

## EnviroVantage completes complicated project at Huddleston Hall at UNH

October 13, 2009 - Front Section

Huddleston Hall, located on the University of N.H. campus, required the removal of its exterior concrete stairs. It may sound like a typical concrete removal project at first, but hiding underneath the concrete stairs we were to cut and disassemble in the dead of winter was a live high pressure steam vault!

The area of the stairs was 10' wide by 16' long with a solid double concrete platform at the top. The stair structure side walls were 24" think and traversed from 8" at the base to 6' at the upper platform. The steam vault below was filled with pipes and gauges making it very difficult to construct a protective barrier. Isolating the steam was out of the question as it was being used to heat a number of buildings while our work was in progress.

EnviroVantage began by constructing a temporary barrier to protect the live steam pipes and gauges from damage throughout this portion of the project. Once that was assembled, the metal center rail was removed allowing for the stairs to be cut into sections small enough to be lifted from the existing structure without dislodging the other sections. Holes were drilled through the concrete stairs to allow for chains to be run through and be attached to a lull.

Lifting each section was a very meticulous process. The actual stairs were cut into four sections, weighing approximately  $2 \ \hat{A}\frac{1}{2}$  tons each. Each heavy section was supported by the chains and lull and then cut and carefully removed over  $1 \ \hat{A}\frac{1}{2}$  day time frame. Removing the stairs opened up the powerful steam vault again requiring us to provide more protection for it from the harsh winter elements.

After the new barrier was created, the thick side walls were strategically cut and lifted out. The EnviroVantage crew discovered that taking out the upper platform would require great care being that it was connected to the building at a point of historic architectural brick. Replacement of this brick would be difficult if not impossible to find. The EnviroVantage team paid special attention to handling this part of the project to prevent any downfalls from happening.

In the end, there was no damage to the structure or mechanical systems throughout the entire project. Pre-project planning, strong management skills, and strict attention to performing their work in a safe and deliberate manner allowed EnviroVantage to make this project a great success.

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