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**Masonry Condition Assessment &**

**Price Estimates for Restoration**

**Tucker Free Library**

**Henniker, NH**

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**OVERVIEW:**

- **General appearance of the building has deteriorated over the years in areas of the brick and granite because of environmental tarnish, weathering and deteriorated mortar.**
- **Cleaning the tarnish from brickwork, granite and limestone would greatly enhance the appearance of the library ( a product such as Prosoco EK Restoration Cleaner is recommended ). A test area should be done before**

beginning a major cleaning. However, because the original mortar is likely a lime based mortar, a pressure washer should not be used but hand washing only. Cleaning would only need to be done on the obvious discolored areas.

- Original mortar is in very good condition for its age, is likely a lime based mortar and should not have a portland based mortar applied over it. The repointing done in 1989 visually looks to be a good color match, however it should be replaced if we find it incompatible with the original mortar. To be determined through a mortar analysis.
- Restoration work should follow guidelines in *Preservation Brief 2: Repointing Mortar Joints in Historic Masonry Buildings* <https://www.nps.gov/tps/how-to-preserve/briefs/2-repoint-mortar-joints.htm>
- Prior to beginning any repointing work of mortar joints, a mortar analysis should be done as well as a test patch ( I recommend Limeworks in PA to complete these tests and provide the correct mortar). The original mortar should be tested along with the mortar applied in 1989.

#### **PROPOSED RESTORATION WORK:**

##### **North Side of the Library:**

- Granite - 25% needs repointing and 20% needs washing ( excluding front steps)
- Brickwork - 5% repointing and 15% needs washing. We might have to add another 20% to the repointing if the recent work of 1989 is found to have portland cement in it ( to be determined by a mortar test)
- Limestone - 50% needs to be repointed and 10% needs to be washed
- Lead Flashing - reset all new

##### **West Side of the Library:**

- Granite - 25% repointed and 10% should be washed
- Brickwork - 5% to be repointed and 15% to be washed. We might have to add another 20% to the repointing if the recent work of 1989 is found to have portland cement in it ( to be determined by a mortar test)
- Limestone - 80% should be repointed and 50% should be washed

**East Side of the Library:**

- Granite - 25% needs repointing and 10% needs to be washed
- Brickwork - 20% needs to be repointed and 20% needs to be washed. We might have to add another 25% to the repointing if the recent work of 1989 is found to have portland cement in it ( to be determined by a mortar test)
- Limestone - 50% needs to be repointed and 50% needs to be washed
- Lead Flashing - reset all new

**South Side of the Library:**

- Granite - 25% to be repointed and 50% to be washed
- Brickwork - 25% to be repointed and 50% to be washed. We might have to add another 40% to the repointing if the recent work of 1989 is found to have portland cement in it ( to be determined by a mortar test)
- Limestone - 40% to be repointed and 50% needs washing

**The Two Chimneys:**

- Need 10 - 25% repointing on each chimney and 80% washing. If in fact both chimneys were rebuilt in 1989 there should be no reason to replace any mortar joints other than the

deteriorated ones.

### **PROPOSED RESTORATION COSTS**

\*\*\* I have added repointing of the 1989 mortars if we find it is incompatible with the original mortar. From a visual observation it looks to be a very good color match. The washing percentages are worst case scenario and after doing a test patch that estimate can be revisited. \*\*\*

- Washing - total price \$18,200.00
- Repointing of original mortar - total price \$38,000.00 ( includes deteriorated original mortar along with granite and limestone joints )
- Repointing 1989 mortars- total price \$ 32,600.00 ( includes both chimneys ).
- Replace all Lead Flashing - total price \$9700.00