# *4. Materials for Rehabilitation and their Treatment*

Every effort must be made to retain and preserve historic materials, thus maintaining the unique character of a property. Character-defining materials should be repaired rather than replaced. The information in this section compliments Chapter 5, *Building Elements*, and is consistent with the *Secretary of the Interior's Standards for Rehabilitation*. It is important to review both Chapters 4 and 5 together as much as the information is inter-related. On a case-by-case-basis, the Commission may approve the use of materials acceptable for new construction on new additions as discussed in Chapter 10.

## A. Masonry Materials

**(1) Character-defining masonry features.** Masonry features that help define the overall character of a building must be identified, repaired and preserved. Such features include, but are not limited to walls, cornices, hoodmolds, columns and pediments. Masonry features may be constructed of Character-defining masonry elements should be repaired rather than replaced. If replacement becomes necessary, the original should be replicated, matching the original design, material, bonding patterns and joints.

**(2) Replacing missing masonry features.** If historic masonry features are missing, and no physical or documentary evidence remains to indicate the exact nature of the feature, the new design should reflect a contemporary design that is compatible with the size, scale, material and color of the building. Recreating a feature without adequate documentation would create a false sense of history and will not be approved.

**(3) Maintain masonry buildings.** To prevent water penetration, masonry buildings must be carefully maintained. Water penetration can cause serious and potentially costly damage to masonry, either through freezing inside the walls or by causing destructive chemical reactions. For these reasons, it is important to keep roofs, flashing, drains, gutters and downspouts in good repair and free of vegetation.

**(4) Masonry treatments.**

**a. Brick.** Brick used to repair historic work must match the existing brick in material, size, color, texture, and finish. If brick is removed so repairs can be made, it must be removed carefully to prevent breakage. Cleaning mortar from brick to be re-used must be done to prevent gouging and breakage.

**b. Concrete.** Historic formed-concrete and concrete block walls and foundations shall be repaired and preserved.

**c. Cast stone.** Cast stone on sills, lintels, cornices and other architectural details shall be retained and preserved. If the Commission believes replacement of any feature is necessary, the replacement shall match the existing in material, size, form, color, texture and finish.

**d. Stone.** Historic stone walls, including garden walls, shall not be concealed by parging or other treatments. Where historic stone details exist, they must be retained and preserved.

**e. Stucco and parging.** Existing stucco and parging shall be repaired and preserved if the Commission determines that it was an original treatment or that its removal will damage the underlying wall. If the Commission determines these finishes require

replacement, the new finish shall be applied traditionally, with a smooth and uniform finish. Manufactured stucco panels shall not be used for repairs to historic stucco.

i. **New stucco and parging on existing buildings.** Historic brick, stone and concrete block walls on contributing buildings cannot be covered in stucco or parging unless deterioration is severe. Stucco may be approved for non-contributing concrete block buildings, structures and additions. The stucco cannot consist of manufactured stucco panels and the finish must be uniform. The Commission may approve parging over original masonry if deterioration is severe or in the case of an exposed party wall.

ii. **Removal of stucco and parging.** The removal of stucco and parging will be approved on a case-by-case basis, and only with the assurance that the underlying material will not be damaged during the removal.

**f. Simulated masonry veneers.** Simulated masonry veneers consist of a cement-type material applied to exterior walls, in a manner similar to stucco, that was popular in the mid-twentieth-century (commonly known as Formstone or Permastone). Simulated masonry veneers that are original or which are considered by the Commission to be a significant alteration, shall be retained and preserved. On a case-by-case basis the Commission may approval the removal of simulated masonry veneers if it the underlying material is not or will not be damaged and the façade will be restored to its historic appearance as shown in documentary or physical evidence.

**(5) Painting unpainted masonry.** The painting or coating of historic masonry structures, or sections thereof, which are not currently painted or coated, will not be approved except in those cases where it will help stabilize deteriorating brick. Structures, or sections thereof, that are identified as non-historic may be painted for stabilization or aesthetic reasons.

