

Project Profile

New Denver Public Library Opens with State-of-the-Art Indoor Air Quality



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—Don Guizzetti
Facilities Manager
Denver Public Library

Andover Controls and local Andover Specialist, *Westover Controls* of Denver, Colorado, joined forces with the Denver Public Library in their commitment to maintain a "healthy building" environment for library patrons and employees. Both the 5,000 visitors that enter the DPL each day and DPL employees experience state-of-the-art indoor air quality and a substantial energy savings thanks to the *Infinity* control system in their new \$60 million library building.

Located in downtown Denver, the DPL totals 540,000 square feet including the existing Central Library building, which was renovated after the new construction was completed. Designed by architect Michael Graves, this impressive structure features a functional, user-friendly mix of formal and informal spaces, spacious rotundas, towers, and halls.

The existing building, constructed in 1956, had many air quality problems. With only a pneumatic control system inside and swamp coolers on the roof, the humidity levels were at times unbearable. The library shelves would literally *groan* as the humidity increased and books would swell so much that pulling them off the shelf was often difficult. And the dirt and dust coming in off the city streets only compounded the already uncomfortable indoor air. In addition, employees complained of annoying drifts in temperature.

Now more than 400 *Infinity* controllers monitor the air quality sensors in the library's air handling units, all which are equipped with hospital-grade filtration. *Infinity* determines the correct humidity and temperature levels and controls equipment accordingly. The system also maintains the proper mix of indoor and outdoor air at all times.

"The Infinity control system alerts us of a potential air quality problem well in advance of a building occupant detecting it," says Don Guizzetti, Facilities Manager at the library. *"Because once your occupants alert you, you really do have a problem."*

Human comfort levels are only one part of DPL's mandate for good air quality. The sensitive nature of many of the library's rare collections requires that indoor air and minimum dust levels be carefully maintained to preserve these materials as well.

In addition to its HVAC duties, the *Infinity* system provides door access control throughout the facility and also monitors the sewage and drainage levels in the library.

Because the new facility was built on a former industrial site where residues of the chemical nonane still remain in the soil, the Andover system also serves as a watchdog for any build-up of nonane levels in the library's two sub-basements. When nonane levels become elevated, the *Infinity* system activates the exhaust fans.

Best of all, the *Infinity* system will provide the DPL with optimum energy efficiency and only a \$500,000-a-year utility bill—less than \$1 per square foot!

"We haven't even begun to scratch the surface of what the Andover system will be able to do for us. *Infinity's* reporting and graphic capabilities alone meet so many of our custom needs," comments Guizzetti. "We hope to someday connect all 23 branch libraries to this system and monitor all of them from this one central location. We could save both energy and manpower if the entire city library system was connected by one building control system."



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PROJECT AT A GLANCE:

Project Type:

HVAC

Project Name:

Denver Public Library

Location:

Denver, Colorado

Market Segment:

Municipal

Number Of Buildings:

2

Total Square Feet:

540,000 square feet

Infinity Equipment Installed:

2 – CX 9001 network controllers
1 – SX 8000 workstation
13 – SCX 920s
10 – LCX 810s
360 – TCX 850s
13 – EMX 150s
2 – EMX 155s
4 – InfiLink 200s

Network:

Single-user

Applications:

Temperature and humidity control
Air quality monitoring
Nonane monitoring
Sewage and drainage level
monitoring
Door access control

Total System Points:

1800

Andover Controls Representative:

Westover Controls