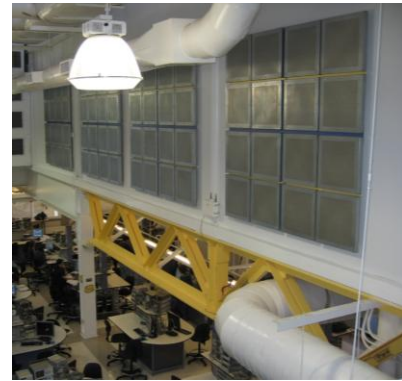


Example Acoustics Strategies Used in a University Classroom Building

Shhh.....

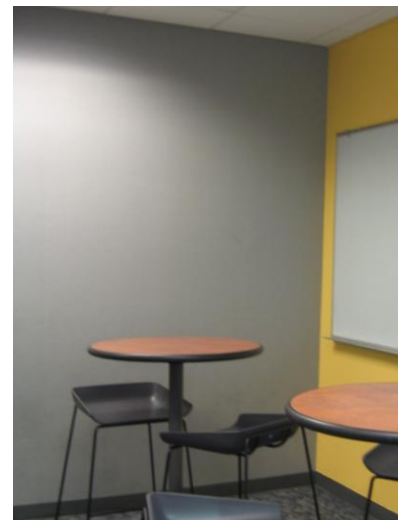
In a large classroom building on the University of Colorado at Boulder campus, acoustical engineers designed and implemented many strategies to reduce unwanted sounds and provide good acoustics for this student learning environment.

→ Throughout the building, **acoustic panels** made of perforated metal with fiber material inside absorb sound.



← Lower hallway walls made of **concrete masonry units (CMUs)** with slots to absorb sound.

→ **Textured and porous wall surface material** absorbs sound in a room designed for student presentations.

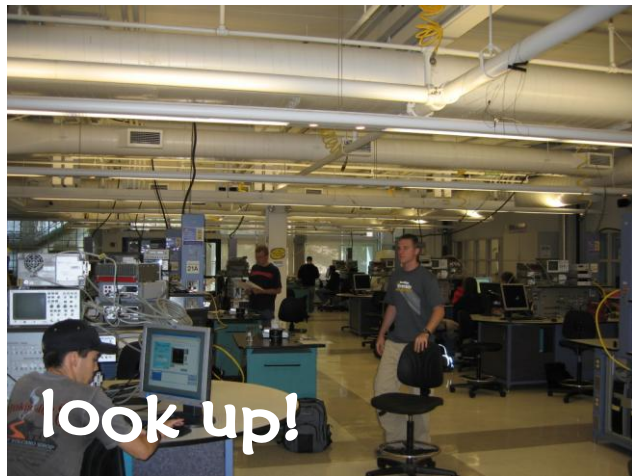




← In a classroom with white boards on all four walls, the **boards are tilted** at slightly different angles to reduce sound wave reflection within the room.



→ Ceiling-floor **acoustic decking** (metal with many, many tiny holes) placed between the ceilings/floors of the building during original construction minimizes sound reflection in large, open lab spaces.



← Fabric and foam **locker panels** are sound absorbing in a small classroom.

➔ Fabric and foam **under-table panels** absorb sound waves in the tool bench section of a classroom.



Engineering.
...ideas in action...



↑ Soft, fabric-covered **bulletin boards** absorb sound better than painted drywall surfaces.

Source: Integrated Teaching and Learning Program and Laboratory, College of Engineering and Applied Science, University of Colorado at Boulder, USA. <http://itll.colorado.edu/ITLL/>