MASONRY
DESIGN GUIDELINES

Brick, stucco, and stone are the primary historic masonry building materials in Louisville and are a vital component of many historic structures and elements in preservation districts. Historic masonry should be repaired and preserved whenever possible to maintain the character of historic buildings and districts throughout Louisville.

Original Historic Masonry

The original masonry construction and detailing on a historic building should be preserved wherever possible.

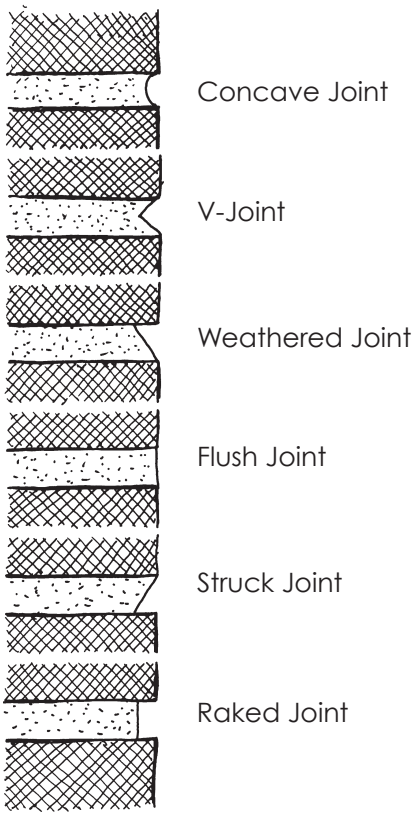
M.1 Preserve an original masonry material.

» Do not cover original historic masonry with new materials.

M.2 Do not resurface historic masonry with alternative materials such as stucco, permastone-cladding, or exterior insulation.

Preserve an original masonry material. Masonry can convey a wide range of stylistic effects such as shape and texture, as shown above.

Mortar Joints



Match the existing bonding pattern, coursing, color, size, strength, and pointing mortar of the original masonry. The type of mortar joint selected can affect the visual appearance of a masonry wall and the way the wall sheds water.

Reconstructing Deteriorated Masonry Features

The replacement of historic masonry features should only be considered when original masonry cannot feasibly be repaired. Elements on historic masonry walls should not be removed or replaced unless deterioration exists. When considering a reconstruction project, removing or rebuilding substantial portions of a historic masonry wall is not recommended as it could potentially compromise the structure's historic integrity. Rather, reconstruction projects should focus only on areas that are deteriorated. The reconstruction should match the existing pattern, size, and style of the original historic masonry work to adhere to the character of the building and the district.

M.3 When replacing a section of a brick wall, match the existing bonding pattern, coursing, color, size, strength, and pointing mortar of the original masonry.

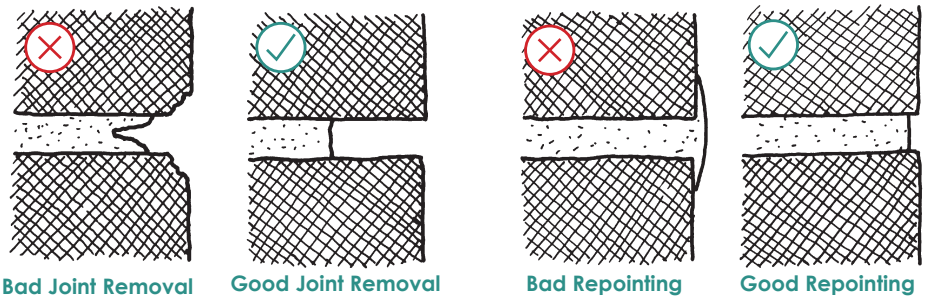
- » Tooth-in new bricks to historic brickwork to disguise the joint between new and old.

M.4 Use a replacement material that is suited for exterior use and that is of similar strength to the historic masonry.

M.5 Do not construct a new masonry feature that is falsely historical or that is incompatible with the building or district in terms of size, scale, material, or color.

Repoint a deteriorated masonry mortar joint. Mortar bonds masonry together, permits movement, and acts as a conduit for moisture transpiration. Walls that have damaged or inappropriate mortar are at risk of freeze-thaw deterioration.

Repointing Requires a Careful Touch



Repoint a deteriorated masonry mortar joint. Remove an unsound mortar joint by hand to a depth of two and a half times the width of the joint, or to sound mortar. Bad repointing results in brick damage from grinding tools, mortar that is too hard, and sloppy joints. Good repointing carefully removes deteriorated mortar using hand tools and replaces it with compatible mortar, slightly recessed from the edge of the brick.

