



**CLEARVIEW ELEMENTARY
HANOVER, PENNSYLVANIA**

30% reduced water use

\$18,000 yearly energy savings

40% building materials manufactured within 500 miles of site

LEED® Facts

**Clearview Elementary
Hanover, PA**

LEED for New Construction v2.0
Certification awarded March 24, 2004

Gold 42*

Sustainable Sites 5/14

Water Efficiency 4/5

Energy & Atmosphere 10/17

Materials & Resources 7/13

Indoor Environmental Quality 11/15

Innovation & Design 5/5

*Out of a possible 69 points



CLEARVIEW ELEMENTARY IN HANOVER, PENNSYLVANIA

An Enlightened Learning Environment

PROJECT BACKGROUND

Day in and day out, Clearview Elementary School in Hanover, Pennsylvania, has an important duty: educate 250 young minds, eager to learn. The school serves children in kindergarten through the fourth grade, providing a learning environment tailored to the particular needs of young children. In designing Clearview, the project team's goal was to create an educational facility that would protect the children's delicate health while teaching them how to protect their delicate environment. Clearview's innovative, high-performance design does just that.

The 43,000-square-foot, two-story schoolhouse was built on an empty lot next to an existing school. Hanover Public School District wanted its new school to be sustainable and efficient, a school that would save money on energy and water bills year after year. The \$6.35 million building cost less than 2.5% more to build than average elementary schools in Pennsylvania. The building saves about \$18,000 a year on energy costs – meaning a complete payback in nine years from energy savings alone.

USING GREEN FEATURES TO TEACH

Clearview's many green features serve a purpose beyond preserving the environment and promoting good student and teacher health. The creativity and collaboration of the school's designers and faculty resulted in a school where eco-friendly design has opened up a new world of teaching opportunities.

A curved sunscreen in front of the school's glass corridor is more than just an energy-efficient design element; it's also a teaching tool. The sunscreen not only offers shade from the hot summer sun and forms an acoustical backdrop for outdoor assemblies and presentations; it also functions as a sundial, providing an opportunity for hands-on learning.

At Clearview the classrooms, hallways and even stairwells are bathed in natural sunlight, thanks to the design of its classroom wing. The east-west wing is long and narrow, allowing light to penetrate into the center of the building through windows, including high, south-facing clerestory windows. These daylighting strategies reduce the need for electrical lighting and promote learning and productivity. Recent studies by the California Board for Energy Efficiency showed test scores in classrooms with natural light were 15% to 26% higher than in classrooms with low levels of daylight.

STRATEGIES AND RESULTS

The school building maintains superior indoor air quality through a floor-mounted, air-diffusing system that responds to changes in temperature, humidity and carbon dioxide levels. Because air comes through the floor rather than vents in the ceiling, the fresh air is closer to the breathing zone of students and teachers. Low- and no-VOC (volatile organic compound) paints, non-solvent-based adhesives, and low-emitting carpeting also contribute to high indoor air quality in the school.

The facility was built with an emphasis on both local and recycled materials. Some 40% of the building materials, such as hemlock siding, were harvested and manufactured within a 500-mile radius; transporting local materials requires less energy and supports the region's economy. Insulation, fiberboard panels and rubber flooring are all made from recycled materials, and more than 75% of the school's construction waste was diverted from the landfill through recycling.

Clearview conserves water through water-efficient landscaping and plumbing fixtures. In fact, the school uses more than 30% less potable water than a traditionally designed school. The site is landscaped with indigenous plant species, which are more suited to the area's climate and therefore require less watering. Urinals use waterless technology, and lavatory sinks use automatic faucet controls to reduce potable water use.

ABOUT HANOVER PUBLIC SCHOOL DISTRICT

The Hanover Public School District is committed to excellence in education through nurturing, challenging and inspiring all students to achieve their full potential and become productive citizens in a global community. Building a green school afforded the district a unique opportunity to provide students with a facility that embodied those very principles.

“We set out for Clearview to be a place where students thrive and parents and taxpayers get the most for their money, both up front and over the life of the building.”

John Boecker
L. Robert Kimball & Associates,
lead architect on the project



Owner/Developer: Hanover Public School District
Energy and Daylighting: 7 Group
Architect: John Boecker, L. Robert Kimball & Associates
Project Size: 43,600 square feet
Total Project Cost: \$6,350,000
Cost Per Square Foot: \$145

ABOUT LEED

The LEED® Green Building Rating System™ is the national benchmark for the design, construction, and operations of high-performance green buildings. Visit the U.S. Green Building Council's web site at www.usgbc.org to learn more about how you can make LEED work for you.



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