

October 26, 2008

Dear NELL Members,

I just received this from Bob Trapani Jr. and wanted you to now as we donated \$2,500 to help make this happen.

Lighthouse Making History at Cape Elizabeth Lighthouse

For those who think lighthouses like Cape Elizabeth are done making history in today's world, think again.

The elegant 67-foot east tower at Cape Elizabeth is currently undergoing an historic rehabilitation to its concrete base, and in the process, the 'makeover' is making its own new history.

The repair work to the light's concrete base, which is being managed by the nonprofit American Lighthouse Foundation and facilitated by J.B. Leslie Masonry Company from South Berwick, Maine, is addressing years of surface spalling to the structure caused by age and the elements.



(Photo by Bob Trapani, Jr.)

Ken Morse repairs a top section of the concrete base at Cape Elizabeth Lighthouse

Why is a project that is designed to repair a concrete base so historic?

Earle G. Shettleworth, Jr. of the Maine Historic Preservation Commission explains, "Based on the lab analysis identification of the cement base sample as a grappier cement, it appears that the cement base of the Cape Elizabeth Light is original and likely dates to the 1873-74 tower replacement. This may be the first known use of cement construction in Maine, making it especially significant."



The rehabilitation project to repair the base of Cape Elizabeth Lighthouse, which stands majestic sentinel above Casco Bay near the entrance to Portland Harbor, started earlier this month and should be completed within the next two weeks.

Working to replicate the original cement used to construct the light tower's concrete base is not the only challenge to properly repairing the structure in accordance with the U.S. Secretary of the Interior's *Standards for Preservation*.

Jim Leslie, president of J.B. Leslie Masonry Company notes, "This project has presented a few challenges - one being the concrete overhangs. In repairing the spalling edges, you cannot just simply pour new cement or apply a skim coat patch. We built wood forms to match both the original board lines and concrete form marks on the cement base in order to replicate the historic appearance of the structure, as well as to ensure the durability of the repair work."

Leslie goes on to say, "The important part of a project like this one is the careful prep work to remove the sections of failing

cement. We removed the failing cement down to the existing hard substrate and are using the closest match that could possibly be duplicated mixture-wise to the original grappier cement."

As interesting as this project has been from an historical perspective, it has also been nothing short of a team effort.

The American Lighthouse Foundation, which serves as the steward for Cape Elizabeth Light and 20 other lighthouses throughout New England, has worked closely with the Maine Historic Preservation Commission and United States Coast Guard, as well as with J.B. Leslie Masonry Company.

"In addition to initiating the consultation review process prior to the work commencing at Cape Elizabeth, there was a lot of behind the scenes work that occurred to ensure this project met the high standards for historic preservation," says Bob Trapani, Jr., executive director for the American Lighthouse Foundation.



(Photo by Bob Trapani, Jr.)

Jim Leslie uses hand tools to carefully remove failed cement down to hard substrate on a concrete overhang

Trapani went on to note, "J.B. Leslie Masonry Company took core samples of the concrete, which underwent lab analysis by



(Photo by Bob Trapani, Jr.)

A close-up view of repairs to a spalling area on the top section where the tower's flashing is attached to the concrete base

Testwell, Inc. of Ossining, NY. This analysis report determined what type of cement we were dealing with – in this case grappier cement that is no longer manufactured. The data was then reviewed by the Commission and later enabled Edison Coatings of Plainville, CT to closely duplicate a cement mixture consistent with grappier cement."

The extent of the team effort with the Cape Elizabeth project goes beyond the professional consultation that has occurred.

The need to fund the \$11,300 project required a team approach as well. This is where the generosity of Mr. William Kourakos of Cape Elizabeth, who kindly donated nearly \$9,000, and the New England Lighthouse Lovers, a chapter of the American Lighthouse Foundation who contributed \$2,500, helped make the project financially possible. Without their support, the critical repairs to the light's concrete base would not have occurred this year.

As for the actual rehabilitation work itself; it is in good hands with J.B. Leslie Masonry Company. Cape Elizabeth Lighthouse is the third American Lighthouse Foundation project that the company has worked with the organization on – the other two being the high profile restorations of New Hampshire's White Island Light in 2005 and Maine's Pemaquid Point Light in 2007.

"We take a lot of pride in this kind of important work," says Jim Leslie. "The fact that our company works on a lot of historic structures gives us a better awareness and respect for maintaining the structural integrity of an historic building or in this case, a lighthouse."



(Photo by Bob Trapani, Jr.)

Cape Elizabeth Lighthouse

Leslie concludes, "In the end, we not only want to adhere to the *Standards for Preservation*, we want to make sure the repair and restoration work stands the test of time so that future generations will be able to see a lighthouse like Cape Elizabeth looking the same as we know it today."



A close-up view of the deterioration that occurred to the light's concrete base on the east side

(Photo by Bob Trapani, Jr.)

A close-up view of the repair work by J.B. Leslie Masonry on the east side of the concrete overhang



(Photo by Bob Trapani, Jr.)



(Photo by Bob Trapani, Jr.)
A view of the special cement mixture from Edison Coatings



(Photo by Bob Trapani, Jr.)
Jake Johnson works to mix a round of cement



A close-up view of the cement mixture being prepared for application

(Photo by Bob Trapani, Jr.)



(Photo by Bob Trapani, Jr.)
Ken Morse applies new cement to repair spalling damage



(Photo by Bob Trapani, Jr.)
Ken Morse applies new cement to repair spalling damage



(Photo by Bob Trapani, Jr.)
A close-up view of failing cement on the top of the base



(Photo by Bob Trapani, Jr.)
Jake Johnson and Ken Morse repair a top section

Jake Johnson
vacuums around the base
of the lighthouse,
maintaining a clean work
area



(Photo by Bob Trapani, Jr.)



(Photo by Bob Trapani, Jr.)

A close-up view of spalling
occurring on an corner edge
of the light's base



(Photo by Bob Trapani, Jr.)

Jim Leslie works on prepping
a side section on the south
side of the base

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