Chapter 3

Maintenance, Repair, Preservation and Restoration of Existing Historic Buildings

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Chapter 3
Maintenance, Repair, Preservation, and Restoration of Existing Historic Buildings

Introduction

Design guidelines for maintenance, repair, preservation, and restoration are intended to provide standards for a range of treatments to existing historic buildings within the Great Falls Historic District (GFH District). It is hoped that while these guidelines will both suggest and require certain historic preservation practices, they will also educate the residents and property owners of Paterson as to the proper maintenance and care of their historic buildings.

The flexibility of these guidelines recognizes that there are several solutions to most problems. Further, while one solution may be favorable to another, there may be circumstances—financial or otherwise—that make a particular treatment difficult or impossible to undertake. These guidelines thus recognize the financial constraints on any property owner and that the favored preservation practice may be beyond the means of some.

The flexibility of the guidelines is linked to the building permit process. For most types of treatments, guidelines are grouped under the categories of “Approved,” “Not Approved,” and “Not Recommended.” Guidelines that are “Approved” represent the best preservation practice—that is, those treatments that are most respectful of existing historic fabric. Projects that follow the “Approved” guidelines will receive a letter recommending approval from the Historic Preservation Commission. Projects that employ one or more “Not Approved” treatments will receive letters recommending denial of the building permit, unless there are extenuating circumstances that warrant approval. Projects that employ treatments that are “Not Recommended” may or may not receive a letter recommending approval.
or conditional approval, depending upon the evaluation and determination by the Historic Preservation Commission of the overall impact of those treatments on the character of the structure and the GFH District as a whole.

These guidelines recognize that healthy cities grow and change, that Paterson will continue to grow into the 21st century, and that it is not, nor should it be, the intention of the city to restore the GFH District to an earlier period of time. These guidelines are based on the commitment that growth and change must be complementary to historic preservation, and vice versa. While preservation sometimes conflicts with growth and change, it has been the widespread experience in towns, small cities, and large cities throughout the United States that a downtown with a unique historic character will attract new development. Conversely, the financial resources that new development brings to a city or town can support the goals of historic preservation by providing jobs that make home ownership possible, attracting shoppers and tourists to local businesses, and contributing to the tax base.

These guidelines attempt to establish a balance between the mandate to fulfill Paterson’s obligation to steward a national treasure, and the compelling forces of new development. A successful balance will be mutually beneficial to both preservation and new development. The guidelines also recognize that appropriate maintenance of historic building fabric may be the least dramatic but most important step in retaining the historic character of the Great Falls Historic District, for it is the cumulative effect of incremental losses that will erode the character of the district.

The design guidelines for existing buildings presented here are intended to preserve the distinct historic character of the GFH District. The preservation of the historic character of the district is largely a function of the preservation of the existing historic building fabric, and the negation of the cumulative effect of incremental changes that will, over time, result in the loss or obscuring of the GFH District’s particular character. Therefore, these guidelines stress the retention, repair, and proper maintenance of existing historic architectural fabric.
The preservation philosophy underlying these guidelines is based on the Secretary of the Interior’s Standards for the Rehabilitation of Historic Buildings that are discussed in detail in Chapter 2 of this document. Those standards may be summarized as follows:

✓ The proper maintenance of historic building fabric underlies any recommendations with regard to historic preservation.

✓ It is always preferable to retain and repair existing historic building fabric, rather than replace it with new materials.

✓ When replacing historic building materials that are irreparably deteriorated, replacement should be in-kind, using materials and craftsmanship that match as closely as possible the existing historic fabric that is being removed.

✓ Restoration (returning a building to a specific, previous condition or appearance) should be undertaken only when sufficient documentation or evidence exists to determine historic conditions at a specific, significant period of a building’s history. Because history accrues to buildings over time, it is recommended that later historic fabric should not be removed in order to restore a building to an earlier appearance.

When adequate documentation is not available to restore a building accurately to a previous appearance, and the building has lost its historic integrity, speculative restoration should not be attempted. Similarly, if a historic feature has been lost previously, such as a cornice, these guidelines suggest a variety of alternative appropriate treatments including leaving the alteration in place, restoration according to good documentation, or replacement to a design and with a material that is sympathetic to the scale and character of the building.
Masonry/Brick, Stone, and Stucco

Masonry has been used from the earliest period of building in Paterson. Masonry was chosen for the construction of the historic mill buildings because it is strong, durable, and fire resistant. Brick is the oldest and best preserved building material in the GFH District. Its warm color and soft appearance is still attractive and requires relatively little maintenance.

