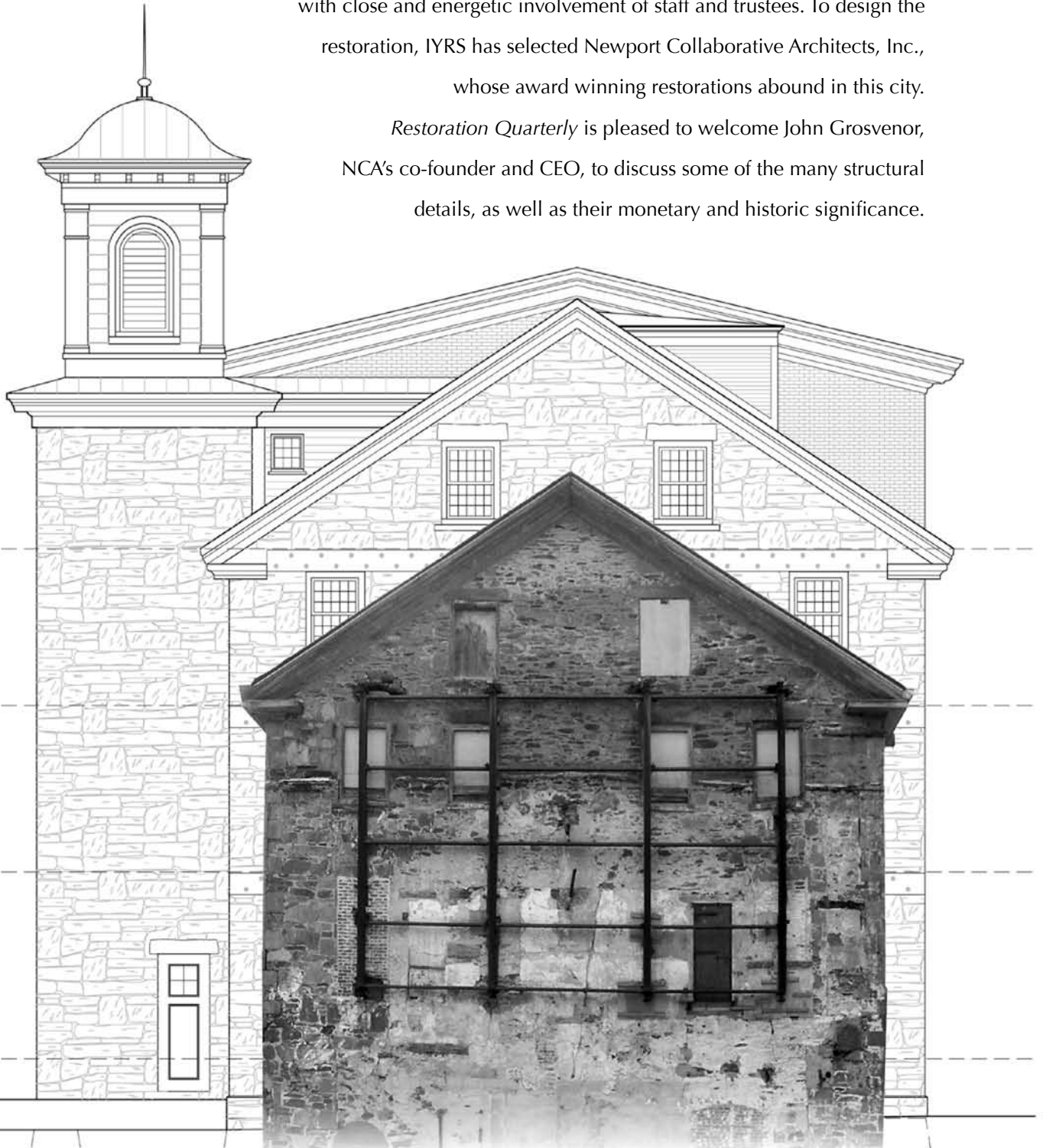


The project to restore the historic AQUIDNECK MILL BUILDING is well underway at IYRS, with close and energetic involvement of staff and trustees. To design the restoration, IYRS has selected Newport Collaborative Architects, Inc., whose award winning restorations abound in this city.

