
B R E A D T H P R O P O S A L S

Breadth Study: Mechanical

A four-story glass curtain wall is one of the main features of the north plaza and lobby space. This large expanse of glass provides views of campus and allows ample daylight into the space, but may be a weak point in the thermal envelope of the building. A breadth study will be completed to analyze the thermal impact of this large glass façade. Possible improvements to glazing or mechanical distribution systems in this space will be considered to facilitate a more energy efficient building.

Breadth Study: Acoustics

Acoustical quality is particularly important in the main northern lobby space of the building. The acoustic analysis of this space will include calculation of reverberation times and sound dampening capabilities of construction materials. The acoustic effect of architectural modifications caused by the lighting redesign will be calculated and summarized. Changes to improve the acoustic conditions of the lobby will be considered and presented.

Additional MAE Study: Daylighting

In accordance with the requirements to complete the integrated MAE/BAE program, an additional depth study will be completed using knowledge gained in AE 565: Daylighting. An appropriate photosensor-based lighting control system will be considered for use within the third floor open office space. Feasibility and effectiveness of specific systems will be studied, and the potential for energy savings will be calculated using computer software and/or hand methods.