Brownstone was used on the foundations of several buildings and for trim on some of the more decorative buildings. Brownstone was favored for its availability and ease in quarrying and carving. Brownstone’s durability is not consistent. It is very soft and subject to erosion and delamination, as can be seen in several locations in the GFH District.

Mortar is the “glue” that holds a masonry wall together. It also acts to seal the joints between individual brick and stone units. Because bricks and stone expand and contract as they heat up, cool down, and absorb moisture, mortar must be “soft” enough to allow that movement, yet pliable enough to maintain its seal with the masonry so as to prevent moisture from entering the wall through open joints.
The durability of masonry construction is dependent upon appropriate maintenance and repair methods. Guidelines for the repair, maintenance, and rehabilitation of exterior masonry are as follows.

**Approved**

- Where repointing is proposed, the mortar used for repointing must be equivalent to or softer than the original mortar in the masonry joints. Under no circumstances should the mortar be harder than the brick or masonry in the wall.

- To determine the composition for equivalent mortar, it is necessary to perform laboratory analysis of the mortar. In the absence of such analysis, a high lime content and low Portland cement content mortar will usually be compatible with most historic masonry. A mortar mix of 1 part cement, 1 part lime, and 6 parts sand (1:1:6) is frequently acceptable. Where the original mortar or masonry units are particularly soft, a mortar mix of 1:2:9 may be appropriate.

**Not Approved**

- Do not sandblast or use high pressure water wash (exceeding 500 psi) on masonry for any reason. This will remove the outer protective surface of brick, exposing the porous interior and leading to rapid deterioration.

- Do not use mortar that is harder than the original historic mortar.

- Do not change the size or tooling profile of the mortar joint when repointing brick.

- Prior to repointing, do not damage the brick edge or widen the joint in the process of removing existing mortar. Remove existing mortar using hand tools narrower than the width of the masonry joint.

- Do not use modern “antique” brick for new construction. It is too regular in its contrived variability, and easily distinguished by the discriminating eye.

- “Over cleaning” of masonry with harsh chemicals and/or excessive water pressure will do more harm than good. Also, chemical methods will require containment and proper disposal of all run-off.

- Barrier coatings are not approved as a means to combat graffiti on brick or brownstone. They tend to alter the surface texture and sheen of the masonry, and their impermeability will trap moisture within the masonry wall. They are also expensive and will require frequent re-application.

*Overly hard mortar has contributed to the brownstone deterioration at the base of the Union Works Building. As the soft brownstone expands and contracts due to temperature variation and moisture absorption, it is crushed against the hard mortar and begins to erode, leaving the mortar standing out from the face of the wall.*
Approved cont'd...

✓ Repointed mortar joints must match the appearance, color, texture, joint size, and tooling of the original or historic repointing, whichever predominates. Use appropriate sands to match the color and texture of existing mortar. Do not use color additives (pigments), which tend to lighten over time. Numerous test panels may be required to achieve an acceptable match. Allow test panels to cure at least one week prior to evaluating their appearance.

✓ Deteriorated and loose mortar should be removed manually, using non-mechanized hand tools, in order to minimize damage to surrounding masonry work. Remove mortar to a depth of two-and-one-half times the width of the mortar joint, or to sound mortar, whichever is greater.

✓ When repointing, remove existing mortar using handtools narrower than the width of the masonry joint.

Not Approved cont'd...

✗ Do not use masonry sealer, which traps moisture inside masonry walls, preventing them from "breathing." Moisture trapped inside masonry may have two deleterious effects. First, it may leach salts out onto the surface of the masonry, causing a chalky appearance. Second, it may freeze within the wall, expanding, pushing against the sealed surface so that it actually fractures the face of the brick or stone, causing it to spall away from the wall.

✗ Do not paint historically unpainted masonry.

Unpainted masonry should not be painted. Note also that two window openings were damaged and reconfigured to form the large modern opening.

✗ Do not add stucco, Dryvit, or permastone-type cladding.
Approved cont'd...

✓ When replacement of an area of brick in a brick wall is required, that area should match the existing brick in bonding pattern, decorative pattern, coursing, color, size, strength, pointing, and mortar, and should be toothed or keyed to existing brickwork. Replacement brick should never be substantially stronger than the existing brick.

