ANSI SCHOOL STANDARDS

New standards have been established that define acceptable acoustical conditions for classrooms and other educational facilities. Will your classrooms receive a passing grade?

The Standards

The American National Standards Institute (ANSI) has recently released a set of standards outlining "Acoustical Performance Criteria, Design Requirements, and Guidelines for Schools." This standard was created with the guidance of the Acoustical Society of America (ASA) and addresses the growing concern of inadequate acoustical conditions in many classrooms.

- Ambient noise from external and internal sources (i.e. traffic, HVAC, electrical equipment).
- Reverberation time - a measure of the decay of sound in the space, determined by the volume and quantity of sound absorbing materials.
- Sound isolation - attenuation of sound through walls and ceilings, determined by the type of construction between adjacent spaces.

The standards outline specific requirements, measurements, and construction types relating to:

The Research

Research has shown that learning is greatly dependent on communication of the spoken word. Acoustical barriers can make it difficult to learn new concepts, language, and skills. This standard will benefit all those working in and attending all learning institutions. The result of incorporating these standards into the learning environment, including educational facilities, will to a greater degree benefit younger children and persons with hearing, language, speech, attention deficit, and learning disabilities.

Impact of the Standards

Currently, compliance with these standards is voluntary unless referenced by a code, ordinance, or regulation. It is predicted, however, that building codes, states, and school districts may require these standards in their new and remodeled construction building programs. Some may eventually require that all educational facilities, new and old, meet these standards.

What Can Be Done?

New Facility Design

CFA will review construction documents throughout the design process.

- Review the mechanical and electrical system design and provide recommendations to help ensure recommended ambient noise levels are not exceeded.
- Assist with the selection of finish materials and estimate the reverberation time of the space, identifying any conditions that may decrease speech intelligibility.
- Recommend partition, door, and window construction to provide appropriate sound isolation.

Existing Facility Renovation and Evaluation

CFA can evaluate existing facilities to compare current conditions with the standards by examining the current construction of partitions, doors, and windows; measuring ambient noise; and recording