



ABC's of Balanced Acoustical Design

Absorb

NRC (Noise Reduction Coefficient) - Build up of noise within a space.

NRC ratings assesses how well a material absorbs sound within the (four) speech frequencies, 250, 500, 1000 and 2000Hz.

Causes:

Reverberance—space with reflective materials (drywall, glass, tile, etc....)

Solutions:

Provide absorptive materials to reduce reverberation & limit reflections. (Acoustical Ceilings, Fabric Treatments, Carpet)

Example: Material with NRC of .80 will absorb 80% of sound that comes into contact with it, and reflect 20% of the sound back into the space.

Block

STC ratings (Sound Transmission Class) - Sound transmission between spaces.

Causes:

Inefficient barrier or lack of a barrier between two separate environments.

Solutions:

A barrier of adequate construction with controlled weak points and sealed joints and penetrations. (Furniture systems - paneled partitions, walls, screens, glass, etc....)

Example: A higher STC rating blocks more noise from transmitting through a partition. Loud speech can be understood fairly well through an STC 30 wall, but should not be audible through a STC 60 wall.

***ANSI/BIFMA recommends an STC 15 or greater.**

Cover

Studies cited "overheard conversation" as the biggest privacy related issues plaguing the workplace.

Causes:

Some people find it impossible to "tune out" the distraction of human conversation. Without sound masking, human speech can be intelligible up to 50 ft.

Solutions:

Sound Masking - "White Noise" - plenum mounted or in ceiling.

Strategy

The most effective strategy in combating acoustical concerns in the workplace is to employ a combination of the above "ABC's". We would be happy to refer you to an Acoustical Consultant. Please call our office for a referral.