✓ Pay particular attention to masonry and trim detailing on the facades of residences and commercial buildings. Full photographic and dimensional documentation should precede rebuilding, if required. Retain and repair projecting and decorative cornices, if possible, or replicate in-kind. Neither remove nor cover up these features.

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Permastone-type cladding is not approved within the GFH District.

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When restoration of the Cooke Locomotive Company Office Building takes place, the cornice on the north wall of the building should be replaced, preferably restored to its original configuration with brick. A substitute material may also be acceptable.

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Approved cont'd...

✓ Clean masonry using the gentlest means possible; often a prolonged saturation with water followed by brushing with bristle brushes will be sufficient. When cleaning, assure that historic signs, "ghost" signs, and traces of removed buildings are masked off and not damaged.

✓ A low pressure wash of 150 psi may be used with a 30° fan-tip nozzle. In no case should pressure exceed 300 psi. Masonry cleaning work should not be undertaken until temperatures will remain above 50° for 72 hours after cleaning work is complete.

✓ Brownstone deterioration is common within the district, due at least in part to the fact that it is not a particularly durable material, and tends to spall and delaminate depending upon how it was originally quarried and laid. Because deterioration of individual units is like a chink in a wall's armor, inviting further damage due to water infiltration, it is recommended that individual deteriorated brownstone units be dressed back to sound stone and then patched using cementitious patching mortar especially formulated for brownstone, to match the color and tooling of existing adjacent stones.

✓ Prior to rebuilding any masonry wall, foundation, or chimney, carefully document the structure by photography and actual measurement to facilitate accurate duplication. Reuse as many bricks as possible.

✓ On building exteriors, use only brick that is intended for exterior work.
Approved cont'd...
✓ Install sloping mortar wash surfaces at the tops of chimneys to protect the chimney walls.
✓ If a chimney cap is required, a stone or terra cotta cap is recommended.
✓ Retain historic hardware on the exterior of a building. Its being left in place helps to interpret the district as a historic industrial center.

Appropriate

Inappropriate

Keying in of replacement Brick

Significant areas of masonry wall at Public School #2 are being rebuilt.

The replacement brick around this door has been well chosen and well installed, toothed into the brick of the adjacent wall.
Note the historic steel door frame that was left in place when this loading door was bricked in.

✓ Remove graffiti as soon as possible. Visible graffiti tends to attract other graffiti writers. Also, the longer paint cures, the harder it will be to remove.

✓ The best means of graffiti removal will depend upon what the graffiti material is (paint, spray paint, felt-tip marker, chalk, crayon, etc.) and what the masonry material is (brick, brownstone, granite, marble, etc.).

✓ Graffiti removal must always begin with the gentlest means possible. Overly harsh methods may permanently alter the masonry, even etching a shadow of the graffiti into the masonry, doing more damage to the masonry than will the graffiti. Several methods may have to be tested in order to determine an effective, non-harmful technique. (Preservation Briefs #38, “Removing Graffiti from Historic Masonry”).

✓ Protect areas subject to wear and tear, especially at loading areas. Painted steel bollard-type protectors or simple steel angles are appropriate.

Typical damage to brick at a loading door, where it has not been protected by a steel bollard or angle.
Wood Siding and Trim

Wood siding is the “skin” of a building. Its purpose is to shed water quickly and thoroughly, thus preventing decay of the underlying structure and the deterioration of interior finishes, and to deflect sunlight and wind. Siding also plays an important visual role in establishing the scale of a building. Each clapboard or shingle casts a shadow line, adding some visual depth to the wall surface, while the size of the clapboard or shingle visually affects the mass and proportions of each building.

Directly associated with the wood siding, and with masonry as well, is the exterior trim of a building. Wood trim serves a critical visual purpose by providing architectural ornament and a functional purpose by sealing the structure at vulnerable locations. Corner boards, fascia boards, window caps and trim, architraves, and cornices are examples of trim elements that protect critical joints of a building from exposure.

The following guidelines for the repair, maintenance, restoration, or rehabilitation of wood siding and trim are as follows:

**Approved**

✔ Wood siding and trim should be retained and repaired whenever possible. For areas of partial deterioration, in-kind and visually matching patches are preferable to total replacement, in the interest of retaining as much historic material as possible.

