

Millicent Library Chimney Restoration Project



**Town of Fairhaven
Community Preservation Committee**

2021 APPLICATION

**Submitted by
Millicent Library Board of Trustees**

PROJECT APPLICATION FORM – 2021

Applicant: The Millicent Library

Submission Date: November 12, 2020

Applicant's Address, Phone Number and Email

Purpose: (Please select all that apply)

45 Center Street

(508)992-5342

dcharpentier@sailsinc.org

- Open Space
- Community Housing
- Historic Preservation
- Recreation

Town Committee (if applicable):

Project Name: Chimney Restoration Project

Project Location/Address: 45 Center Street

Amount Requested: \$136,360.00

Project Summary:

Please see the attached scope of work provided by Clearwater Architects.

Estimated Date for Commencement of Project: June 2021

Estimated Date for Completion of Project: Fall 2021

Millicent Library Interior Restoration Project

Town of Fairhaven Community Preservation Application

Narrative

History:

The Millicent Library, originally dedicated in 1893, has been a valuable architectural and cultural resource to the town of Fairhaven. The Library was commissioned as a memorial for Millicent Rogers, beloved daughter of Henry Huttleston Rogers, the founder of the Standard Oil Company. Designed by Charles Brigham, a noted Boston architect, the Millicent was built in the Richardson Romanesque style with complex Ruskinian detailing. It is located in the historic center of Fairhaven and has been listed on the National Register of Historic Places since 1986. It is represented in the State of Massachusetts Inventory. The building remains an active public library, used by citizens and visited by tourist because of its architectural significance. Its collections include donated works by Mark Twain, fine paintings and stained glass, and the Rogers' family papers and memorabilia.

An addition to the original historic building was added in 1968 in order to accommodate increased use. The interior of this space supports library activities and contains a handicap accessible elevator and workroom.

Background:

Clearwater Architects has completed the construction phase of the Millicent Library Exterior Window Restoration Project. All of the exterior masonry, windows, and storms, have been cleaned, repointed, and repainted.

With the exterior work on the facade completed, we believe it is time to address the recurring issues with the two chimneys. Once these problems have been addressed we can resume the Interior painting project.

Project:

See Project Budget Summary and Unit Cost Estimate

October 30, 2020

Debra Charpentier
The Millicent Library
45 Center Street
Fairhaven, MA 02719

Millicent Library Interior Restoration
CPC Funding Application
Description and Estimate
NE and SW Chimney Repairs

Dear Debra;

The following scope of work includes exterior repairs and restoration to address water infiltration and damage from the Millicent Library building's Northeast (Center Street Façade) chimney and possible water infiltration from the Southwest (William Street façade) chimney. The historic library building's original extravagant multidimensional design created several areas on roofs adjacent to the chimneys which have been unremittingly difficult to maintain. Multiple steep roof pitches adjacent to the vertical masonry sides of the chimneys along with many adjacent seams between differing building materials exacerbate these conditions. To prepare this report, the current conditions at the Northeast chimney were observed with a Town of Fairhaven drone. Annotated drone photos are included with this report.

To repair and waterproof the chimney, robust waterproof flashing and roof cricket connections at the chimney to roof seams are imperative. Unlike the massive granite walls of the library, the chimneys are constructed of smaller blocks of granite and terra cotta and show signs of structural stresses including some observable cracks, especially at the upslope back sides. The number of lengthier storm events in recent years have stressed these areas and increased the potential for water infiltration, especially during storm events which have strong Southern winds that come over the upper ridge of the roof. In order to respond to and correctly repair these conditions, the chimney interior and exterior masonry surfaces, chimney caps, roof crickets, associated flashing, counterflashing, gutters, downspouts and subsurface drainage should be carefully tested examined and evaluated.

The Northeast and Southwest Chimney masonry exterior surfaces were re-pointed during previous exterior restoration projects. Leakage from the Southwest chimney appears to have been mitigated. The Northeast chimney, however, is still leaking, with observable drippage at the interior and in the library attic. More forensic work to determine the source of observable water infiltration at the children's librarian's desk (Room 110) and the Research Reference Room (Room 111) from the Northeast chimney, and at the East wall of the Stacks and Director's Office from the Southwest chimney, is required. In each of the areas adjacent to the two chimneys, the existing roof crickets, masonry to roof flashing, flashing behind the roof edge gutter system and chimney caps should be examined and replaced as necessary to make these chimneys waterproof. Roof rain leaders, gutters, and cast-iron stormwater

downspouts and inground piping should be examined and replaced if they are not of sufficient size to support drainage for increasingly larger rain events.

