

Acoustic Panels Reduce Noise and Boost Productivity at Adelphi University

Libraries are notoriously quiet, or at least they're meant to be. But what happens when students need to interact for studying and project work? How can libraries effectively accommodate these activities and keep the noise down for other patrons?

"Shh" just might be the most heard utterance in libraries. And it makes sense. Libraries are refuges for study, research and reading. Their patrons need and demand silence.

On higher education campuses and in other academic settings, however, the library is also a destination for group study and project collaboration. These endeavors require students to interact verbally. But when the environment isn't acoustically designed for that purpose, things get noisy, and both those in groups and those doing individual study suffer.

This is exactly the situation that Long Island's **Adelphi University** found itself in about five years ago. Ceiling tiles in the collaborative study area on the first floor of the Swirbul Library were old and had been painted several times over. This destroyed any absorptive qualities the tiles once had and actually made them reflect and reverberate sound.

"The collaborative study area was very loud, so much so that students had to raise their voices as if they were outside," said Jerry Tangredi, Adelphi's Associate Director for Facilities Planning, Construction and Design. *"This made an already challenging acoustic situation worse, with noise reverberating all over the place, making it nearly impossible for the students to collaborate effectively, not to mention causing unpleasant conditions for library staff."*

Tangredi reached out to an acoustics consultant he had known and worked with for several years. Sy Lerner, Vice President at **Controlled Acoustics Corporation**, visited the library to assess the situation. He proposed installing Acoustic Lay-in Panels (ALPs) from Eckel Noise Control Technologies of Cambridge, Massachusetts.

"Upon seeing the collaborative study area, I felt we should try a step-by-step approach to minimize any major physical change and also to minimize the costs, if possible," Lerner said. *"I've seen and had great success improving sound absorption with Eckel's panels, so I recommended installing a modest number of them to cover the immediate area."*

Eckel ALPs are designed to provide a comprehensive solution for rooms with sound and reverberation problems. The panel faces and sides enable maximum noise reduction and sound absorption, and are devised specifically for rooms with lay-in ceilings. Noisy rooms often can be corrected by replacing as little as one-third of the existing ceiling tiles with Eckel ALPs.

Not only do ALPs improve acoustics, they also enhance aesthetics with their sleek, modern design. Standard Eckel ALPs measure 2 ft. by 2 ft. or 2 ft. by 4 ft.—to fit typical ceiling grid systems—and are fabricated from perforated metal. A catalyst-activated polyurethane enamel paint provides a range of finishes from matte to gloss. Both the size and the paint color can be customized.

For the initial Adelphi project, Eckel manufactured 20 custom-sized ALPs to accommodate the existing drop-ceiling grid in the collaborative study area. In the months following the installation, both staff and students noted a marked improvement.



"The installation of the Eckel panels quieted things down tremendously and made a monumental difference to students and staff working in that area," said Tangredi.

This initial success led Tangredi to order an additional 66 ALPs to complete the acoustic solution in the surrounding section of the library. As funding became available, Adelphi installed even more panels throughout all collaborative work areas on the first and second floors of the library, including above a series of newer glassed-in rooms with Internet access, video screens and white boards. (The tops of the glass enclosures were left open to allow for the panels' sound absorbing effects.)

"Obviously, Adelphi was impressed with the effectiveness of the panels, since they've added a lot more of them over time," Lerner said.

In the summer of 2012, the University installed an additional 900 ALPs, and then another 520 in December of that year. In May 2014, they installed 930 more panels. All of the panels are made of perforated steel and are painted white. To accommodate existing ceiling grids in the library, Eckel manufactured the ALPs in two custom sizes.

"We now have ALPs in all areas of the library where students work together," Tangredi said. *"Our students and staff are very pleased with the outcome. It's gratifying to have found a solution that enables effective collaborative work without the risk of creating a disturbance that impedes anyone else's studies."*

With a total of more than 2,400 Eckel ALPs installed in the library, Adelphi students now enjoy the benefits of a quiet space for both collaborative and individual research and study.