✔ If wood siding is severely deteriorated and re-siding is proposed, replacement wood siding must match the profile and exposure of existing siding. Vertical siding is a more modern application and is more appropriate to secondary structures such as sheds and outbuildings.

✔ All wood siding and trim must be painted.

**Not Approved**

✗ Wavy-edged shingles are not approved.

✗ Vertical siding, both solid wood and textured plywood (T-111) must not be used on primary structures within the GFH District.

✗ The addition of Dryvit, stucco, or permastone-type cladding over existing wood, aluminum, or vinyl siding is not approved.

✗ Applying siding of any type over a masonry structure is not approved.

✗ Clear or opaque wood stains and clear finishes such as varnish are not approved for use on siding.

✗ Vinyl siding that is embossed with artificial wood grain is not approved. Its false texture draws attention to the artificial surface. Also, the wood siding in Paterson typically did not have raised grain, which is a feature of more rustic buildings.
Not Recommended

- Avoid using aluminum building products in areas exposed to severe weather conditions. Aluminum is not as resistant to corrosion as other materials.

- Consider alternative materials that are more durable and less susceptible to damage.

- If you must use aluminum, ensure it is properly maintained and regularly checked for signs of wear.

- Consult with a professional to determine the best course of action for your specific situation.
Sheet Metal Cornices

Sheet metal cornices are in place and visible on a few commercial and small-scale residential buildings within the GFH District. Sheet metal cornices were widely available as prefabricated building elements beginning in the late-19th century, and provided a relatively inexpensive means to apply ornament to relatively simple buildings. Sheet metal cornices are susceptible to water infiltration from the roof and parapet above, and will deteriorate from the resulting rust and corrosion. There are presently several sources for ornamental sheet metal, although finding an exact match for deteriorated components may be difficult.

Approved

✓ Retain historic sheet metal cornice material.

✓ Maintain roofs to keep water from infiltrating behind the cornice. Keep cornices painted to minimize exposure to the elements.

✓ Hand-sand, scrape, or use chemical strippers to remove paint and to prepare the sheet metal surface for repainting.

✓ Replace missing or irreparable sheet metal cornice components and ornament in-kind, if available. Replacement cornice elements should match the existing design, texture, and appearance as closely as possible. Sheet metal is the best material, but durable cast materials such as fiberglass and Glass Fiber Reinforced Concrete (GFRC) are also acceptable.

✓ Patch small holes and dents using epoxy metal filler.

✓ Refasten loose sheet metal ornament using stainless steel fasteners, which will resist corrosion.

Not Approved

✗ Do not remove existing sheet metal cornices or individual cornice components.

✗ Do not enclose sheet metal cornices with siding material.

✗ Do not remove paint from sheet metal using abrasive blasting methods that will etch the metal.
Doors, Windows, and Shutters

Doors, windows, and shutters are the moving parts of building exteriors. As such, they are subject to hard and frequent use. They are also critical elements in regulating the passage of light, air, rain, and people into the interior of a building.

These elements are also critical in determining the architectural character of individual buildings, particularly the historic mill buildings whose dependence on natural light required quantities of large windows. The correct preservation of existing historic doors, windows, and shutters as well as the appropriate design of their replacements is absolutely essential to the maintenance of the character of individual buildings and their context within a historic district.

The repair and replacement of existing original or historic doors, windows, and shutters should be in-kind—that is, to match existing conditions as closely as possible. Attention should be paid to the size, species, and profile of the piece or element requiring repair or replacement. Custom millwork may be required if stock millwork matching existing conditions is unavailable. Replacement of existing non-historic doors should be appropriate to the age and character of the building.

Doors

Paneled doors were used during every period of Paterson architecture, and in every building type found in the GFH District. The technology to produce flush doors is a very recent phenomenon, having mostly to do with the development of inexpensive glues. Panel trim and moldings have varied over time as have the configuration of the panels and the use of glazing in the panels.

The doors for the mills and related buildings were massive wood panel doors. Very few historic doors remain on the mill buildings in the GFH District.

The design of doors for commercial establishments typically remained consistent during the late-19th and early-20th centuries. Shop doors were either single or double doors, often with a transom above. The doors themselves were usually paneled below with a glass pane inset above. Steel and bronze frame storefront “systems” began to appear after 1920.

The design of doors for the relatively modest residences within the district would most likely have been in the Italianate style, with more ornate elongated vertical panel shapes, glazed upper panes, and deeper and more complex molding profiles. Original doors were not observed to remain on residential structures within the district.
Approved

✓ Retain and repair as much historic door fabric as possible. Repair should be in-kind, to match existing size, species, profile, and configuration.

