

## **FAHEY & MCLANE RESIDENCE HALL**

Dartmouth College  
Hanover, NH



### **PROJECT DESCRIPTION**

Two new adjoining residence halls, Fahey Hall and McLane Hall, house approximately 170 students in single and two-room configurations. Numerous social spaces serve the residential cluster: a commons room, living room, and lounges, as well as kitchens on each floor. With brick exteriors, white trim and copper roofs, the new facilities echo Dartmouth's traditional Georgian architecture but stand out for their environmentally friendly and energy efficient design, which reduces overall energy use by 40 percent. The buildings include renewable and recyclable materials throughout. The project obtained a LEED® Gold certification for its sustainable design.

To assess the acoustical impact of this new facility on the surrounding environment, Acentech conducted a sound level survey to document the baseline sound levels prior to construction. We then created a computer acoustical model to estimate the sound propagation from the buildings' mechanical systems to the surrounding environment. We predicted sound levels from the discharge and intake airpaths of the emergency generator at some of the close critical locations, and provided detailed recommendations for the control of sound via these air paths.

We consulted on acoustics and mechanical system noise and vibration control for the duration of the project. The University had been concerned about the potential build-up of noise within the commons room of Fahey Hall, so we recommended acoustical treatments to help control sound levels, in keeping with the visual intent for the space. The design allowed an acoustically comfortable and distraction-free commons area.

## **Acentech**

### **CONSULTING SERVICES**

- Architectural acoustics
- Site sound level survey
- Exterior sound modeling & analysis

### **REFERENCES**

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