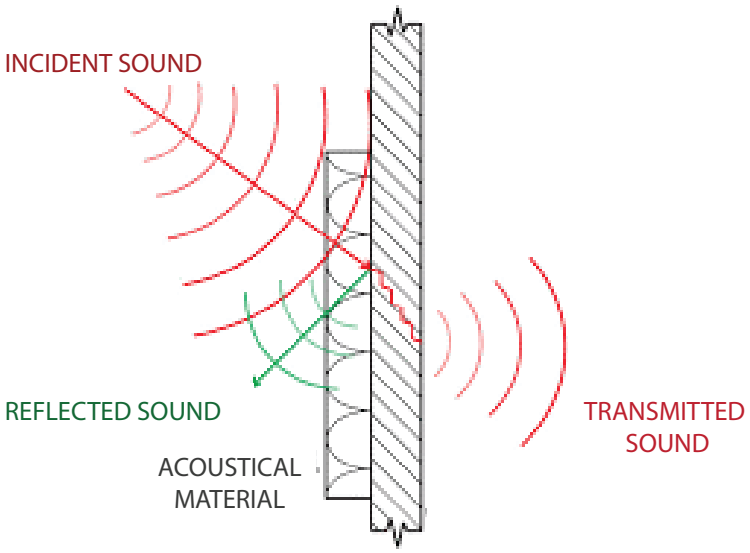
ACOUSTIC BAFFLE

HUFCOR™
shaping your experience

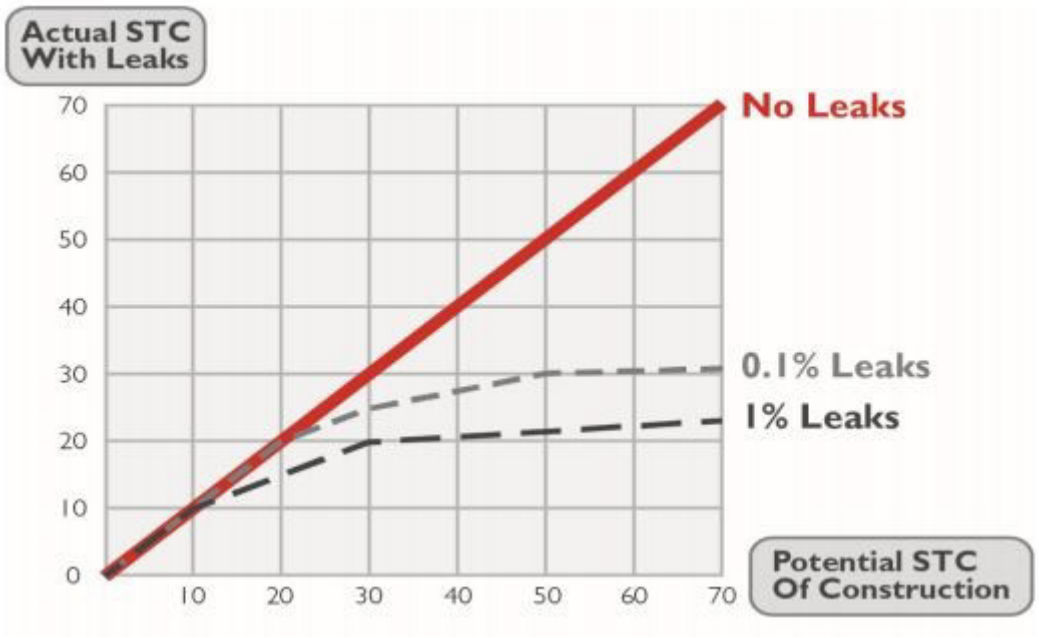


An acoustic or sound baffle is a construction or device which reduces the strength (level) of airborne sound. Sound baffles are fundamental tool for noise mitigation, the practice of minimizing reverberation and to increase speech intelligibility. Since the material installs vertically, both sides are exposed to the sound.

This increases the amount of surface area exposed to the sound, increasing its ability to reduce reverberation. In architectural acoustics, we are concerned with controlling the amplitude and/or the duration of the sound. In walls and partitions, this is done by controlling sound transmission loss and sound absorption. When sound waves strike a partition, some are reflected from the surface, staying within the same room as the source of the sound. Some are absorbed by the material covering the partition and some are transmitted through to the other side of the partition.

Why is Acoustic Baffle important to the Partition?

Sound, same as water, follows the path of least resistance. If there are leaks in the surrounding construction, even the best movable partition will not provide a good sound barrier. Shoddy construction, customary construction practices, or poor installation of the partition can all contribute to the leaks, known as flanking paths. The graphic below illustrates how flanking paths can limit even a 56 STC partition's abilities to block sound. When a path one tenth of one percent of the total area exists, a 56 STC rating can drop to 30 STC impacting the overall effectiveness of the partition. For this reason, when we focus on acoustics, we talk about the entire system; not just the panels. The entire system is designed to support and increases the integrity of each included panel. Building a barrier in the plenum above the partition track with a construction as good as the partition itself will prevent the sound from leaking over the top.