✓ If existing historic doors or screen doors are deteriorated beyond the point of repair, replace in-kind to match existing size, species, profile, and configuration.

✓ Replace inappropriate doors with doors appropriate to the period and style of the building. This will require research and may require custom millwork.

✓ Screen and storm doors should be wood and kept as simple as possible. Horizontal and vertical rails of screen doors should align and coincide with those of the door behind.

Approved cont'd...

Wood storm doors are approved.

✓ Wood storm doors with one large opening that allow the door behind to be visible are recommended.

Not Approved

✗ Modern flush doors are not approved on the exterior of buildings within the GFH District.

Modern flush doors are inappropriate.

✗ Glazed doors containing windows with snap-in muntins or masking tape to simulate divided lights are inappropriate.

✗ Enclosure of existing transoms and sidelights is inappropriate.

✗ Blocking up existing door openings is inappropriate.
Approved cont'd...

*Historic doors at the Congdon Mill Building. Note that infill of transom above is inappropriate.*

Not Recommended:

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Windows

The history of window design, until recently, can be seen as a continuous attempt to increase the size of glazed openings. Thus, throughout the 19th century (especially in commercial design), opening sizes increased, glass panes got larger, and muntins got thinner.

Early window casings were usually planed out of one piece; built-up moldings became commonplace in the Federal period and were virtually standardized by the end of the 19th century.

Typically, there was a range of sizes available in any given period, so the above summary should not be considered to be without exception. It is generally the case, however, that windows in any given period were proportioned so that the width was roughly 3/4 that of the height.

Windows play an extremely important role in establishing the character of the GFH District. It could be argued that the industrial processes could not have occurred without the large doublehung windows whose transparency allowed natural light to illuminate the work place and whose operation provided the ventilation that permitted workers to labor through the warmer months. Large wood windows were supplanted or replaced by large steel industrial sash windows whose function was the same and whose presence is just as important to the character of the district. As electric lighting became available and modern mechanical systems prevailed, the expense of maintaining hundreds of windows combined with the poor security they provided led building owners to remove windows and infill openings. The loss of historic windows and the closing in of window openings have resulted in severe damage to the character of the district.

(For a discussion of awnings, see Chapter 4.)
Approved

✓ Repair existing historic windows with in-kind material.

✓ Return altered window openings to their original configuration.

✓ When existing historic windows are irreparable, replacement windows must be of the same materials and must replicate as closely as possible existing historic window details, including pane configuration and muntin, mullion, casing, and trim profiles.

✓ Replacement windows must have the same operating characteristics as the original windows (i.e., doublehung windows should replace doublehung windows, casement windows should replace casement windows, etc.).

✓ Replacement windows must be sized to fit exactly into the historic masonry opening.

✓ Use only clear glass in existing historic or replacement windows, storm windows, and thermal sash.

✓ Historic stained or leaded glass must be repaired or restored. This work must be accomplished by a trained leaded glass artisan, using the gentlest means possible. If leaded glass panels are irreparable, and if restoration is not possible, they must be removed and stored in a manner that will allow future restoration.

✓ The rails of window screens and storm windows must match the rails of windows behind.

Not Approved

✗ Window opening sizes and shapes must not be changed to accommodate replacement windows or to accommodate new interior furnishings or cabinetry.

✗ Bricking up windows in a manner that obliterates or obscures the perimeter of the existing opening is not approved. The character of a building can be completely altered by this treatment.

✗ Leaving window openings vacant or unfilled is not approved.

✗ Changing the operating characteristics of windows is not approved.
Approved cont'd...

✓ Where increased thermal performance is required of existing windows, install interior thermal sash within existing openings. Allow for air circulation between the window and thermal sash to prevent the build-up of condensation that will accelerate the deterioration of historic wood and metal windows. On the exterior side of the thermal sash, match the color of the existing window as well as the glazed opening sizes and overall design. Metal thermal sash is recommended for metal windows, and wood, PVC, or vinyl thermal sash is recommended for wood windows.

✓ Exterior or interior storm windows are also recommended. They must have slender frames and meeting rails that align with the historic windows behind, and must be painted to match the adjacent window frame and trim. Triple track storm aluminum windows are approved.

✓ Install security shutters, bars, and grates on the interior of windows.

