

# UNDERFLOOR SERVICE DISTRIBUTION

by Tate Access Floors

Pleasant Ridge School  
Cincinnati, OH

## EDUCATION PROJECT

75,310 gross sq. ft.  
Approx. 50,000 access floor sq. ft.

## PRODUCTS USED:

CCN1000  
Underfloor air  
Modular wiring for power, voice  
and data



## Subject

### PLEASANT RIDGE SCHOOL

Ohio schools have gotten much greener. In September 2007, the Buckeye State set a significant precedent when the Ohio School Facilities Commission (OSFC) adopted the Leadership in Energy and Environmental Design (LEED) for Schools Rating System as part of its school design standards, mandating that all new K-12 schools constructed with state funds must be LEED-certified Silver. The Cincinnati Public School system was in the midst of implementing a comprehensive \$1-billion Facilities Master Plan. A number of the new school buildings were completed or underway but CPS had the vision to order changes that would incorporate green architectural design. Committed to its sustainable initiative, CPS built the first public school in the state of Ohio to seek LEED certification: the Pleasant Ridge School.

Pleasant Ridge School is a new K-8 building for their Montessori program. To promote a green environment, special energy saving components are included in the design; components which will educate the next generation of sustainable leaders. One of these components is a growing trend in the education industry: Underfloor Air Distribution (UFAD). This system supplies conditioned air from a pressurized plenum that is created between the floor slab and a raised floor system. When it comes to life-cycle cost, initial research shows that UFAD provides savings from improved flexibility, thus reducing classroom reconfiguration costs. In addition, energy is saved from expanded economizer operation, since air doesn't have to be cooled as much as with overhead systems, and reduced fan energy since the majority of the air supply ductwork is eliminated. Even though green schools can cost about 3% more to build than traditional schools, the upfront costs are offset by these energy savings over the life of the building. And the savings are significant. The USGBC reports that green schools save an average of \$100,000 annually in energy costs. In addition to the cost savings, schools benefit greatly from the increased indoor air quality. UFAD provides air closer to the students and therefore lets pollutants rise to the ceiling, where they're removed from the system. By incorporating UFAD and many other green initiatives, Pleasant Ridge School serves as a model to the entire Cincinnati Public School District on sustainable design.

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