A thorough examination of the chimneys during the planning phase of the proposed project is essential. Use of a lift and/or Town of Fairhaven camera drone will enable visual access to the roof and chimney surfaces. We recommend that a scope of work be developed for a construction bid that described and itemizes a base bid amount for the needed replacement of the Northeast chimney roof cricket, flashing and repairs to cracked masonry. Along with this base bid we recommend developing a thorough list of add/delete unit prices for additional work that may only be discovered when the chimney is staged with scaffolding and more invasive investigation is undertaken while the base bid repairs are underway during the construction phase.

Because of leakage from both chimneys, plaster surfaces and wood fireplace surrounds have been damaged due to water infiltration. Repair and repainting of these interior surfaces has already been approved and funded. It is essential to remedy all water infiltration issues prior to undertaking any plaster work at the interior. We also recommend that an onsite moisture analysis of the plaster be conducted. Moisture readings of the damaged and undamaged areas of plaster should be taken at various times – after a period of dry weather, and at times both during and following a heavy rain (i.e. ½ day, 1 day, and 2 days) to verify that water infiltration has stopped. The moisture readings should be taken with a moisture meter calibrated for plaster. We also recommend the installation of six crack monitors at significant plaster cracks; most notably the South Façade Palladian window and the circulation area arched openings.

A line item Scope of Work for the chimney repair project was generated through preliminary observation and inspection. Annotated photos of the existing conditions are also included. An updated preliminary estimate of probable cost follows. The chimney repair could be a stand-alone or concurrent project to the interior painting and restoration, but we recommend that both chimneys are made waterproof so that work undertaken to restore plaster and painted surfaced at the interior is done after the original plaster is completely dry.

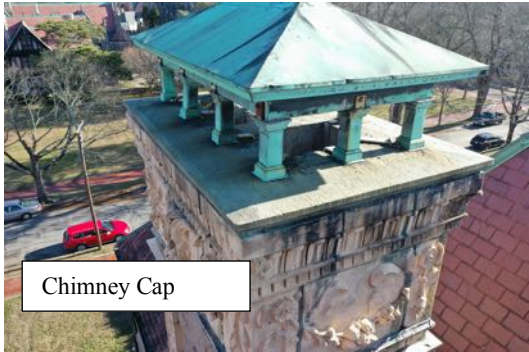
We recommend proceeding with this work or as soon as funding becomes available, so that this remarkable building will have an equal level of restoration and protection. If there are any questions, please contact us.

Best Regards,
Julia M. Bernert, RA LEED AP
Clearwater Architects

Millicent Library Chimney Repair Project Budget Summary

	Repair and Restoration Items Schematic Phase Estimate Northeast Chimney Repair with staging for Southwest Chimney	Type	Each	Total
1	Scaffolding + all terrain forklift with labor to erect and dismantle	Stage 4 sides of the chimneys	9,000	18,000
2	Tarpaulins, with labor to erect and dismantle	each	375	3,000
3	Protection for landscape irrigation system and plantings	each		2,000
4	Piping, storm drain, Clean-outs	Linear feet	75	4,500
5	Cleaning masonry, light restoration, heavy soil, biological and mineral staining, low pressure wash, brush and rinse, excludes scaffolding	Square feet	8	1,800
6	Copper roofing for roof cricket, flat seam, 20 oz, 145 lb. per sq	each	9,600	9,600
7	Gutters, lead coated copper, K type, 7" wide	10' lengths	1,050	2,100
8	Reglet copper 16oz. and counterflashing	10' lengths	350	2,800
9	Hip and Ridge Chimney Cap, Custom size, 20 oz copper	1	7,500	7,500
10	Flashing, copper, 16 oz, various widths	Linear feet	35	8,400
11	Granite Masonry crack repair	each	275	5,500
12	Terra Cotta Masonry crack repair	each	275	6,900
13	Pointing masonry, stonework, soft old mortar	square feet	180	8,600
14	Sealing Masonry, Waterproof sealer, 2 coats	Square feet	6	1,400
15	Replacement of attic troughs	each	500	1000
16	Thermal imaging moisture meter	each	2	1600
17	Subtotal			84,700
18	Schematic level Budget Contingency @ 25%			21,175
19	Contractor Overhead and Profit @ 15%			12,705
20	Total Construction phase preliminary estimate			118,580
21	Construction Documents, Bidding and Construction Administration Architect Fee			17,780
22	Total Schematic Level Project Budget Cost			136,360

Millicent Library Chimney Photos



North and East Chimneys