✓ Window openings that have been previously closed up with masonry or wood, when opened back up, must be opened to the original size and filled with a window that is appropriate to the period of the building.

Not Approved cont'd...

The manner in which the original window openings were bricked up at the Rogers Locomotive Millwright Shop has completely changed the character of the building.

Solid security gates and shutters on the exterior of buildings are not recommended.

✗ Contemporary picture windows (large undivided panes of glass set in inoperable sash) are inappropriate on buildings built before 1940. (This of course does not apply to commercial storefronts.)

✗ “Panning” over existing window sills with sheet metal is not recommended.
Approved cont'd...

The window openings at the Rogers Locomotive Frame Fitting Shop were bricked up in a manner that leaves the original openings discernible, but has altered the appearance and character of the building.

Not Approved cont'd...

X Smoked, tinted, low-E, and reflective glass are not approved on elevations visible from the public way. The visual characteristics of each of these types of window is noticeably different from that of clear glass.

X Slider windows are not approved.

X Vinyl windows are not approved for use on elevations visible from the public right-of-way.

X "Sandwich" muntins (muntins between two continuous panes of glass) are not approved.

X False muntins for divided-light wood windows are not approved. They are easily detectable from a distance.
Shutters

Wood shutters were at one time common on houses within the GFH District. Their original purpose was to provide security and privacy, to permit ventilation while keeping rain and sunlight out, and to act as storm sash during heavy rains. Presently, primarily as a result of the installation of non-historic siding, shutters are not prevalent on residences within the GFH District.

There is no physical evidence, such as abandoned hardware, that mill buildings had shutters.

Most small-scale residential buildings within the GFH District originally had window shutters.
Approved

- Shutters should be repaired in-kind. If shutters are irreparable, replacement shutters should match existing.
- Shutters should be made of wood and painted for protection. A non-obtrusive metal cap along the top edge will dramatically increase the longevity of the shutter.
- Louvered or paneled wood shutters are appropriate (typically paneled shutters were used only on lower floors, for security reasons).
- Shutters should operate or at least give the appearance of being operable, and should be large enough to cover the windows, as would have been intended originally.

Not Approved

- Shutters that are too narrow or too short to completely cover the window in a closed position are not approved.
- Hanging shutters on windows they could not possibly cover when closed is not approved. Proper installation will entail partially covering the vertical window trim with the shutter.

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Roofing

There are a variety of historic roofing materials in the Great Falls Historic District: slate and wood shingles, metal roofing including copper and tin, and flat roofs. Asphalt and fiberglass shingles and cement shakes are non-historic materials that are also prevalent. It should be noted that roofing material is a wearing surface whose lifetime is finite and that various roofing materials have various lifetimes. A slate roof may be viable for more than 100 years. A good copper roof can last 60 years. Historic buildings will not retain their original roofs forever. There are, however, several basic steps that can be taken to prolong the lifetime of existing historic and new roofs.

Slate roof at the Rogers Locomotive Company Administration Building.

The following guidelines should inform decisions regarding building permit applications for roof work on buildings within the GFH District.

**Approved**

- Whenever possible, retain and repair historic roofing material in-kind and match existing, whether original to the building or not. Reuse or replace in-kind historic decorative elements.

**Not Approved**

- Do not install a new roof over an existing roof. Layering old and new roofing accelerates the deterioration of the new roof, and traps moisture that may accelerate the deterioration of the roof structure. It also visually thickens the roof and roof edge.

- Do not remove historic decorative elements such as roof crests or finials.

- Do not change historic roof forms. New dormers and skylights must not appear on visible roof slopes.
Approved cont'd...

The decorative iron fencing at the roof eaves of the Rogers Millwright Shop should be retained.

✓ Replacement roof materials should match those existing or verifiable historic conditions. Substitute materials are best limited to non-conspicuous roof areas.

✓ Flat-seam and standing-seam metal roofs are appropriate treatments for the replacement of existing non-repairable historic metal roofs.

✓ Appropriate metal roofing material includes copper, lead-coated copper, terne-coated stainless steel, and terne metal. Painted metal roofs are also appropriate, but the paint used must be compatible with the metal roof. Colors should be limited to traditional roof colors such as red, green, and silver.

Not Approved cont’d...

✗ Rubber, membrane, or roll roofing must not be applied on sloped roofs intended for shingles.

