

Penn State University Acoustics Lab

Pennsylvania, US



Case Study



Property Owner
Penn State University



Main Contractor
Lab Crafters



Acoustic Consultant
Acentech



Architect
Payette Associates

OVERVIEW

Penn State University's Acoustics Lab stands as a cutting-edge research facility committed to the exploration of sound and its many applications. The lab's investigations are conducted within its specially designed anechoic and reverberation chambers, which were meticulously crafted during this project.

Stravifloor Mount

- Discrete pad floating floor system designed for fast and easy installation; can be installed with concrete or panelized floor systems using plywood or cement board

Stravifloor Channel

- Isolated steel batten system for the support of a fiber cement board based floating floor application, using strong, galvanized steel channels over the springs
- Uses steel channels to facilitate the positioning of the optimized discrete supports, allowing fewer contact points (transmission paths) to the subfloor



SOLUTION

A notable highlight of this facility is its innovative floating floor, meticulously engineered to shield the lab from external vibrations and mitigate unwanted noise disruptions. This critical component is indispensable for the execution of remarkably precise and sensitive experiments in the realm of acoustics, as it effectively thwarts the influence of external vibrations—be they from foot traffic or nearby machinery.

The use of [Stravifloor Mount](#), equipped with elastomeric pads, ensures the isolation of the acoustics lab, wind tunnel, and the reverberation chamber from the broader building environment. Furthermore, a custom-tailored [Stravifloor Channel](#) system, incorporating springs, has been meticulously engineered to attain peak performance within the lab's anechoic chamber, allowing for the highest level of precision in research and experimentation.

AT A GLANCE

CHALLENGES

- Performance was critical, as this is a laboratory setting.
- The custom designed Stravifloor Channel system needed to meet a strict performance threshold with a limited available system height.

BENEFITS

- Laboratory-grade acoustical isolation performance from our installed systems.
- Quick and easy installation of the required systems, executed by the CDM Stravitec North America team.

418 sqft

Stravifloor
Channel

2487 sqft

Stravifloor
Mount

