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## **By Rick Jensen: Renovations and restorations - Expect the unexpected - part 3**

January 19, 2012 - Construction Design & Engineering

Part 2 appeared in the DEC. 16 CDE

It would have taken too long and it still wouldn't have been as precise as the plan we derived from the model."

Technology played a huge part in achieving success at Andover Inn. However, without a skilled and knowledgeable team working together to overcome the obstacles we encountered, and the know how to utilize the right technology, it's very likely the project would not have ended as well.

Stitzer YMCA Center/Judd Gymnasia at Springfield College - Springfield, Mass.

Originally built in 1894 and expanded in 1910, Judd Gymnasia is the oldest building on the Springfield College campus. Given the facility's age and increasing lack of functionality, the school was interested in exploring options to better make use of the space. One course of action could have been to tear it down and build a new structure. Destroying such an important piece of the College's history, however, was not a welcome prospect; so, the school made the decision to renovate Judd Gymnasia and give the facility new purpose. In 2009, Erland Construction began this important restoration project - our third consecutive project for Springfield College.

Before the start of construction, Erland hired a third party firm to assess the building envelope and structural integrity of the building. Because of its age, there was concern that it might not stand up to the rigor of the planned renovations. The assessment found that the building was sound, but once the team began opening up walls and removing ceilings, parts of the building began to fail.

Judd had undergone several small "band aid" repairs prior to this major renewal project. Because it was originally built in the late 1800s, it was not insulated, so the school had covered ceilings in the East and West Gyms and the former Natatorium (which was then transformed into the school's bookstore) lowering the heights to help with astronomical heating bills. The shortened ceilings covered many of the building's beautiful features, including arched windows in the East Gym. As part of this project, Erland was tasked with restoring many of the original components of the building to recreate the initial design.

Uncovering the arched windows in the East Gym was particularly problematic for our team. After removing the ceiling and walls to expose the windows, the arches of the windows began to fall apart. Erland's team had to reinforce all the trusses and outside walls to ensure the window arches would stay in place. Adding insulation to this building while restoring ceiling heights also meant that we were adding weight to the roof; we had to reinforce the entire structure to ensure it would be able to support snow loads.

Despite our best efforts to plan ahead by hiring a firm to assess the building's structural integrity, our team had to think quickly to manage the unexpected. As with most school projects, we had a firm deadline to finish before the start of the 2011 school year, so we did not have the luxury of stopping

work to brainstorm potential solutions - despite our efforts to build in some extra time after completing the Risk Assessment Matrix in preconstruction. Our site superintendent and field laborers were forced to think on their feet to resolve small issues in the field; our project management staff had to work diligently to develop solutions to the larger scale challenges while always upholding the agreed-upon budget and schedule. Without prior experience to rely on, meeting the schedule would have been next to impossible.

#### A Good Defense

In construction, like sports, sometime the best offense is a good defense. Planning ahead and anticipating setbacks based on previous experience and the building's observable condition will help to avoid huge problems during construction. There is no "right way" to renovate a space, but the top Construction Managers have plenty of resources to draw on and policies to enforce to increase the chance for success.

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