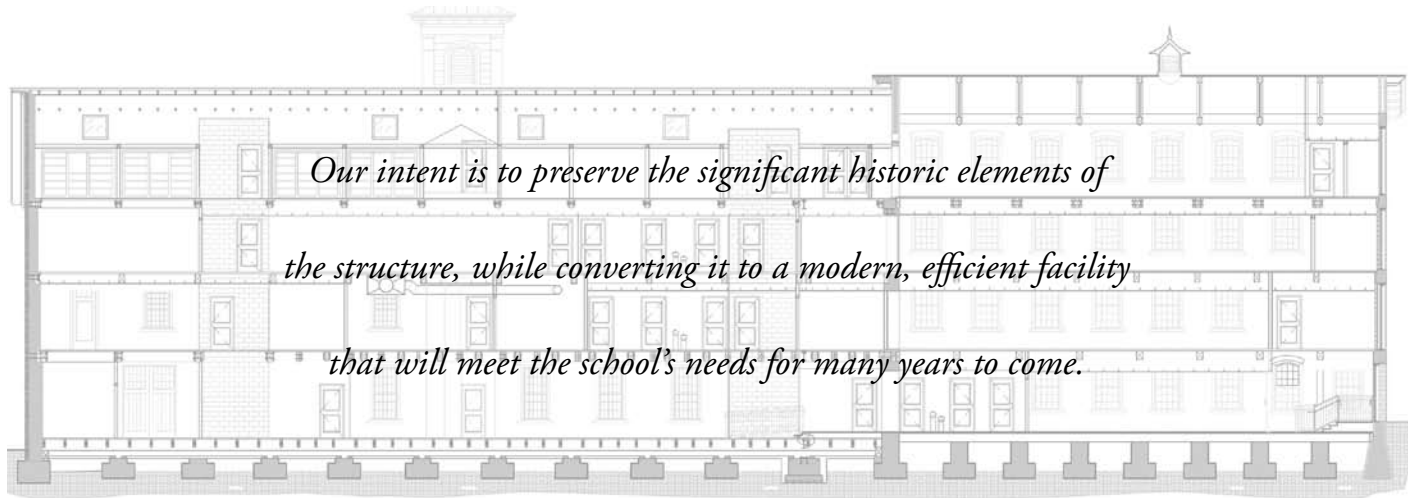
Restoration Quarterly is pleased to welcome John Grosvenor, NCA's co-founder and CEO, to discuss some of the many structural details, as well as their monetary and historic significance.



Reuse of Historic Aquidneck Mill

A Plan for the Future of IYRS

By John Grosvenor, AIA



Our intent is to preserve the significant historic elements of the structure, while converting it to a modern, efficient facility that will meet the school's needs for many years to come.

The Aquidneck Mill, an 1831 steam-powered complex and the largest of four original Newport mills (one of two still standing), represents the prosperity of Newport's bustling antebellum waterfront. The building's use, originating from the textile industry, changed and evolved over the decades from the weaving of cotton to the storage of electrical parts and finally to electrical generation.

Unlike Slater's first generation of industrial mills that harnessed the waters from the Blackstone River, the Aquidneck Mill utilized coal to power the turbines that ran its looms. What is truly remarkable is that the complex is still extant and that its green granite walls wear the vestiges of the past, providing clues to the mill's operation through the decades.

Preserving an old structure like the Aquidneck Mill requires endless research and forensic skills to uncover prior building materials and discern structural additions. Newport Collaborative Architects (NCA) along with the International Yacht Restoration School has worked together to design a viable adaptive reuse of the mill.

Our intent is to preserve the significant historic elements of the structure, while converting it to a modern, efficient facility that will meet the school's needs for many years to come. The mixed-use plan reserves a third of the space for

IYRS classrooms and workshops, with the remaining area set aside for office rental—a total of nearly 30,000 gross square feet of functional space.

THE IMPORTANCE OF TAX CREDITS

As architects, one of our primary goals is to design the structure to historic preservation standards that will allow the project to benefit from both the State and the Federal Historic Tax Credit programs. Combined, these programs amount to about a 40 percent net rebate to the owner for all construction costs associated with the project, with the exception of landscaping and furnishings.

Interestingly, the rules by which a property is deemed eligible for these tax credits are very straightforward. The structure must be over 50 years old, in a National Historic District, and considered a contributing element to the district. Finally, the structure must be rehabilitated utilizing the Secretary of the Interior's Standards for Rehabilitation. This last requirement is the most subjective and indeed the hardest to achieve (see box on page 15 for a detailed list of these standards).

The IYRS program anticipates the use of new materials to achieve practicality and to conform to stringent State fire

codes. In addition to creating concerns about fire, retaining old, worn out combustible materials like oil-soaked planking would also create difficulty in meeting the requirement for a dust-free working environment.

The Rhode Island Historic Preservation and Heritage Commission (RIHPHC) oversees the Tax Credit programs and helps owners and architects navigate the process, offering assistance to reconcile the often conflicting needs of rehabilitation, such as new energy efficient systems versus the requirements of saving and preserving original inefficient materials in place. Every project is different, and experience and guidance are crucial to the right solution if a project is to meet contemporary needs, while retaining important historic tax credit value.

Windows, heavy timbers, and brick and stone work are the character-defining materials of this historic structure.

