- **Moderate Deterioration:** Can rotted or rusted or broken sections of material be replaced with new material to match the old? Can solid material (such as Carrara glass) from a non-conspicuous location be used on the historic facade to repair damaged elements? Do stone or brick components need repointing? Is the storefront watertight with good flashing connections? Are there leaky gutters or air conditioner units which drip condensation on the storefront? Is caulking needed? Moderate deterioration generally requires patching or splicing of the existing elements with new pieces to match the deteriorated element.
- **Severe Deterioration:** Have existing facing materials deteriorated beyond repair through vandalism, settlement, or water penetration? Is there a loss of structural integrity? Is the material rusted through, rotted, buckling, completely missing? Are structural lintels sagging? Are support columns settled or out of alignment? Severe deterioration generally requires replacement of deteriorated elements as part of the overall rehabilitation.

DORMER A structure containing a vertical window (or windows) that projects through a pitched roof.

EAVES The overhang at the lower edge of the roof which usually projects out over the walls.

FACADE The exterior face of a building which is the architectural front, sometimes distinguished from other faces by elaboration of architectural or ornamental details.

FASCIA The outside horizontal board on a cornice.

FENESTRATION The arrangement and design of windows and other openings in a building.

FRONTAGES The aggregated facade wall composed of uninterrupted placement of individual urban oriented structures located side-by-side along an entire block as opposed to individual buildings located within the block. The continuity of frontages contributes to what has historically been referred to as the "Main Street Wall of Buildings."

GABLE The triangular wall section, formed by ends of a sloping roof

INFILL A newly constructed building within an existing development area.

KICKPLATE See "Bulkhead" above.

LINTEL A horizontal beam over an opening in a wall that carries the weight of the structure above.

LOT A parcel of land, in single or joint ownership, and occupied or to be occupied by a main building and accessory buildings, or by a dwelling group and its accessory buildings, together with such open spaces and having its principal frontage on a street, road, highway or waterway.

MASONRY Wall construction of such material as stone and brick.

MASS Describes three dimensional forms, the simplest of which are cubes, boxes (or " rectangular solids"), cylinders, pyramids and cones. Buildings are rarely one of these simple forms, but generally are composites of varying types. This composition is generally described as the “massing" of forms in a building. During the design process, massing is one of many aspects of form considered by an architect or designer and can be the result of both exterior and interior design concepts. Exterior massing can identify an entry, denote a stairway or simply create a desirable form. Mass and massing are inevitably affected by their opposite, open space. The lack of mass, or creation of perceived open space, can significantly affect the character of a building. Architects often call attention to a lack of mass, by defining the open space with low walls or railings. Landscape architects also use massing in design such as in grouping of

plants with different sizes and shapes. Plant masses can be used to fill a space, define the boundary of an open area, or extend the perceived form of an architectural element.

MOLDING A decorative band or strip with a constant profile or section generally used in cornices and as a trim around window and door openings. It provides a contoured transition from one surface to another or produces a rectangular or curved profile to a flat surface.

MONOLITHIC A single large flat surface (facade) without relief. A massive unyielding structure that has no proportion for people to relate to, nor does it respond to the scale of adjacent buildings.

MUNTIN One of the members, vertical or horizontal that divides and supports the panes of glass in a window.

ORIEL WINDOW A bay window that projects from the building beginning above the ground level.

ORNAMENTATION Details added to a structure solely for decorative reasons i.e. to add shape, texture or color to an architectural composition).

PARAPET A low wall generally running around the outside of a flat, or low-slop roof.

PATINA A film on the surface of bronze or similar metals (produced by oxidation over a long period).

PATTERN The pattern of material can also add texture and can be used to add character, scale and balance to a building. The lines of the many types of brick bonds are examples of how material can be placed in a pattern to create texture.

PEDIMENT A low, triangular gable end often found in classical architecture.

PILASTER An engaged column or pillar that typically frames the storefront portion of a building, often with capital and base.

PRIMARY BUILDING FACADE The particular facade of a building which faces the street to which the address of the building pertains.

PROPORTION The concept of proportion deals with the ratio of dimension between elements. Proportion can describe height to height ratios, width to width ratios, width to height ratios, as well as ratios of massing. Landscaping can be used to establish a consistent rhythm along a streetscape which will disguise the lack of proportion in building size and placement.

RECESS A hollow place, as in a wall.