**(6) Removing paint from masonry.** The brick on many Frederick buildings was low-fired and porous and, therefore, was frequently painted to maintain its integrity. The Commission will not approve the removal of paint from a brick building if the removal will cause damage or compromise its integrity. The Commission may approve the use of a chemical stripping method after it has approved a test patch. Graffiti must be removed in a manner that will not deface or destroy masonry.

**(7) Cleaning masonry.** Masonry shall only be cleaned to arrest deterioration or to remove severe soiling. For further information, see *Preservation Brief 1, Assessing Cleaning and Water-Repellent Treatments for Historic Masonry Buildings*.

**a. Appropriate cleaning.** If the Commission recommends that masonry cleaning is appropriate, the gentlest methods possible must be used. The approved method for cleaning masonry is low-pressure water using standard City water pressure without augmentation. Scrubbing can be done with soft bristle brushes and mild detergents. The Commission may approve water washing using the lowest pressure possible between 100 and 300 psi at the nozzle, with the nozzle no closer than eight inches from the surface being cleaned. On some surfaces the Commission may require a psi lower than 100 psi. Pressure compressors cannot be used. All non-masonry surfaces must be protected prior to cleaning.

**b. Inappropriate cleaning.** Abrasive cleaning techniques, such as sandblasting or strong chemical solutions, are not appropriate and will not be approved. Such methods can severely damage the masonry surface. High-pressure washing, with pressure exceeding 300 psi, is not appropriate and will not be approved because it can cause severe damage to the brick and mortar.

**(8) Repointing.** Repointing involves the removal of deteriorated and loose mortar from the joints of a masonry wall and replacing it with new mortar. If there is evidence of masonry deterioration, such as disintegrating mortar, cracks in joints, loose bricks, damp walls or damaged plasterwork, repointing may be necessary. *Preservation Brief 2, Repointing Mortar Joints in Historic Brick Buildings*, provides specific information.

**a. Preparation.** Repointing shall only be done where deteriorated and loose mortar has been removed. Damaged mortar should only be removed using hand tools. On a case-by-case basis, the Commission may approve the use of some power tools on horizontal joints.

**b. Appropriate mortar.** Mortar used in rehabilitation shall be appropriate in composition based on the type of masonry and match the historic mortar in color, texture, and tooling. The use of a lime-based mortar is recommended for nearly all re-pointing projects and is required for repointing historic brick. The color of the new mortar shall match the existing mortar through the use of sand that matches the historic color or added tints. Consult the most current edition of *Preservation Brief 2, Repointing Mortar Joints in Historic Brick Buildings*, for instructions on mixing a lime-based mortar.

**c. Portland cement.** Except where it is demonstrated to be original or compatible with the masonry type, Portland cement is generally not an appropriate mortar for most re-pointing jobs in Frederick and will only be approved on a case-by-case basis. Portland cement likely was not used in mortar mixes in Frederick until the late nineteenth century. The tensile strength of Portland cement is greater than the tensile strength of traditional lime mortars and creates a bond that is stronger than the historic mortar. The result can be spalling or cracking of the brick during freeze-thaw cycles.

## Mortar Mix for Soft Frederick Brick
### *Recommended Model*

Frederick's oldest brick buildings were built with lime-based mortars that did not contain Portland cement. Repointing such brick and building with salvaged soft brick requires the use of lime-based mortars. Modern mortar mixes can result in damaged brick as freeze-thaw cycles weaken the structure of the brick and the joints.

The American Society for Testing and Materials (ASTM) defines mortar types in terms of the amount of Portland cement and strength in terms of psi. ASTM designates mortars by the letters M, S, N, O, and K (every other letter of the words "mason work"). The psi ratings range from 2,500 (type M) to 75 (type K). The proportions of materials are generally stated in terms of cement:lime:sand. Type K has the highest lime content and probably is the only ASTM type appropriate for old Frederick brick. The mix is 1:3:10 (1 part cement, 3 parts lime, and 10 parts sand).

