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Acoustical Guide

Making a Sound Decision in Operable Walls

Selecting the correct operable wall system first requires a clear understanding of your desired level of acoustical control. Secondarily, the wall's surrounding construction should be carefully planned to enhance the determined objective.

How is sound control measured?

The industry-accepted "measuring stick" for the acoustical performance of operable walls is Sound Transmission Class or STC rating. Every operable wall will have a publicized STC rating. Modernfold utilizes certified, third-party acousticians to determine our STC ratings. The acousticians will administer varying frequencies in their sound laboratory to determine how much sound loss occurs as it transmits from one side of our operable wall to the other. The greater the sound loss is between the two rooms, the higher the STC rating awarded.

What level of acoustical control do you need?

You can use STC to select the appropriate operable partition to fit your design objectives. If you know your outcome, you can be sure to select a partition with the correlating STC.

30-35 STC	Sentences heard clearly
36-40 STC	Sentences heard occasionally
41-51 STC	Only loud speech is audible
52-55 STC	Speech is barely audible; loud music or TV is heard
56-60 STC	Loud speech is inaudible; Loud music or TV is faintly heard

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What architectural elements of the project should be considered?

Operable walls represent a small fraction of the surface area in your space. Effective acoustical control must also consider the contributions of the floor, ceiling, permanent walls, and furnishings in your space. The amount of sound-absorbing material will help reduce the level of sound transmitted through the operable partition.

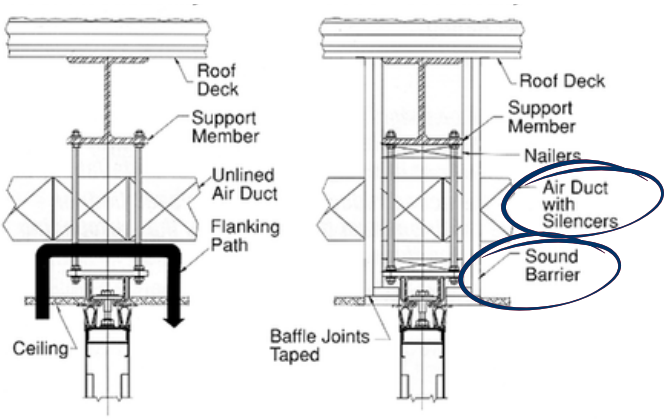
At what stage of the design process should acoustics be considered?

The construction of the envelope surrounding the operable wall must be examined during the early stages of your project to prevent sound from passing from one room to another through flanking paths. It is far more economical than post-construction corrections.

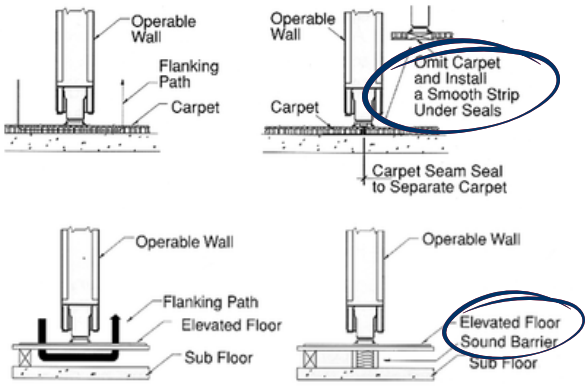
What are common flanking paths?

Sound may pass from one room to another by going over, around, or under the partition based on the construction of the envelope surrounding the wall.

Above the Partition:



Below the Partition:



What other resources can assist the design?

The ASTM E-557 *Standard Guide for Architectural Design and Installation Practices for Sound Isolation between Spaces Separated by Operable Partitions* is an excellent resource to understand flanking.