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Laser scanning historic assets - Coburn Hall renovation, UMass Lowell - by Lauren Poulakis

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How do we speed up historic renovations? The Northeast is a history buff's playground and heritage buildings are everywhere, so how do we make them sustainable; how do we renovate and still be cost-effective? Often at the heart of communities, historic buildings are no longer being overlooked; they are finding new life consistent with adaptive reuse trends. Area universities are also exploring ways to reprogram their historic assets as space becomes a premium.

Brennan Consulting completed laser scanning at Coburn Hall, University of Mass. Lowell. Coburn was the first building to open the campus and originally served as a state teaching college in 1897. Four stories and 64,000 s/f of masonry and timber, this classical revival is slated for renovations. Coburn Hall is on the State Register of Historic Places, creating an even bigger challenge due to potential MEPA triggers and other regulatory constraints.

The \$45 million renovation plans for Coburn Hall include historic preservation and rehab, structural reinforcement, code compliance and modernization with a 14,000 s/f addition. CBT Architects and Suffolk Construction are leading the efforts. According to the RFP, 'Preservation is important for this signature building and appropriate standards and practices should be employed to protect and celebrate the architectural character of the building...'

Brennan surveyors recently completed laser scanning of the entire building, exterior and interior.

Detailed BIM models captured intricate moulding, stairwells, stained glass windows, chimneys and their interior stacks, murals, etched carvings and existing MEP. Laser scanning and BIM technologies can significantly reduce costs to the owner. Brennan's data collection is being used in the Coburn Hall renovation to:

- Streamline design team coordination.
- Assist in comprehensive structural analysis.
- Inventory and protect historic assets.
- Upgrade energy efficiency.
- Perform preconstruction coordination.

Laser surveys also provide a hands-off inventory of historic art and architecture. Coburn's gems are no exception. According to UMass, 'the series of 10 plaster casts of men on horses and a singing choir, were made more than a century ago, from the frieze at the Parthenon, and then installed in Coburn around 1911. The lobby murals of mill girls at work and at leisure are the only visible examples of a set of 1934 murals painted by Works Progress Administration artists during the Great Depression. A matching mural that runs the length of the ballroom will be restored after being painted over decades ago.

Brennan's experience in laser scanning continues to aid in minimizing client risk. The Coburn Hall project illustrates the effectiveness of BIM at reducing unnecessary capital costs during design and construction. Brennan Consulting, Inc. is recently WBE Certified and prequalified by Mass DOT.

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