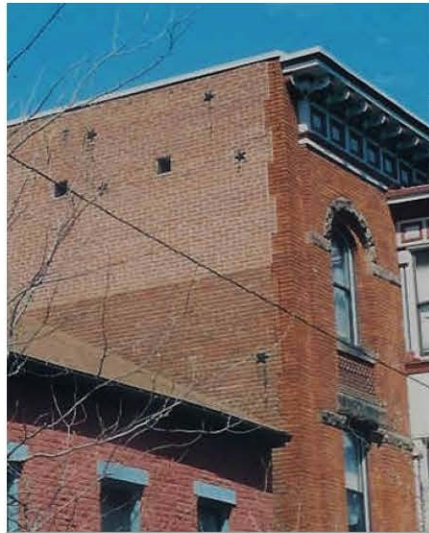


## Brick Masonry



Poor quality repointing work is easy to spot. Inorganic pigments can be used to tint mortar so it matches the historic.



This damage traces the length of a chimney. The temperature differential has eroded the masonry. Repointing is useless without lining the chimney first.

**BRICK** Buildings in Troy's historic district are predominantly constructed of brick laid in courses of mortar. In the early 19th century, handmade brick was "soft" and varied in size. Mortar, too, was "soft," and comprised of just lime and sand. As the brick industry modernized, brick was made harder and more uniform. The mortar that held them together also was a harder mix, made with cement.

Bricks and mortars from different time periods are not interchangeable. Mortar binds the bricks to prevent moisture from entering the building in between them. When soft mortar is replaced with newer harder mortar, moisture can be trapped in older brick, causing the face of it to pop, or spall.

In the 1970s, brick was often sand-blasted to remove paint. But it also removed the face of the soft brick. It is easy to tell if a building has been sand blasted. The brick will be pockmarked, or worse, spalled and deteriorated because water has penetrated it.

An experienced mason will understand the importance of mixing a mortar compatible with the composition and color of the brick. A typical historic soft mortar mix is comprised of 1 part white Portland cement; 3 parts Type S hydrated lime; and 6 parts of sand with no admixtures that are sometimes used.

### WATERPROOFING

Though tempting, water proofing is not a quick fix and can exacerbate water damage by preventing moisture from escaping. It is far better to keep water away from a building altogether by cleaning gutters, extending down spouts at least three feet from the foundation, removing overgrown shrubs and vines that prevent walls from drying out and repairing mortar joints or damaged stone which allow moisture in masonry walls.

### CLEANING

There often is a strong temptation to clean brick masonry. If brick masonry has become heavily blackened by grime, or vandalized by graffiti cleaning may be appropriate.

### APPROPRIATE TREATMENT GUIDE

All repairs and replacements are subject to HRC review. Submit photos of your property with your application for review. Reviewers can help you in determining whether repair or replacement is appropriate.

- Joints being repointed should be raked clean by hand to remove deteriorated mortar.
- Mix and apply mortar in test samples to match strength, profile, color and texture of the existing mortar closely.
- Know the composition of your brick before deciding to paint. Rule of Thumb: Only paint brick that's been painted before.
- Understand why the masonry is damaged before deciding how to repair it. Most damage is moisture related and will reoccur if the source of moisture is not mitigated.
- When replacing brick, use brick of the same composition and color as the original.
- Cleaning should be done as part of a project that repairs the mortar joints to prevent water intrusion.
- Remove ivy from masonry walls. It looks charming but it can damage the mortar.



Hard brick, unpainted, is found when the brick pattern and color was a key feature of the design.



Ivy is not your friend, remove it



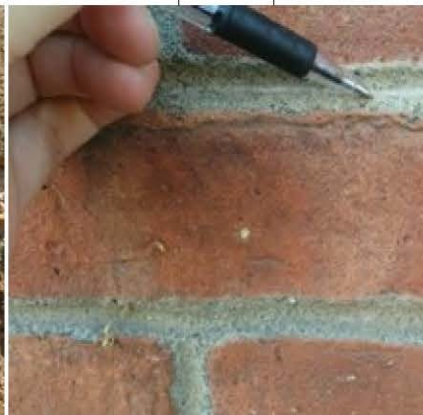
Some brick needs to be painted, some does not.



Uncle Sam Wilson manufactured bricks in Troy in the early 1800's.



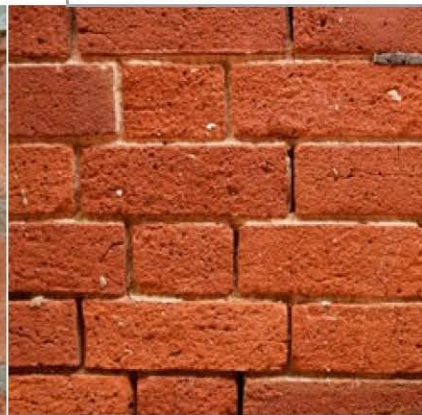
Soft mortar will shed granules of sand when scratched with a key or a pen.



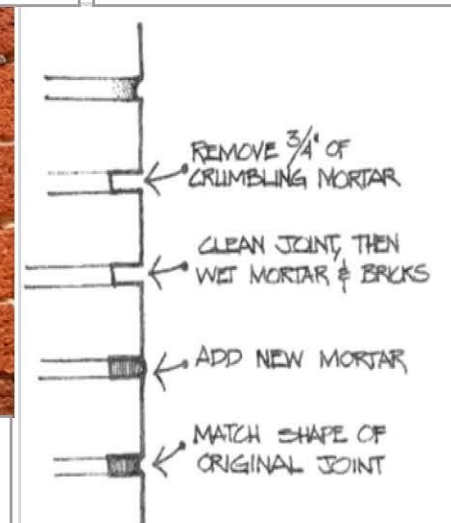
Hard mortar will not crumble when scraped with a sharp tool.



The use of hard mortar has caused the face of these bricks to spall.



Sandblasting removes the face of soft brick leaving it susceptible to damage.



[Repointing Mortar Joints in Historic Masonry Buildings](#)