A good mortar mix for the softest Frederick brick may be 0:1:3 (no cement, 1 part lime, 3 parts sand). If a slightly harder mortar is appropriate for the brick, a *small* amount of Portland may be added, for a proportion not to exceed 1:1:3 (1 part each, cement, and lime; 3 parts sand). The type K mortar and the two mixes suggested for Frederick are about 20% lime. The lime should conform to "ASTM C 207, Type S, or Type SA, Hydrated Lime for Masonry Purposes," according to *Preservation Brief 2*.

photo

## *Preservation Briefs*

The National Park Service (NPS) has published a series of *Preservation Briefs* that concern various aspects of rehabilitation. These reports present historical information about various materials and the practical application of rehabilitation treatments. Several of the *Briefs* are specifically mentioned in the text of the Guidelines and a list of all titles is included in the Appendix. The *Briefs* can be found at the NPS website, "Links to the Past," www.cr.nps.gov/tps/briefs (go to Heritage Preservation Services). A link to the NPS website can be found on the City's website. The Planning Department will provide copies of the *Briefs* it has on file, but the *Briefs* at the NPS website are the most current version.

## What is *Documentation* and *Physical Evidence*?

Frequently, the Guidelines state that certain treatments cannot be undertaken unless documentation or physical evidence proves a feature existed. *Documentation* refers to paper records—written, printed, or pictorial. Such records include written descriptions (for example, the 1969 City architectural survey may refer to 6/6 windows that previously existed), photographs (a historic photograph may show a commercial storefront with the transom intact), or archival or published material (Jacob Engelbrecht may have mentioned the "new stone stoop added to Mr. Brown's house" in his diary). *Physical evidence* may be the ghost of a previous feature outlined on a brick wall, a small remnant of a feature, or a buried foundation. Either alone or together, documentation and physical evidence can reveal much about the earlier appearance of a building.

### B. Wood Materials

**(1) Character-defining wood features.** All character-defining wood features must be identified, repaired, and preserved. Such elements include, but are not limited to, siding, brackets, framing details, windows, doors, sills and lintels, entablatures, porches, cornices, shutters and balustrades. All wood elements shall be repaired. The Commission will only approve the selective replacement of severely deteriorated pieces.

**(2) Replacing missing wood elements.** In cases where character-defining wood elements such as cornices, balustrades or German lap siding are missing, recreating those features will be approved if historical, pictorial or physical documentation exists. If documentation is not available, a compatible replacement in terms of material, size, scale, and color is appropriate**.**

**(3) Finishing and maintaining wood elements.** No matter the type of wood used, it must be painted or stained with a solid, opaque stain to ensure longevity and to attain the appropriate appearance for the Historic District. Proper maintenance and a regular painting schedule will prolong the life of all wood elements. Refer to *Preservation Brief 10, Exterior Paint Problems on Historic Woodwork.*

**(4) Acceptable wood.** Any species of untreated, non-composite wood can be used for wood elements in the Historic District, except as prohibited by building codes. Plywood may be approved, but only where the edges are not visible.

**a. Decay- and termite-resistant wood.** The International Building Code and the International Residential Code require decay- and termite-resistant wood is required by code, to be used in certain situations, specifically where siding is located within six inches of grade. Decay- and termite-resistant wood includes heartwood of redwood, cedars, black locust and black walnut.

**b. Use of pressure-treated wood.** Pressure-treated southern yellow pine is also decay- and termite-resistant; however, generally this material is of poor quality, has high moisture content, and tends to warp. In the Historic District visible pressure-treated wood only can be used where wood is in direct contact with the ground, such as posts, lattice and some structural and trim elements. It also can be used for structural

elements that are concealed. Fences and gates can be built of pressure-treated lumber except when street-facing.