RHYTHM (HORIZONTAL, VERTICAL) The regular or harmonious recurrence of lines, shapes, forms, elements or colors, usually within a proportional system.

RUSTICATION A method of forming stonework with recessed joints and smooth or roughly textured block faces. A regularly spaced recess in masonry work.

SASH Window framework that may be fixed or moveable. If moveable, it may slide, as in a double-hung window; or it may pivot, as in a casement window.

SCALE (HUMAN) Scale is the measurement of the relationship of one object to another object. The scale of a building can be described in terms of its relationship to a human being. All components of a building also have a relationship to each other and to the building as a whole, which is the " scale" of the components. Generally, the scale of the building components also relate to the scale of the entire building. The relationship of a building, or portions of a building, to a human being is called it relationship to " human -scale." The spectrum of relationships to human-scale ranges from intimate to monumental. The components of a building with an intimate scale are often small and include details which break those

components into smaller units. At the other end of the spectrum, monumental scale is used to present a feeling of grandeur, security, timelessness or spiritual well- being. Building types which commonly use the monumental scale to express these feelings are banks, churches and civic buildings. Landscape or hardscape elements can also bring human-scale to a large building by introducing features such as a tree canopy, leaf textures, color and fragrance.

SETBACK The minimum horizontal distance between the lot or property line and the nearest front, side or rear line of the building (as the case may be), including porches or any covered projection thereof, excluding steps.

SHAFT The main portion of a column, between the base and the capital.

SILL The framing member that forms the lower side of an opening, such as a door sill. A window sill forms the lower, usually projecting, lip on the outside face of a window.

SPALLING The process, usually caused by moisture being trapped inside bricks, whereby the face of the brick falls off due to extreme changes in temperature.

STOREFRONT The traditional " main street" facade bounded by a structural pier on either side, the sidewalk on the bottom and the lower edge of the upper facade on top, typically dominated by retail display windows. The parts of the building that face the street and connect with the sidewalk

STREET WALL The edges created by buildings and landscaping that enclose the street and create space. Sometimes called, " frontages."

STRING COURSE A thin projecting horizontal strip of masonry on the façade of a building.

SURFACE MATERIALS Can be used to create a texture for a building from the roughness of stone to the smoothness of marble or glass. Some materials, such as wood, may be either rough (such as wood shingles or re -sawn lumber) or smooth (such as clapboard siding).

TEXTURE The concept of texture refers to variations in the exterior façade and may be described in terms of roughness of the surface material, the patterns inherent in the material or the patterns in which the material is placed. Texture and lack of texture influence the mass, scale and rhythm of a building. Texture also can add intimate scale to large buildings by the use of small detailed patterns, such as brick masonry.

TRANSOM The horizontal division or cross - bar in a window. A window opening above a door.

TRIM The decorative finish around a door or window; the architrave or decorative casing used around a door or window frame.

A.2 WINDOWS - REPAIR RATHER THAN REPLACE

The link to the Window Preservation Alliance Library below provides a great resource index to assist an owner in how to approach window repair on historic buildings. This includes:

- repair of wooden windows
- methods & approaches that qualify owners for state & federal tax credits
- repair of steel windows
- energy efficiency facts & myths
- efficiency studies - historic windows vs. replacement windows

https://www.windowpreservationalliance.org/Library

A.2 WINDOW FAQS

Do I need a building permit to replace windows?

> *ALL replacement windows that are visible from a street or other public right-of-way require Planning Department review. This includes: Windows on the primary elevation (commonly the street façade of the building). Please note that corner buildings are considered to have two primary elevations Windows on the side of a building or in a visible recessed area near or next to the street. Windows on a back wall that can be seen from the street or another public right-of-way.*

Can I replace windows with vinyl, fiberglass, or aluminum windows? Can't I get vinyl or aluminum windows that look virtually the same from the street as wood painted windows?

> *Wood windows were originally installed on the majority of residential buildings constructed up until World War II. Most buildings are viewed at close range from the street, the differences between wood windows and substitute materials are almost always easily detectable. Particularly with older buildings, these alternate materials usually stand out visually, and rarely match the character of the district. They always look like what they are: plastic or aluminum – materials that are not architecturally compatible with the building.*

Don't wood windows cost more and require more maintenance, as opposed to vinyl and aluminum windows?

