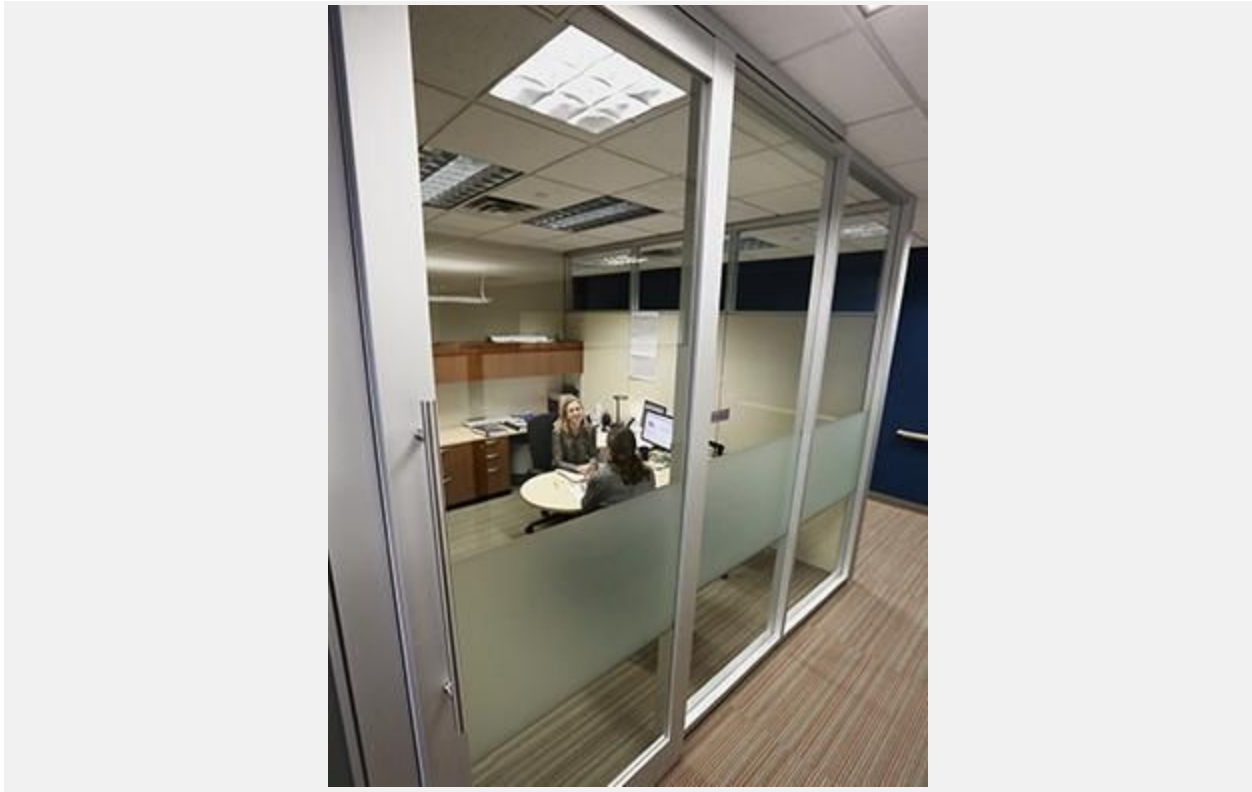


## Sound Defects: How to Mitigate Noise in Open Offices

Open-office floor plans have become a trendy choice for companies seeking an alternative to cubicle-heavy spaces. But one of the functions of cubicle partitions is blocking and absorbing distracting noise.

As a result, companies opting for open floor plans — and their architects — are strategizing other ways to reduce noise.



Private offices in Bremer Financial Corp.'s space feature sliding doors equipped with rubber gaskets to prevent sound from leaking in or out. Staff photo: Bill Klotz

When St. Paul-based [Bremer Financial Corp.](#) was preparing to move into a new, 32,000-square-foot space last year in downtown St. Paul, its in-house committee and St. Paul-based [BWBR Architects](#) spent considerable time and effort talking about sound levels and mitigating noise.