**(3) Siding and trim.** Siding and trim on walls to be rehabilitated must be wood. The siding and trim used in rehabilitation projects must match the historic wood in dimensions, texture, and profile. Historic siding includes German lap siding, beveled siding, tongue-and-groove, colonial siding, and board-and-batten vertical siding. Shingles are evident in various shapes. Wood siding and trim shall be retained and repaired. If replacement becomes necessary, the new siding or trim must match the original in terms of materials, size, profile and application as closely as possible.

**(4) Porches.**

**a. Exterior floors.** Floors of historic porches and balconies must be tongue-and-groove wood that matches the dimensions of the historic fabric, unless evidence of other historic materials is present. Exterior porch and stoop stairs can be 5/4" x 6" wood flooring.

**b. Exterior ceilings.** Ceilings that shelter porches, balconies and stoops must match the historic ceiling or be of a similar design. Wood ceilings must be replaced in-kind. If they already have been replaced, the replacement ceiling must resemble historic ceiling materials—either wood, plaster, or metal.

**c. Lattice.** Lattice may be any decay- and termite-resistant wood. It may have a square or diagonal pattern, but it must be framed with wood. Lattice that is deteriorated and must be replaced should have a square or diagonal pattern, unless historical evidence exists for the use of metal lattice or any other pattern. The lattice must include a simple wood frame.

**(6) Doors and windows.** Historic wood doors and windows can often be rehabilitated. When historic wood doors and windows must be replaced due to severe deterioration, the new door or window must be solid wood, not composite or clad.

**(7) Resurfacing wood structures.** Resurfacing structures that historically were wood-sided with artificial stone; thin brick veneer; hardboard siding (Masonite); asbestos or asphalt shingles; cementitious shingles or siding; T1-11 and similar wood products; vinyl or horizontal metal siding; or other non-historic siding materials will not be approved. Roofing materials are not appropriate siding materials, but their use as siding on utilitarian buildings may be approved on a case-by-case basis.

**(8) Paint removal.** Paint on wood surfaces can be removed with a putty knife or paint scraper, followed by hand or mechanical sanding to provide an even surface for re-painting. For heavy paint build-up, paint can be removed with a heat gun that does not exceed 750 degrees Fahrenheit or the equivalent, or with chemical strippers designed for wood. Grinders and torches shall not be used to remove paint. Sanding disks and rotary

## C. Metal Materials

**(1) Character-defining metal features**. Many buildings in the Historic District employ decorative metal such as cast iron, sheet metal, pressed metal and corrugated metal. Features that were fabricated from metal include storefronts, cornices, columns, window and door hoods, fences and gates, historic siding, roofs, window grilles, stoops and railings. All character-defining metal components shall be identified, repaired and

preserved. Removal of character-defining metal elements will not be approved, unless the Commission determines there is irreparable damage or unsafe conditions. The Commission will determine if the complete or partial removal of metal features is advisable, what should be done to prevent further damage and how the underlying surface should be treated if the feature is removed.

**(2) Missing metal features.** If character-defining metal elements are missing and specific documentary or physical evidence does not exist to prove what was in place originally, a design compatible with the building's architectural style, including, but not limited to, the material, size, scale and color, must be used for the replacement.

**(3) Replacing metal features.** Replacement of metal features is appropriate only if the original fabric is damaged beyond repair. The replacement fabric must conform to the original material. On a case-by-case basis, the Commission may approve a non-metallic material for repairs or replacement, if the material is a good facsimile and can form a seamless interface with the historic material, and generally only at upper stories.

**(4) Maintaining metal features.** The maintenance of metal features must adhere to the following guidelines:

- **a. Cleaning.** Some metal should be cleaned occasionally to remove potentially corrosive substances, and all metal should be cleaned prior to repainting using water, with pressure not to exceed a garden hose without artificial pressure, and mild detergent. Power washing and sandblasting will not be approved to clean metal or remove old paint and corrosion or rust.
- **b. Painting.** If metal needs to be repainted, all corrosion or rust and loose, flaking and peeling paint should first be removed and the surface should be painted with a primer compatible with the finish paint.
- **c. Caulking.** The joints between metal panels may need to be caulked to reduce moisture damage. The caulk should provide a seamless interface between pieces and should be compatible with the feature and the metal fabric.
- **d. Tools.** Tools and methods that damage existing metal, such as sandblasting, cannot be used for modifying, cleaning, repairs and installation.