> *It depends. The highest quality custom-made wood windows by major manufacturers may be more expensive than windows of other materials. But there are a number of manufacturers and local craftsmen that produce quality, double-paned, architectural grade, painted wood replacement windows that are competitive in price and also provide the beauty and authenticity that only comes with real painted wood sashes and assemblies. Also, while it is often desirable to have all wood replacement windows in your building, in many cases, you may choose to use replacement windows of a substitute material in light wells or rear facades that are not visible from the street or other public right-of-ways. The only instance when a property owner may be required to use historically appropriate windows on all elevations is when the subject property has been determined to have historic significance. In terms of maintenance, wood windows do require painting every five to ten years, depending on their location, sun exposure, water exposure, paint quality, priming, wood quality, etc. Although vinyl and aluminum windows do not require painting,*

they are rarely maintenance free, and economy grade vinyl and aluminum windows can fail within a few years. Finishes on vinyl and aluminum can deteriorate through UV exposure, oxidation, and denting.

Quality wood windows can last indefinitely, depending on maintenance and the quality of wood used. Double-hung painted wood windows can also be installed with metal or vinyl tracks, making them easier to open and close.

My windows are beyond repair and need to be replaced. What type of window is acceptable for my property?

If replacement windows are required due to deterioration, those that are visible from the street or other public rights-of-way should be replaced with windows that are appropriate to the time period your building was originally constructed. For example, if the building was originally constructed in 1908 with wood double-hung windows, then they should be replaced with wood double-hung windows with similar exterior dimensions. If the appropriate window type cannot be determined, then a window that is otherwise architecturally appropriate to the building and surrounding neighborhood character, in terms of style, material, visual quality, and detailing can be considered. For example, if the building was originally constructed in 1925 and currently has vinyl sliding windows but similar neighboring buildings from the same time period have their original steel casement windows, then the appropriate replacement window would be a metal casement window.

Energy conservation & sustainability

Windows don't always require replacement in order to see and feel big results in reducing energy usage; however, energy conservation and sustainability is one of the primary reasons for replacing windows that are considered to be obsolete, particularly replacing single-glazed sashes with double-glazed sashes. Currently, most manufacturers' warranties for replacement windows are from 2 to 10 years; however, historic wood windows with minimal maintenance have a performance life of 60 to 100 years. Retaining and repairing existing windows also conserves embodied energy (i.e. the sum of the energy required to extract raw materials, manufacture, transport, and install building products). Replacement window materials – primarily aluminum, vinyl, and glass - possess some of the highest levels of embodied energy of all building materials.

What is the importance of brick mold and other exterior millwork?

A brick mold is the exterior molding often used to trim the edge of windows in a masonry opening. On a wood frame building this window detail is referred to as millwork. A common practice when installing replacement windows is to replace only the sashes and cover the trim and framework around the exterior of the window with capping or panning to give the window a cleaner, "updated" look. This panning, whether vinyl, fiberglass, or aluminum, is used to cover over brick molds and other exterior millwork that frame the opening and makes up part of the exterior profile of the windows. The Historic and Architectural Review Commission (HARC) will not approve replacement windows where these elements are covered or obscured from view. Wherever possible, all surrounding millwork or brick molds should be retained and left exposed. When replacement is required due to deterioration or missing elements, these elements should be replaced with a material akin to the original, and a profile of the existing and proposed millwork should be included as part of the permit application drawings for review by HARC staff.

What about wood windows that have vinyl, fiberglass, or aluminum clad exteriors?

For clarification, a clad window is part of a window system that is primarily constructed of wood but has an additional material, such as aluminum, applied to the exterior face for maintenance purposes. Generally, clad windows are not appropriate, especially on older commercial properties. However, in some instances they may be acceptable, and if proposed, shall be reviewed on a case-by-case basis. Most clad window products do not have Ogee lugs, which are an important feature of older double-hung wood windows. In addition, a true divided light option is not offered for clad windows by any manufacturer. Another issue with vinyl-clad window systems is that they often show seams, as some of these windows are clad with vinyl strips on the outer surface. Aluminum and finishes can come in a variety of colors and often have a finish that more closely resembles a painted surface. There are a number of windows constructed of substitute materials on the market today that strive to match the styles and profiles of historic windows. HARC is always open to reviewing any new products for compatibility with older properties. A quick way to get initial feedback on a new product is to bring the manufacturer's specification sheet to the Planning Department for HARC staff to review. In some cases, the HARC may consider approving clad replacement windows that are visible from the street or other public rights-of-way if their architectural compatibility can be adequately demonstrated in terms of overall, size, glazing, operation, finish, exterior profiles, and arrangement.

