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Office acoustics are important to productive work atmosphere

Denver Business Journal - by Steve Johnson

Why do we build walls in commercial office space? Why not just line up desks in a row and use the space more efficiently?

The answer is simple. Privacy. In all aspects of business, privacy is a requirement in different degrees and for different reasons.

We immediately accept that certain professions have a need for privacy. Doctors and lawyers are obvious examples. These professionals have legal obligations to protect privacy and confidentiality. But there are many less obvious examples in every corner of the business world. Privacy is necessary for all managers with responsibility for personnel decisions or any other sensitive information It is also required for productive work without distraction by the conversations of co-workers.

So back to our question on walls -- it seems obvious that we need them. Given that we need them, how can they be constructed to provide the desired privacy without busting the construction budget?

In most modern office buildings, the area above the acoustical ceiling is an integral part of the air conditioning system for the building. This return air plenum allows for efficient air circulation throughout a space. The return air plenum is frequently tagged as the culprit in office-to-office privacy. As a result, many walls are constructed to penetrate the acoustical ceiling, continuing to the underside of the structure above.

This not only increases construction cost for the walls but creates the need for more HVAC components. If the return air plenum is interrupted, additional ducting and controls are required to provide consistent heating and cooling

In addition to the plenum, there are other acoustical weaknesses in many office buildings. Baseboard heating units, window mullions and doors are just a few of the biggest offenders. These acoustical weaknesses will be problems even if walls are built to the underside of the structure.

From a building owner's standpoint, building walls to the underside of the ceiling grid provides potential cost savings and shorter construction schedules for the next tenant build-out. The space will be more easily modified, leaving the ceiling grid largely intact.

Under these conditions, the key to providing privacy is the installation of a sound-masking system. Sound masking increases privacy levels by as much as 50 percent. This increase exceeds the privacy that would have been achieved with traditional construction.

Sound masking is an electronic technology that creates a precisely tuned, low-level background sound that covers the intelligibility of speech. It utilizes a series of speakers located above an acoustical ceiling. The speakers are suspended from the building structure facing upward. The sound bounces around in plenum and filters down uniformly in the office below. In offices without ceilings, the speakers are located unobtrusively from the structure or under raised access flooring.

The sound, frequently described as resembling the sound of rushing air, is provided uniformly through the space. Using sophisticated equalization, the background sound is very effective at covering the intelligibility of speech at a very low volume. Most occupants of offices with sound masking don't know they have it. They just know it's working.

Construction professionals have found sound masking to be a value engineering tool on new construction projects.

"We have found that by discussing acoustics with our clients early in the planning process, we can reduce hard construction costs while ensuring a good acoustical environment" said Don Fitzmartin, senior vice president of project management services with CB Richard Ellis. "Implementation of sound masking allows the space to be constructed more simply. Fewer walls through the ceiling opens the door to significant savings and avoids mechanical maintenance issues down the road."

Property owners and managers know that they can help their tenants squeeze more into their improvement allowances by implementing sound-masking systems. It also provides them with the confidence that their tenants will not look to them to spend additional money after occupancy to fix acoustical privacy problems.

In cases where privacy problems exist in occupied space, the typical solution has been to put fiberglass batts above the ceiling or even rebuild office walls to the structure. The results are usually disappointing. Successfully solving acoustical problems requires a balanced approach. Until the weakest link in the acoustical chain is fixed, all other treatments will fall short. Sound masking can effectively solve the privacy problems for a fraction of the cost of traditional construction.

Commercial office brokers frequently deal with clients that want to lease space "as-is." With construction minimized, move-in costs can be dramatically lowered and schedules can be accelerated. If a desirable space is found that satisfies most of the tenant's needs but suffers from poor privacy, the lease may not get done. Instead of continuing the search or capitulating to expensive construction, sound masking

can be implemented to overcome the acoustical weaknesses in the space and make the deal happen. Sound masking is frequently negotiated into the tenant-improvement allowances of commercial office leases.

Reduced costs, faster construction and reduced material can all be achieved when office acoustics are brought into the planning process early.

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