**(5) Horizontal metal siding.** Non-historic metal siding that is intended to imitate wood siding will not be approved. With Commission approval, non-historic metal siding can be removed and underlying historic siding rehabilitated, if present, or replaced with a historically appropriate material.

**(6) Inappropriate use of metal roofing materials.** Metal roofing materials are not appropriate siding materials, but their use as siding on utilitarian buildings may be approved on a case-by-case basis.

**(7) Additional information.** *Preservation Brief 27, The Maintenance and Repair of Architectural Cast Iron,* includes useful information on the rehabilitation of metal.

## D. Glass Materials

**(1) Window and door glass.** Historic glass must be retained, unless it is cracked or broken. If it is cracked or broken, the replacement glass must be essentially the same in clarity or thickness, although modern safety glass may be used. On a case-by-case

basis, the Commission may approve the installation of insulated glass in windows and doors, particularly on rear elevations.

**(2) Structural glass.** *Structural glass* refers to glass construction materials that became popular in the early twentieth century for wall surfaces. Glass block and plate glass, which are still used, are included in this category of materials. Pigmented structural glass, often known by the trade names of Carrara Glass and Vitrolite, is not produced any more. It was used as a veneer on existing walls—usually storefronts—and on new buildings and usually is associated with Art Deco and Moderne styles. Structural glass is often a character-defining feature, even if applied to more historic walls, and, therefore, it must be identified, repaired and preserved.

- **a. Deterioration and repairs.** The joints or adhesive backing of structural glass tend to deteriorate over time. When the cement joints fail, moisture penetrates behind the glass and compromises the bond between the mastic adhesive and the underlying masonry substrate or the metal anchors. Repairs to structural glass include repointing the joints with a silicone compound, replacement of the original mastic and the installation of new panels. Although old inventories of Carrara Glass or Vitrolite may be found, spandrel glass with a back-colored surface also can be used as a replacement.
- **b. Technical information.** *Preservation Brief 12, The Preservation of Historic Pigmented Structural Glass*, explains in detail how pigmented structural glass can be repaired.

**(3) Stained and leaded glass.** Stained and leaded glass must be repaired and preserved. If the glass is broken, replacement glass must match the existing glass and design.

- **a. Retrofitting window glass.** Windows may not be retrofitted with stained or leaded glass, unless its previous existence can be proved with documentation or physical evidence.
- **b. Deterioration and repairs.** Stained and leaded glass repairs should not result in the removal of original fabric, such as glazing and lead, except as approved for repairs.
- ***c.* Further information.** *Preservation Brief 33, The Preservation and Repair of Historic Stained and Leaded Glass,* should be consulted for further information.

**(4) Glass block.** Historic glass block must be repaired and preserved, unless the glass is cracked, missing, or broken. If the Commission allows replacement, the new glass block must match the historic. If documentary or physical evidence shows the previous existence of glass block in an opening, its installation may be approved by the Commission. Otherwise, it will be approved by the Commission on a case-by-case basis.

## E. Plaster Materials

**(1) Character-defining plaster.** Plaster is generally an interior finish material, but in some cases plaster ceilings were installed on porches, particularly upper level porches. Historic plaster walls on sheltered exterior spaces, such as porches, must be repaired and preserved. Plaster repairs shall match the original in material, texture, finish and color.

**(2) Replacement.** If the Commission considers the plaster beyond repair, the replacement plaster shall match the original plaster in material, texture, finish and color. On a case-by-case basis, the Commission may approve the use of exterior drywall as a replacement for plaster walls and ceilings, but the finish surface must be the same as the original.