Not Recommended

[Image showing design guidelines for the Great Falls National Historic Landmark District]
Approved cont’d...

✓ When replacing non-repairable and/or non-historic roofing of any kind, existing roofing material should be removed. This will assist in prolonging the life of the replacement roof and will maintain the thickness of the roof edge and thus minimize the effect on the proportions of the facade.

✓ Maintain historic roof forms. New dormers and skylights should be located to the rear roof slopes of buildings, not visible from a public right-of-way.

✓ Skylights should have minimal curbs and flat glass. Dormers should be appropriately scaled to maintain the dominance of the form of the existing roof.

✓ If a slate roof is beyond repair, there are several materials available that are slate substitutes. Of these, cement tiles are recommended. The owner should verify that the roof structure can support the weight of the cement tiles. It should be noted that although cement tiles are less expensive, their installation—the bulk of the expense—is roughly equivalent to that of slate. A properly installed slate roof will last 75+ years. The expected lifetime of cement tiles is only 25 years.

✓ Metal roofing should be installed in accordance with the recommendations of the Sheet Metal and Air Conditioning Contractors’ National Association, Inc., 8224 Old Courthouse Road, Vienna, VA (703) 790-9890. These recommendations pertain especially to flashing details at roof edges and intersections.
Flashing, Gutters, and Downspouts

Flashing spans the joints in a roof system, such as ridges and valleys, where a roof meets a wall, and where roofing material would be inadequate. Gutters and downspouts collect and convey rainwater off the roof and away from the walls.

The following guidelines should facilitate decisions regarding applications for architectural review certification for roofing for buildings within the GFH District.

Approved

✓ Use 1/2-round or plain rectangular sheet metal gutters and plain round downspouts. Metal may be copper, lead-coated copper, terne-coated stainless steel, terne metal, or aluminum.

✓ Pole gutters and built-in gutters are often the original roofing condition, especially on older structures, and therefore are recommended. These have the advantage of being historically compatible and are visibly less obtrusive than hung gutters. Some exploration will be required to determine the original gutter condition.

✓ Maintain gutters so that water does not infiltrate into masonry walls.

Not Approved

✗ Corrugated down spouts are inappropriate in the GFH District.

✗ Architectural “K”-style gutters are inappropriate in the GFH District.

✗ Vinyl gutters and downspouts are inappropriate for use in the GFH District. Their life expectancy is short and their lower initial installation cost does not represent a long-term savings.

✗ It is inappropriate not to replace lost downspouts. Uncontrolled roof drainage will, over time, cause severe damage to masonry and building interiors.

The downspout missing at the roof scupper allows rainwater to wash down the exterior wall of the building, and to collect along the foundation. This condition will accelerate the deterioration of the brick and foundation wall, and will likely be a source of dampness in the basement.

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Insufficient maintenance of gutters and downspouts is
the most likely cause of the water infiltration that has
discolored the walls high on the S.U.M. hydroelectric
plant.
Painting

Paint is the final layer of finish applied to a building’s exterior. It plays a critical role in the appearance of a building and in protecting the building from rain, snow, and sunlight. It is a sacrificial layer, requiring re-application every 5-10 years. As such, paint colors are also the aspects of a building’s design that are the most subject to changes in taste over time. It is not unusual for a 100-year-old building to have a paint build-up of 10 or more colors, several of which may be considered “historic.” It is therefore difficult to prescribe paint colors rigidly.

The existing surface must be prepared to allow the paint to bond both mechanically and chemically with the surface to be painted. Proper preparation will give the best surface possible for paint adhesion that will not damage the underlying historic material. In addition, virtually any paint applied prior to 1965 will almost certainly contain lead, a known toxin.

It is worth noting that, with appropriate preparation and careful application, painting is extremely labor intensive. The cost of paint is a relatively small portion of the overall expense of repainting, and the quality of paint varies widely. It is often significantly more cost effective to prepare surfaces carefully and apply a higher quality (and usually more expensive) paint, thus creating a better bond and a more durable finish.