Keeping an eye on Details

Flanking paths can be present even when the surrounding construction is of premium quality. Direct HVAC ductwork between rooms, common lobbies and corridors, and open plenums above suspended ceilings are all perfect escape routes for sound. The ceiling tiles themselves, whose porous properties help prevent reverberation, allow sound to pass through easily. Uneven floors and out-of-plumb walls also contribute to leaks as do recessed lighting, access panels, projection and lighting booths, and other design details.

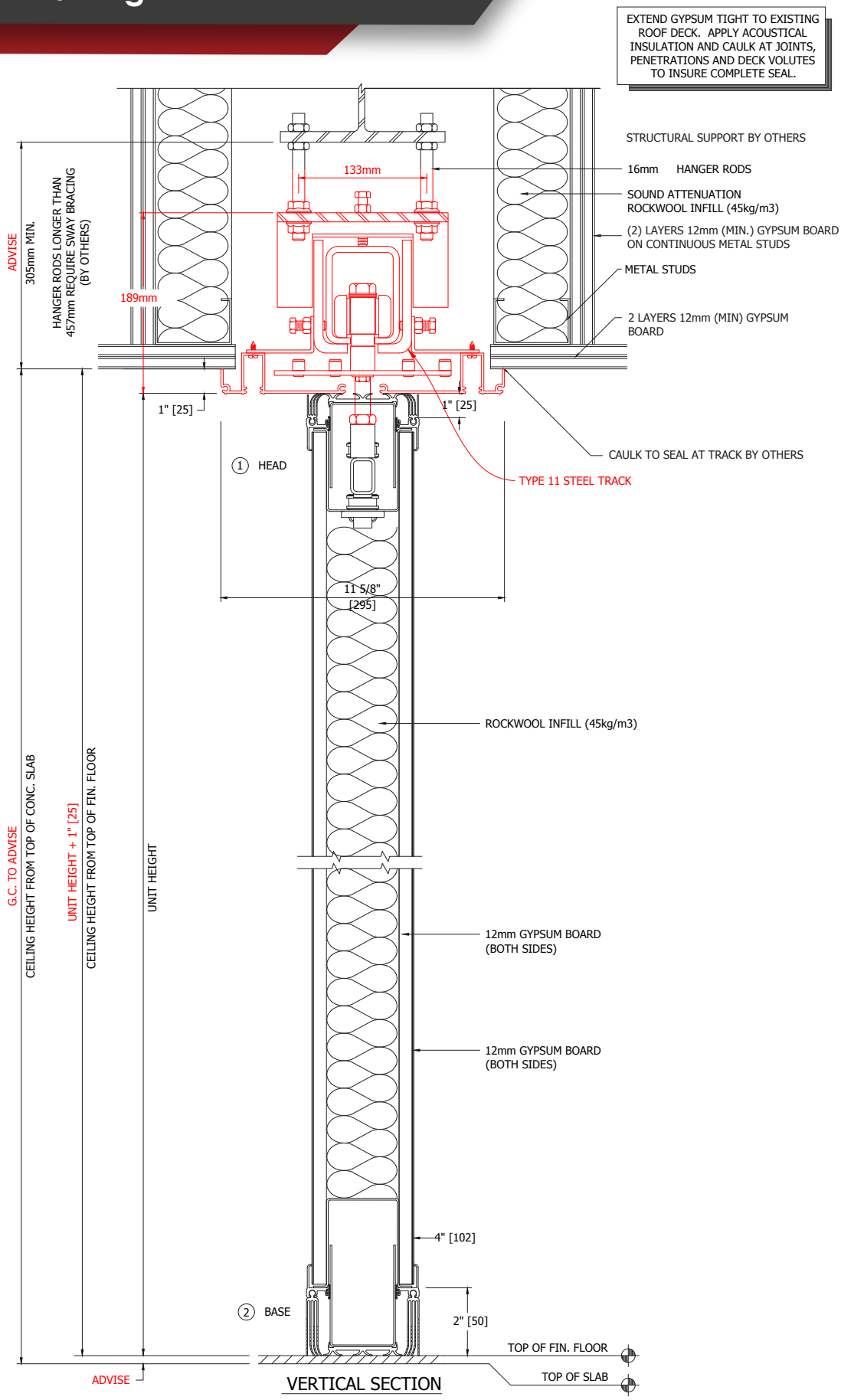
Construction

An acoustic baffle is similar in construction to the operable wall panel, that enables it to achieve an acoustic rating similar to an operable wall. It is constructed from 2 layers of gypsum on either side of the partition track with an intermediate rockwool infill of density 45kg/sqm. An acoustic sealant is used to close and seal joints between the baffle and services or AC ducts.

The GIBCA Advantage

Rockwool also known as mineral wool or stone wool is a type of insulation produced from natural stone. Rockwool is an excellent insulator, sound buffer and is heat and fire resistant. Gibca's team of highly experienced professional installers ensure that all points of acoustic leakage above the partition are sealed.

Technical Drawing



GIBCA FURNITURE INDUSTRY CO. LTD. (LLC)

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