

# YPSILANTI HISTORIC DISTRICT FACT SHEET

## MORTAR

This is one of a series of Fact Sheets provided by the Historic District Commission to assist property owners and building contractors in planning appropriate rehabilitation of structures within the Historic District.

The Historic District Commission requires that a building be maintained in its original form whenever possible. The character and historic value of a building both change whenever alterations are made and every effort shall be made to maintain the historical integrity of a building.

Your application for a Historic District Work Permit, submitted to the Building Department, will be forwarded to the Historic District Commission for review and must be approved by the Commission before work can begin. A Building Permit will likely also be required.

Historic District Work Permit applications may be obtained from the Building Department in the basement of City Hall, in the Planning and Development Department on the 4<sup>th</sup> floor of City Hall, or on the City website, [www.cityofypsilanti.com](http://www.cityofypsilanti.com).

Old brick (generally found in pre-1900 buildings) is like a loaf of bread – soft inside, crusty outside. It was laid up with soft mortar. Modern mortar, which consists primarily of Portland cement, is very hard and creates a serious problem if used to lay or repoint old soft brick: during the annual freeze-thaw cycle, hard mortar does not yield to stresses caused by expansion and contraction, thus putting all the pressure on the soft brick, causing the outer surface of the brick to break off, a condition called spalling. With the protective crust now gone, moisture penetrates the brick. When this moisture freezes, the brick is further damaged, ultimately turning to dust.

**Therefore, soft mortar with a high lime content must be used whenever old soft brick is laid or repointed.**

### Mortar Formula for Soft Brick

10 parts sharp mason's sand

4 parts hydrated lime

1 part white Portland cement, Type I, ASTM C150

**When used to repair an existing structure, new mortar must match the color of the old, existing mortar. To accomplish this, use:**

1/8 to 1/4 of a box of tint, available at local masonry supply centers – follow manufacturer's recommendations

Run "pancake" tests, allowing samples to dry thoroughly, until a matching color is achieved.