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<th>Approved</th>
<th>Not Approved</th>
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<td>✓ Changes in tastes in color generally accompanied changes in architectural style, and so it is often most appropriate to paint a historic building in its original color scheme. The only way to be certain regarding original paint colors is to undertake a paint seriation study. This must be undertaken by specialists as it involves examining a cross section of paint chips under special light conditions to ascertain the specific color, hue, and value of a paint layer.</td>
<td>✓ Textured paint is not approved on the exterior of historic buildings within the GFH District.</td>
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<td>✓ Generally, given the utilitarian nature of the mill buildings and the modest nature of the residential structures, straightforward paint schemes using subdued colors are most appropriate.</td>
<td>✓ Painting of previously unpainted masonry is not approved.</td>
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<td>✓ Because of ongoing refinements and improvements in modern paint formulas, the differ-</td>
<td>✓ Unpainted, stained, or clear finished wood is not approved for historic buildings within the GFH District.</td>
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<td>✓ Paint removal techniques that may damage historic fabric, such as using a disc sander or abrasive wheel, high pressure water blasting, sandblasting, or a blow torch, is not approved. Each of these techniques can scar or scorch wood and the difficulty in controlling the method increases the likelihood of lead contamination.</td>
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Approved cont'd...

ence in quality and longevity between oil-based and latex exterior paints has become minimal. It is still the case that latex may be applied over oil-based paints but the reverse is not true. However this application requires the use of an alkyd primer for the new latex to bond to old oil paint layers. Once latex paint is applied to a building, it must be stripped before oil-based paint can be applied satisfactorily. Both latex and oil-based paints are recommended in the Paterson GFH District.

✓ Prepare paint surfaces manually using a scraper, wire brush, and/or sandpaper. An orbital or reciprocating electric sander may be used, but a disc sander will cut across the wood grain and will damage the wood. Scraping should not gouge or otherwise mar the wood or other substrate. At areas of bare wood or chipped paint, sand paint edges to a feather edge. Brush off and wipe down all surfaces carefully to remove dust prior to painting.

✓ Always apply a primer coat.

✓ Two finish coats are recommended.
Energy Conservation and Heating, Cooling, and Electrical Systems

It is the contention of these guidelines that historic preservation and energy conservation are completely compatible and mutually supportive. Moreover, some non-historic energy conservation innovations, such as storm windows and insulation, may be sympathetically incorporated in both historic buildings and new construction in the GFH District.

Mechanical, electrical, and communication systems are non-historic, though essential, additions to the GFH District. As such, they are often best hidden or screened from view. Their undisguised presence may compromise the integrity of the historic character of an individual building or vista.

Some attempt should be made to minimize the impact of mechanical, electrical, and plumbing systems upon building exteriors. In the case of the S.U.M. Administration Building, electrical conduit, a vent stack, a louver, and several wires have been affixed to the northwest wall of the building.

The following guidelines should be considered in permit applications involving energy conservation measures and/or mechanical/electrical systems for buildings within the GFH District.
Approved

✓ All glass in any window should be clear glass rather than tinted, reflective, or low-E.

✓ Awnings are appropriate on commercial and residential buildings. These should be of canvas, and may be colored or striped. Their shape and slope should be simple, to conform to the form of the opening. (See Chapter 4.)

✓ The installation of batt insulation with a vapor barrier should occur either from the exterior when siding has been removed for replacement, or from the interior if plaster from exterior walls has been removed. The vapor barrier is always placed towards the warm side of the assembly being insulated.

✓ Air conditioning equipment should be screened by plantings, lattice, or brickwork, so as not to be visible from the street.

✓ Roof-top solar panels should be located so as not to be visible from a public right-of-way.

✓ Exterior and interior storm windows are approved; see windows section, above.

Not Approved

✗ Do not add vestibules to the primary facades of buildings, unless there is historic precedent for a vestibule. The expense of the construction will probably not be recovered through energy savings, and the addition to the entrance facade will significantly alter the building’s character, proportions, and massing.

✗ Modern aluminum doors and storm doors do much harm to the character of historic buildings. They are not approved on historic mill buildings.

✗ Do not install ventilation fans that deposit material on historic masonry.

✗ Blown-in insulation is not approved as it cannot be installed with a vapor barrier. Without a vapor barrier, moisture from condensation will collect within the walls, causing their deterioration.

Mechanical equipment should not be permitted to deposit material onto historic masonry.
The cooling tower at the rear of the Franklin Mill site is well screened from Mill Street.

✓ All mechanical equipment, whether on grade or roof-mounted, including TV antennas and satellite dishes, should be located so as to be screened from the street and raceway park. Where possible, consolidate several antennae on any one building into one antenna. If necessary, sight-line studies should be performed to assist in the selection of unobtrusive locations for such equipment.