Maintenance and Cleaning of Masonry

The maintenance and cleaning of original historic masonry is an extremely important component to maintaining the historic character of a building and district. However, it is important to keep in mind that a "like" new appearance is rarely desirable for a historic structure. Any cleaning methods should be properly understood prior to beginning a cleaning project, so as not to damage the character of the historic masonry. The maintenance and repair of historic materials, such as stucco, should be done carefully and in a way that does not create further damage to the structure.

M.6 Repoint a deteriorated masonry mortar joint.

- » Repoint only a joint that is no longer sound.
- » Remove an unsound mortar joint by hand, not using power tools, to a depth of two and a half times the width of the joint, or to sound mortar.
- » Match a historic joint in color, texture, joint size, and tooling when repointing.
- » Utilize a mortar mix that is compatible with historic masonry and that will allow moisture to escape.
- » Prior to re-pointing, analyze the historic mortar to determine an appropriate mortar mix for the specific property.
- » Do not use a synthetic caulking compound to repoint historic masonry.

M.7 Prior to cleaning, ensure that a mortar joint is not deteriorated, as deteriorated joints will allow for water to penetrate the wall during cleaning.

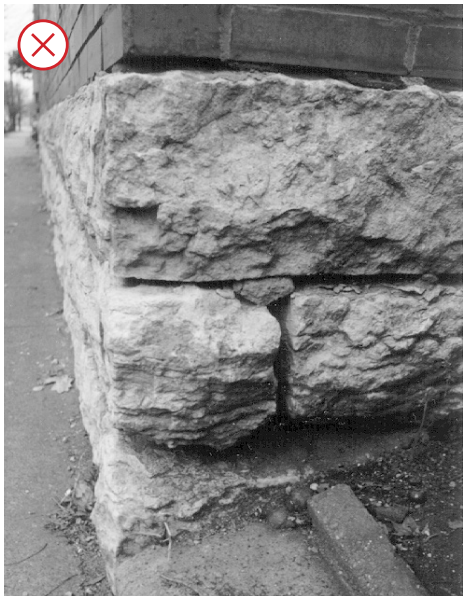
M.8 Use the gentlest means possible to clean masonry.

M.9 Test proposed cleaning treatments in an inconspicious area to evaluate potential adverse effects prior to applying the method to an entire masonry structure.

- » Do not use sandblasting or high-pressure water to clean historic masonry.
- » Do not use water- or chemical-based cleaning systems when the possibility for freezing temperatures exist.

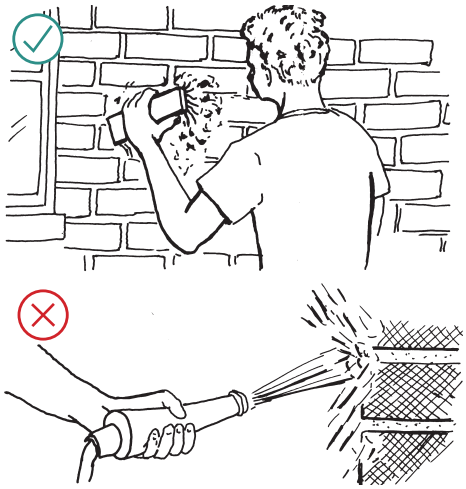
M.10 When patching stucco, utilize a material that matches the strength, composition, color, and texture of the original material.

- » Cut back successive layers of stucco to determine the historic material properties and to provide a guide for the new, patched layers to prevent future cracking.
- » Perform stucco repairs so that the new layer is flesh to the surface of the original stucco layer.



Repoint a deteriorated masonry joint. Utilize a mortar mix that is compatible with historic masonry and that will allow moisture to escape.

Gentle Cleaning Is The Best Cleaning



Use the gentlest means possible to clean masonry. Scrubbing with natural-bristle brushes is recommended. High-pressure water or sandblasting erodes the surface of the brick and dislodges mortar and should be avoided.

PRIOR TO PAINTING

Before beginning a painting or repointing project on your historic structure, Metro Staff in the Planning and Design Services Office are available to consult and to answer any potential questions.

Painting Historic Masonry

The use of paint on historic masonry structures should reflect the historic character of the property and district, and should be done only if the structure was historically a painted masonry structure. To achieve a match close to the pigments of a historic paint color, it is recommended that historic paint samples undergo analysis prior to painting a structure.

M.11 Preserve an unpainted masonry element that was not historically painted.

M.12 Paint a previously-painted masonry structure with a color that is close to its existing color and that appears as a natural masonry color.

M.13 Use a "breathable" masonry paint that is compatible with and can create a strong bond with existing paint.

M.14 Remove inappropriate paint, such as graffiti, as soon and as gently as possible.

- The use of a solvent-based chemical stripper is acceptable for removing paint only after testing its effectiveness on an inconspicious area of the building.
- Do not sand-blast or use an acid-based cleaner to remove paint.