A.3 EXTERIOR MATERIAL GUIDANCE PER SECRETARY OF THE INTERIOR'S STANDARDS FOR REHABILITATION

MASONRY

https://www.nps.gov/tps/standards/rehabilitation/rehab/masonry01.htm

WOOD

https://www.nps.gov/tps/standards/rehabilitation/rehab/wood01.htm

METALS

https://www.nps.gov/tps/standards/rehabilitation/rehab/metals01.htm

A.4 PRESERVATION BRIEFS

Preservation Briefs provide information on preserving, rehabilitating, and restoring historic buildings. These NPS Publications help historic building owners recognize and resolve common problems prior to work. The briefs are especially useful to Historic Preservation Tax Incentives Program applicants because they recommend methods and approaches for rehabilitating historic buildings that are consistent with their historic character.

Some of the web versions of the Preservation Briefs differ somewhat from the printed versions. Many illustrations are new and in color rather than black and white; captions are simplified and some complex charts are omitted. Preservations Briefs can be found on the National Park Service Website (https://www.nps.gov/tps/how-to-preserve/briefs.htm). To order hard copies of the Briefs, see Printed Publications.

1. Cleaning and Water-Repellent Treatments for Historic Masonry Buildings
2. Repointing Mortar Joints in Historic Masonry Buildings
3. Improving Energy Efficiency in Historic Buildings
4. Roofing for Historic Buildings
5. The Preservation of Historic Adobe Buildings
6. Dangers of Abrasive Cleaning to Historic Buildings
7. The Preservation of Historic Glazed Architectural Terra-Cotta
8. Aluminum and Vinyl Siding on Historic Buildings: The Appropriateness of Substitute Materials for Resurfacing Historic Wood Frame Buildings
9. The Repair of Historic Wooden Windows
10. Exterior Paint Problems on Historic Woodwork
11. Rehabilitating Historic Storefronts
12. The Preservation of Historic Pigmented Structural Glass (Vitrolite and Carrara Glass)
13. The Repair and Thermal Upgrading of Historic Steel Windows
14. New Exterior Additions to Historic Buildings: Preservation Concerns
15. Preservation of Historic Concrete
16. The Use of Substitute Materials on Historic Building Exteriors
17. Architectural Character—Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving their Character
18. Rehabilitating Interiors in Historic Buildings—Identifying Character-Defining Elements
19. The Repair and Replacement of Historic Wooden Shingle Roofs
20. The Preservation of Historic Barns
21. Repairing Historic Flat Plaster—Walls and Ceilings
22. The Preservation and Repair of Historic Stucco
23. Preserving Historic Ornamental Plaster
24. Heating, Ventilating, and Cooling Historic Buildings: Problems and Recommended Approaches
25. The Preservation of Historic Signs
26. The Preservation and Repair of Historic Log Buildings
27. The Maintenance and Repair of Architectural Cast Iron
28. Painting Historic Interiors
29. The Repair, Replacement, and Maintenance of Historic Slate Roofs
30. The Preservation and Repair of Historic Clay Tile Roofs
31. Mothballing Historic Buildings
32. Making Historic Properties Accessible
33. The Preservation and Repair of Historic Stained and Leaded Glass

34. Applied Decoration for Historic Interiors: Preserving Historic Composition Ornament
35. Understanding Old Buildings: The Process of Architectural Investigation
36. Protecting Cultural Landscapes: Planning, Treatment and Management of Historic Landscapes
37. Appropriate Methods of Reducing Lead-Paint Hazards in Historic Housing
38. Removing Graffiti from Historic Masonry
39. Holding the Line: Controlling Unwanted Moisture in Historic Buildings
40. Preserving Historic Ceramic Tile Floors
41. The Seismic Rehabilitation of Historic Buildings
42. The Maintenance, Repair and Replacement of Historic Cast Stone
43. The Preparation and Use of Historic Structure Reports
44. The Use of Awnings on Historic Buildings: Repair, Replacement and New Design
45. Preserving Historic Wooden Porches
46. The Preservation and Reuse of Historic Gas Stations
47. Maintaining the Exterior of Small and Medium Size Historic Buildings
48. Preserving Grave Markers in Historic Cemeteries
49. Historic Decorative Metal Ceilings and Walls: Use, Repair, and Replacement
50. Lightning Protection for Historic Buildings