

**Ask Jon Eakes**

# Soundproofing party walls

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Although the Canadian building codes list about 160 acceptable ways to soundproof party walls, it all comes down to taking care of three basic things.

Low frequencies travel through the structure, so the more you separate the structure of one apartment from the structure of the other, the more you isolate the sound. The photo above shows using staggered stud construction, where the studs on one side are not lined up with the studs on the other side. Using resilient or flexible metal bars to hang the drywall on the studs works on isolating the same low frequencies. When things are not rigidly connected together, the low frequencies get stopped.

The high frequencies will cause the drywall itself to vibrate, like the head of a drum, and that can send sound across an open space to the drywall on the other side which will reproduce the vibration and the sound. High frequencies are stopped by using sound absorbing materials either as panels on the wall and/or as soft material inside the walls, as well as using heavier or more layers of drywall.

The biggest offender in hearing your neighbour's noises are called 'flanking paths'. These are air pathways that bypass all other soundproofing efforts. The back to back electrical boxes shown above is a typical example of a bad flanking path. Electrical boxes should not be able to see each other and should be one if not two stud cavities away from each other. Air sealing a party wall will help to stop the noise from the neighbours. Even a skim coat of plaster over concrete blocks has a soundproofing effect simply because it stops the air paths through all those little holes in the concrete. That is a good thing to do before adding anything more to a concrete block party wall.

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