PRESERVING THE WINDOWS

The Aquidneck Mill windows are 16-over-16, multi-paned, single-glazed, double-hung, wood windows. Nearly half of them were previously removed and many of the window openings filled with masonry to accommodate the building's various uses through time. Our design for reuse returns all the window openings and replaces

lost windows with aluminum, double-glazed, double-hung windows with interior spacer bars and mullions affixed to replicate the silhouette and the pattern of the original sash.

About half of the existing windows have their original sashes in relatively good condition. These will be restored by stripping the lead paint, reglazing the original window glass, and reusing the original cast iron balances and weights. The storm window energy panels on the window interiors will be routed to comply with building code energy requirements.

We plan to move all historic windows to the south of the building in an effort to present the entire elevation as “original stock.” The energy efficient new windows will be installed on the colder north elevation. From a distance they will appear the same and will bear the signature of the original.

AGREEING TO DISAGREE ON THE WEST WALL

The west wall has been the most contentious of the proposed changes. Aquidneck Mill has an addition from the late 1800s facing the waterfront that was removed in the mid 20th century and then rather casually *band-aided* back together. Today, the wall resembles a patchwork quilt of rubble stone and mismatched window and door openings sewn together with a 30-year-old rusting steel brace.

This portion of the mill has potentially the best waterfront views on the property. Our original proposal included adding windows that continue the pattern on the other three elevations. Additionally, NCA proposed that the rubble stone wall be rebuilt with old and new stones to match the original façade.

The RIHPHC position on the west wall, however, is that these vestige changes are important, character-defining aspects of the building that reveal its evolution. As a result, RIHPHC has requested that we retain all the elements as they exist today and revise the elevation to reopen only those windows and doors that we can read forensically from the remains.

We have struck a compromise that allows us to render the exterior wall with a transparent whitewash depicting the historic silhouette of the torn off addition. This provides a means to improve aesthetically the jarring crude infill of the rubble stone repairs made in the 1950s. Inside, many existing brick arches and large granite lintel beams will be preserved and exposed to further tell the building’s life story.

MANY OTHER DETAILS TO CONSIDER

Flooring on the first level is yet another source of debate. RIHPHC has called for retaining the original planking, even in areas where there is suspected



The north side of the mill building in the 1880s and the planned elevation.

The Secretary of the Interior's Nine Standards for Rehabilitation

- 1** A property shall be used for its historic purpose or adapted with minimal change to its defining characteristics.
- 2** The historic character of the property must be retained.
- 3** Significant archeological elements must be protected.
- 4** Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved.
- 5** Each property shall be recognized as a physical record of its time, place and use.
- 6** Treatments that cause damage to historic character shall not be used.
- 7** Exterior alterations must not destroy historic elements.
- 8** Exterior alterations must be discernable from the old, but deemed appropriate.
- 9** New construction, if later removed, must not compromise the property's historic integrity.

to match the original. Brick and granite will be re-pointed throughout, with careful attention given to the historic mortar color match and repairs to the brick face. The new roof will consist of heavy 40-year asphalt shingles that will look similar to the original wood cedar shingles. This material change is allowed and preferred to conform to fire code, since the asphalt is non-combustible.

Inside, the brick and granite will be exposed in the workroom spaces on both the first and second floors. The wood beams will be stripped and refinished to accentuate their aged patina. Wood planking will be exposed, stained for consistency, and varnished to accentuate the historic blemishes. New library cases will be constructed for the proposed fourth-floor library.

Perhaps the most exciting ornamental detail to be refurbished and left in place between floors is the old cast iron metal staircase, which will still serve as a supplemental access between floors and conference areas. This staircase does not comply with contemporary building or fire codes, but will be an ornamental stair marking a page in history.

LOOKING FORWARD

When completed, the Aquidneck Mill building will outline and frame a new IYRS campus quadrangle with an entrance along the new south side walk connecting the renovated Restoration Hall with the Aquidneck Mill entrance. Clam shells will still surface the parking areas, creating rusticity to the boatyard and opportunity for student parking.

A restored and reused Aquidneck Mill will also signal a new chapter in the story of Newport's historic waterfront. The hum of machinery, planers, sanders, and hammers used by students learning their craft will replace the low drone of generators producing electrical power for the city. Activity will once again spring from this historically significant building and revitalize this area of Newport's waterfront. ▲

beam rot caused by humidity seeping in from the dirt crawl space below. Our determination, confirmed by documentation from two structural engineers, proposes removing and saving planking for later reuse, repairing the weakened structure, and replacing with original planking where possible. This process will also allow us to remove all the mold and fungus that has accumulated over the years and pour a slurry concrete slab in the crawlspace that will keep

the dry rot conditions from returning.

Other exciting plans include rebuilding the north-facing cupola that once sat on top of the stair tower. On the south side, an override interrupts the roof line with a large dormer form, marking the new sun-filled entrance. These ornamental pieces help provide visual vertical interest in an otherwise horizontally massed building.

Existing roof rafter tails and wood window trim will be repaired or rebuilt