## F. Terra Cotta Materials

**(1) Character-defining terra cotta.** Architectural terra cotta is a brick-like product molded to various shapes and motifs on one plane and fired to achieve a hard, hollow block. Often it was glazed, producing a variety of colors. The block was popular in the early twentieth century for building details, such as cornices. Architectural terra cotta is a character-defining feature that may add rich detailing to buildings. Character-defining terra cotta must be repaired and preserved.

**(2) Deterioration and repairs.** Deterioration of the mortar, metal anchors and the terra cotta itself is possible and is generally caused by moisture penetration. Over time, moisture behind the glaze can lead to crazing and moisture behind the units can lead to spalling. As deterioration progresses, the blocks or portions of blocks can be lost. This unfortunate situation is unattractive and potentially dangerous. Repairs to terra cotta need to be made immediately to arrest further damage and to ameliorate hazardous conditions. The approach to repairs needs to be approved by the Commission. Repairs should result in stabilization of the terra cotta and elimination of the conditions that led to the deterioration. As much historic fabric as possible must be retained.

**(3) Replacement.** Terra cotta that the Commission considers beyond repair shall be replaced with terra cotta to match the original. If unavailable, the Commission will determine a replacement strategy on a case-by-case basis.

**(4) Technical information.** *Preservation Brief 7, The Preservation of Historic Glazed Architectural Terra-Cotta*, explains the repair of this material.

## G. Roofing Materials

**(1) Wood** shingles are an appropriate roofing material only if there is pictorial, historical or architectural evidence that they were once in use on the historic building, and if they were typical of a particular building style or type. Otherwise, their use is not permitted. Products that simulate wood shingles will not be approved.

**(2) Slate** roofs often can be repaired, and this treatment should be pursued using a slate that matches the existing whenever possible, before total replacement is considered. Slate roofs that are beyond repair can be replaced in-kind or with a material that is most appropriate for the age and style of the building. The Commission may consider the use of faux slate, which is a non-traditional material, on a case-by-case basis. The replacement product must match the historic feature in terms of size, color, texture, finish, and shape. The overall pattern of the tiles shall replicate the historic.

**(3) Standing-seam metal** roofs should be replaced in-kind, unless evidence exists for an earlier roofing material. Manually crimped standing-seam metal is preferred by the Commission. If interlocking standing seam roofing systems maintain the same

historic profile as manually crimped standing seam, including a rolled ridge, not a cap, its use may be approved. Interlocking seam roofing will not be approved if the roofing material on an adjacent building would preclude a tight seal at the intersection of the roofs. The width of new metal panels must be compatible with the original roof. Factory-finishes must reflect traditional hues (galvanized, green and red). Standing seam roof panels must be fabricated from flat panels. Ribbed panels will not be approved, although, on some secondary buildings, other types of panels may be approved on a case-by-case basis. Corrugated metal is appropriate for some industrial or small-scale buildings, such as garages and sheds.

**(4) Metal shingles** may be approved on a case-by-case basis.

**(5) Asphalt shingles** can be used to replace existing asphalt or asbestos shingles and on additions, but otherwise they are not permitted unless evidence of their use exists under later roofs. The Commission must approve the color of proposed asphalt shingles. Colors have not been specified, but generally neutral earth tones and black are preferred over pastel colors.

**(6) Rolled composition roofing** is inferior to other roofing materials and its use is generally not approved in the historic district. Alternative materials installed in a similar manner may be approved on a case-by-case basis.

**(7) EPDM, TPO, or rubber roofing systems** can be used on flat and nearly flat roofs that are not visible from the street.

**(8) Bitumen and gravel roofs** were installed on flat or nearly flat roofs and are acceptable in such situations.

**(9) Other** roofing materials may be approved on a case-by-case basis, depending on the qualities of the material and their appropriateness for the style of the building.