Bremer's leaders wanted to ensure that noise distractions would not be a problem for the roughly 100 employees — plus customers and clients — who would use the space, part of which features an “open office” layout.

They wanted to avoid replicating the acoustic environment in Bremer's Lake Elmo operations center, where a 25-foot-high ceiling produces an "echo chamber" effect and contributes to distracting noise levels, said Kathy Tucci, Bremer's vice president of facilities. They also wanted to prevent other noise problems that might result from an open layout.

Last December, Bremer occupied the entire fifth floor of the Lawson Building at 380 St. Peter St. The renovated space offers an array of noise-dampening features, both high-tech and low-tech.

The sound-masking features begin in the lobby. A [SNAP-tex](#) fabric wall and ceiling system designed to absorb sound extends along the walls and into the adjacent boardroom, frequently used for meetings and audio-visual presentations. The system panels are designed to absorb certain frequencies, said Curt Simonson, president of Cokato, Minnesota-based Innovative Acoustics Inc.



A SNAP-tex fabric wall and ceiling system designed to absorb sound extends along the walls and into the Bremer Financial Corp. boardroom. Staff photo: Bill Klotz

Wooden panels on the boardroom walls were provided by West St. Paul-based [Navy Island Inc.](#) The new Bremer space also uses wall-mounted acoustical panels, fabric-covered dividers, glass panels and sound-absorbing partitions of various heights to separate some desks.

Private offices along the space's perimeter feature glass fronts with sliding doors. The DIRT (Do It Right This Time) system was supplied by Calgary, Alberta-based DIRT Environmental Solutions. The system's sliding doors are equipped with rubber gaskets to prevent sound from leaking in or out of offices when the doors are closed.

The space's most high-tech feature is the [SmartSMS-NET Sound Masking System](#), made by Quebec-based Soft dB Inc. and installed by Fridley-based [Building Systems Solutions](#). The system produces "white" and "pink" noise — different frequencies that cover the entire spectrum of human hearing, said Megan Nord, CEO of Building Systems Solutions.



The most high-tech feature in Bremer Financial Corp.'s space is the SmartSMS-NET Sound Masking System, which produces "white" and "pink" noise. Staff photo: Bill Klotz

Her company also installed sensors that continually measure the daily rise and fall of sound levels, and adjust the system accordingly.

Bremer's sound-dampening investment in its corporate space has paid off, Tucci said, in the form of enhanced employee morale. "It's worked out beautifully," she said.

As for the state of open office design, "people have realized that the open office is not going to go away" and are devising ways to mitigate noise levels that might cause problems, said Jennifer Stukenberg, an associate principal with BWBR. The latest strategy to gain popularity is giving employees choices about where to work, rather than "trying to get the cube to do everything."

With the advent of laptops, tablets and other mobile devices, people are no longer “chained” to assigned work stations, she said.

“People spend less time at their desks; that’s why we’ve been seeing shrinkage in workspaces,” she said. “But today’s office employees are performing a wider variety of tasks, so we need different types of workspaces.”

In its own workspace, BWBR has provided a variety of settings, including traditional offices, “touchdown” spaces and “flex rooms” used for gatherings of different sizes and purposes, Stukenberg said.

“You can have a two- or three- person meeting in a 5-by-8 or 8-by-8 [cubicle-style] workspace,” she said. “You can take an office conference room and divide it in two to make a couple of quiet rooms.”

Stukenberg’s advice to employers is to create a flexible environment that creates choices for their workers. “On one day they might need to really focus and require the quiet of a private room. Another day they might want to work next to the window, or with other team members,” she said.

It’s also important to be open to change, she said, and to remember that “tweaks” and more significant changes can be made if a carefully planned office layout doesn’t work as expected.