If These Walls Could Talk

Take the concept of bringing plants indoors and multiply it by several orders of magnitude and you have the Naturaire Living Wall, a vertical display of foliage in the lobby of the new business incubator for the Women’s Economic Self-Sufficiency Team, or WESST, in East Downtown.

Studio Southwest Architects in Albuquerque collaborated with Nedlaw Living Walls, a Canadian firm, to install the 17 feet wide by 24 feet wall in 2008. The wall includes a wide range of foliage and flowering plants selected for Albuquerque’s climate.

At first glance, the living wall looks like some kind of 3-D art installation. But there’s a function behind the decoration, according to Shary Adams, principal architect at Studio Southwest.

The plants serve as kind of biofiltration system integrated into the air handling system of the building. Once air is drawn through the plants, specialized biological components degrade indoor pollutants such as formaldehyde and benzene into harmless constituents of water and carbon dioxide. A mechanical system distributes the clean air back into the building, with a little extra moisture to boot.

“Plants are a natural way to filter the air,” Adams says. “And the added humidity is very welcome in a climate like ours.”

The living wall helps make a building more energy efficient by reducing the amount of air that needs to be cooled in the summer. But there may be a boost for the workers inside the building too: there’s evidence that it reduces stress and increases productivity.

“Not only do you have a nicer environment, but you’ll see reduced absenteeism over the lifespan of the building, so the payback is quite quick,” Adams says.

Nedlaw founder Alan Darlington, Ph.D., created the first living wall in Toronto in 1994, just as indoor air quality was becoming a serious environmental concern. Builders had been sealing office buildings more tightly to conserve heat and air conditioning, and the closed environment caused a build up of contaminants associated with respiratory conditions such as asthma. In 2003, the Environmental Protection Agency’s Science Advisory Board ranked indoor air pollution as one of the top five risks to public health in the United States.

The workers at WESST can attest to the fact that the living wall boosts indoor air quality.

“When we moved in, I noticed that there were virtually no new carpet, fresh paint or construction chemical odors in the building,” remembers Nancy McLain, reporting coordinator for WESST. “Even as the builder adds final touches, such as window caulking, the air remains enjoyably neutral.”

The WESST project represents the first living wall installation west of the Mississippi, according to Adams. It’s also slated to be the first city-owned building to achieve silver certification from the Leadership in Energy and Environmental Design, or LEED, Green Building Rating System.

LEED certification is a prestigious honor for buildings that use resources in a more environmentally friendly manner compared with conventional buildings.