



COLORADO REAL ESTATE JOURNAL

THE COMMUNICATION CHANNEL OF THE COMMERCIAL REAL ESTATE COMMUNITY

JANUARY 6, 2010 – JANUARY 19, 2010

Maintaining productivity in the changing workplace: acoustics

Workplace trends are taking employees into smaller workstations with lower panel heights. A recent Wall Street Journal article noted that the “average square feet per workstation is down to 48 from 64 just five years ago and that companies are reducing their per employee office space by as much as 50 percent.”

The increase in employee density obviously helps to reduce real estate costs. The lowering of panel heights also helps to satisfy the sustainability goals for LEED certification. But with these changes come increased conversational distractions. How can employee productivity be preserved?

Studies conducted by diverse industry groups all find similar results: Conversational distractions are the biggest hurdle to productivity in the workplace. When conversations are conducted in the workplace, neighboring workers are distracted from their tasks. Distraction reduces productivity, increases errors and diminishes workplace satisfaction.

Most open workstations do not provide a level of privacy



Steve Johnson
Principal,
ADI Workplace
Acoustics,
Lakewood

sufficient to allow productive work. Privacy is measured using the Privacy Index (PI). If 60 percent of a conversation can be understood from Point A to Point B, we have a PI of 40.

This is a fairly typical number for many open office environments and is not representative of good performance.

If panel heights are lowered and configured to provide higher density, the numbers become even less impressive.

A PI of 80 is a reasonable goal in open plan environments. Understanding 20 percent or less of neighboring conversations allows concentration through reduced distraction. A key tool to achieve this goal is sound masking. Sound masking is an electronic system that creates a soft, unobtrusive background sound that cov-

ers the sound of neighboring conversations. When properly installed and commissioned, sound masking dramatically reduces the amount of distractions that workers experience in all workplace configurations. It also greatly increases the separation between collaborating groups. One group’s conversations will not have an impact on an adjoining group’s concentration.

With a few strategic decisions during project planning, open work environments can be productive.

Ceilings should be selected based upon their ability to absorb sound when placed above open office areas. Their ability to block sound should be considered when used over offices and conference rooms.

Furniture panel systems should also be analyzed for their acoustical properties. When designing workstation layouts, placement of panels at 54 inches or higher in corners where most speech occurs will maximize performance. The panels may then be dropped down on the wings to allow daylighting and collaboration. When panel heights are below

54 inches, their ability to effect sound transmission is diminished.

Including sound masking in the design will double the privacy index in a well-planned, open work environment. When panel heights are at 54 inches or higher in key panel locations, the privacy goal of 80 PI can be achieved. It surprises many people to learn that many private offices do not provide a Privacy Index of 80.

The Privacy Index of 80 is a great goal. However, even in wide-open work spaces with no panel systems, sound masking will reduce conversational distractions to a radius of approximately 15 feet.

The process of addressing workplace acoustics during the design process also sets the table for satisfying LEED requirements. LEED credits can be earned under the classification of Innovation in Design.

Looking at the *workplace as an assembly*® allows the individual pieces to add up to a stronger whole.▲