## H. Paving Materials

**(1) Brick**. Brick paving on public roads and sidewalks must be laid according to the City standard, which requires a 3" concrete base, and must utilize a City standard shape and pattern. Brick laid on private property should follow the industry standard, which is a 4" to 6" base of crusher run stone, with 2" of stone dust over that. Stone dust and sand (or only sand) is worked into the cracks. A steel or plastic edging must surround brick paved areas that are not adjacent to walls. The HPC may specify which material is appropriate for particular locations. Brick shapes and patterns not included in the City standards, including hexagonal-shaped, may be approved on a case-by-case basis.

**(2) Concrete.** Concrete paving on public roads and sidewalks must be poured according to the city standard. Maryland State Mix #2 with 100% Portland cement (or equivalent) must be used to achieve a historically appropriate concrete color. Within a year of the pour, the concrete should have an appropriate gray color. Concrete should have a horsehair broom finish (a light broom finish); a dimpled finish is also acceptable. Patterned concrete may be approved on a case-by-case basis.

**(3) Stone.** Cut and shaped stone surfaces will be approved on a case-by-case basis. Irregularly shaped flagstones generally are not appropriate for paving visible from the public way.

**(4) Gravel.** Gravel has long been used in the Historic District, but its use today is limited because it is not considered a dust-free surface. Gravel only will be approved within the limits imposed by the Engineering Department.

**(5) Asphalt.** The use of asphalt is limited to areas designed for vehicular traffic, including parking.

**(6) Tile.** Tile or other mosaic treatments may be approved on a case-by-case basis.

**I. Treatments of other historic materials.** These Guidelines do not discuss all materials evident in the Frederick Town Historic District. All historic materials, whether mentioned in these guidelines or not, must be repaired rather than replaced and must be preserved through an on-going program of maintenance. The *Preservation Briefs* should be consulted for fundamental information about appropriate treatments for specific materials. An approach to rehabilitation that demonstrates knowledge of the fabric and its treatment must be presented to the Commission before an approval will be granted. A list of *Preservation Briefs* is included in the Appendix.

**J. Non-traditional materials.** When deteriorated, damaged, or missing materials of a historic building require repair or replacement, it is almost always best practice to use historic materials. In limited circumstances substitute materials that imitate historic materials may be used if the appearance of the historic materials can be matched closely and no damage to the remaining historic fabric will result. The new material shall match the size, color, texture and finish of the historic feature. If the Commission determines the use of substitute materials is appropriate, their use may be limited to upper stories or portions of a structure not readily visible from a public way. In general, four circumstances warrant the consideration of substitute materials:

**(1)** the unavailability of historic materials;
**(2)** the unavailability of skilled craftsmen;
**(3)** inherent flaws in the original materials; and
**(4)** code-required changes

The use of faux slate material may be appropriate with certain conditions (see G.2.).

**K. Materials that will not be approved.** Unless otherwise stated in the guidelines, certain materials, including but not limited to the following, are not appropriate and will not be approved for rehabilitation in the Historic District, unless they can be determined to be original to the building: composite decking and accessories, vinyl and aluminum siding, cementitious siding and shingles, textured plywood siding (e.g. T1-11), brick and stone veneers, particle board and asphalt and asbestos siding. Lattice made of synthetic materials, such as plastic, is not permitted.

## *Lead, Asbestos & Other Hazards*

When preparing for rehabilitation, demolition, or construction property owners and contractors should be aware that some items inside buildings contain lead, asbestos and other hazards. You may be required to follow certain procedures when generating, storing, transporting, or disposing of these materials. All State and Federal Regulation shall be followed. The following online resources can provide additional guidance:

- United States' Environmental Protection Agency
  https://www.epa.gov
- Resource Conservation and Recovery Act In Focus:
  https://www.epa.gov/sites/production/files/2015-01/documents/rif-cd.pdf
- Preservation Brief 37: Appropriate Methods for Reducing Lead-Paint Hazards in Historic Housing
  https://www.nps.gov/tps/how-to-preserve/briefs/37-lead-paint-hazards.htm