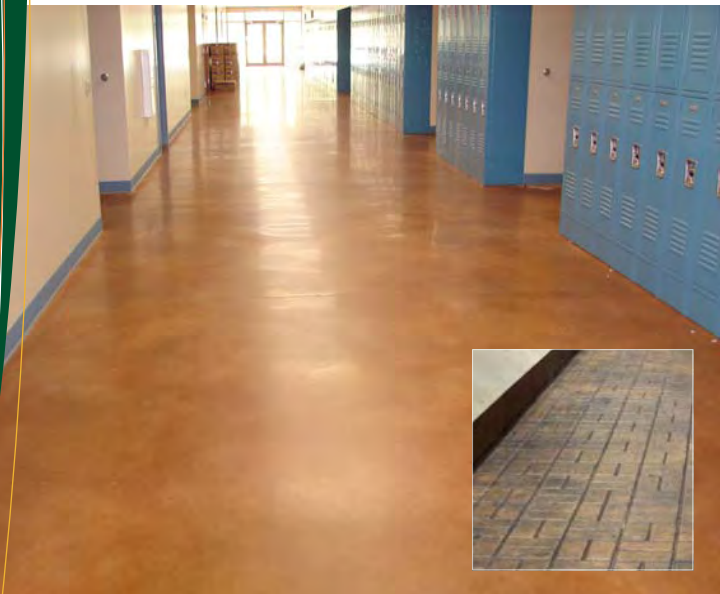




Insulated concrete provides superior energy efficiency and beautiful finishing choices, with the traditional durability and strength of concrete.



Concrete can be colored, textured, stamped or stained, adding architectural interest at lower cost with less maintenance. Concrete floors also provide enhanced indoor air quality and light reflectivity compared to traditional materials.

INSULATING CONCRETE FORMS (ICFs)

ICFs are foam insulation forms for poured concrete walls. ICF forms are not removed and so become part of the permanent structure of the wall system. These forms not only act as insulation and sound barriers but also as a solid structure for the interior drywall and exterior finishes such as brick, siding and stucco. ICF walls have high thermal mass, high R value and allow minimal air infiltration, resulting in lower energy costs. Studies have shown ICF buildings reduce heating and cooling costs by 35-40%. ICF structures can also withstand hurricanes, tornados and fires. For more information about Insulating Concrete Forms, please visit www.forms.org.

ARCHITECTURAL AND DECORATIVE CONCRETE

Concrete is expanding its role as the most versatile construction material. Today, concrete can take on virtually any color, texture or shape at a fraction of the cost of traditional materials and offers superior long-term performance with no off-gassing, much lower maintenance costs and great ease of repair. Pleasing architectural finishes can be built into concrete during construction. This flexibility has increased concrete's desirability for practical and beautiful exteriors and interiors. Variations in the color and texture of the concrete surfaces are limited only by the imagination of the designer and skill of the concrete craftsman. For more information about architectural and decorative concrete, please visit www.DecorativeArchitecturalConcrete.org

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Count on Concrete

Concrete and Sustainable School Design

An investment that pays off year after year



Photos courtesy of the Till-Up Concrete Association

"We have the ability to change the way that a child's life begins. We have the ability to take them out of... an uncomfortable environment and put them into rooms that inspire them."

Rick Fedrizzi,
Founder/President
U.S. Green Building Council

Concrete Delivers™
Engineered concrete solutions for sustainability, durability and value.

www.ConcreteAnswers.org ■ www.ConcreteParking.org
www.PerviousPavement.org ■ www.ConcreteBuildings.org ■ www.FlowableFill.org
www.SelfConsolidatingConcrete.org ■ www.GreenRoofTops.org

Concrete Delivers™
Engineered concrete solutions for sustainability, durability and value.

What is a green school?

A green school is a building that provides a healthy environment that is conducive to learning while saving energy, resources and money.

WHY GREEN SCHOOLS

Twenty percent of America goes to school every day (55 million students and 5 million educators). Too many of these schools are inefficient and miss important opportunities to reduce operational costs, foster learning and protect student health. Public and private school officials alike are realizing that going green makes sense. If a green school saves \$100,000 per year in operational costs, that may enable the hiring of two additional teachers, buy 200 new computers or purchase 5,000 new textbooks. If all new school construction and school renovations went green starting today, energy savings alone would total \$30 billion over the next 10 years. Green schools typically cost less than an additional \$3 per square foot to build, an investment that is paid back within a few years of operation. Over the lifetime of the school, the savings keep adding up. By promoting the design and construction of green schools, we can make a tremendous impact on student health, test scores, teacher retention, school operational costs and the environment.



With a long life-span and good reflectivity, concrete parking lots save money up front and over the long term.

BENEFITS OF GREEN SCHOOLS

- A healthy, productive learning environment
- Improved teacher retention
- Reduced operating and maintenance costs
- Environmentally friendly
- Improved lighting
- Enhanced indoor air quality
- Excellent acoustics
- Improved thermal control

In combination, these benefits greatly enhance student and teacher performance.



Photos courtesy of the Tilt-Up Concrete Association

Concrete delivers sustainability, durability and value.

- Concrete is durable, with a long service life, so it stands up to the test of time better than any other building material.
- Concrete's thermal mass reduces temperature swings in buildings and conserves energy.
- Concrete is produced locally from abundant natural resources.
- Recycled materials in concrete reduce embodied CO₂ and landfill use.
- Pervious concrete percolates stormwater into soil, recharging aquifers and preventing polluted runoff from overwhelming streams and lakes.
- Use of Tilt-Up ("sandwich" panels) or Insulating Concrete Forms (ICFs) for above-grade wall systems provides for increased R values, reducing heating, cooling and infrastructure costs.
- Concrete construction results in buildings with tight envelopes, resulting in less air infiltration and lower energy costs.
- Concrete's light color absorbs less heat, reducing the amount of energy needed to cool buildings.
- Concrete's light color reflects more light at night, reducing the amount of lighting infrastructure needed and lowering energy costs while sustaining safety.



Parking areas, using both conventional and pervious concrete, provide cost-effective storm-water management

BUILD GREEN WITH CONCRETE

In response to growing environmental and economical forces, owners, developers, architects and engineers are seeking efficient and innovative building solutions that conserve non-renewable resources. Increasingly, concrete is being recognized for its strong environmental benefits in support of creative and effective sustainable development as well as being helpful in achieving "LEED™ for Schools" certification. When considering the lifetime environmental impact of a building material—extraction, production, construction, operation, demolition and recycling—there is no better choice than concrete.



In pavement areas, pervious concrete keeps rain and pollutants out of natural waterways.



Photo Courtesy: Jim Schafer Location Photography

Insulating concrete isn't just energy efficient, it's beautiful too.

- Impervious concrete roofs support green landscaping, reducing water runoff and reducing heat island effect.
- With no off-gassing, concrete is an interior finish that meets Indoor Air Quality Standards (IAQ).
- At the end of a concrete building or pavement's usable life, concrete can be recycled.

TILT-UP CONCRETE

In site-cast tilt-up construction, concrete wall panels are cast on the floor slab of a building and within a few days are lifted (tilted) into place and braced until the roof is constructed. It is one of the fastest growing construction methods available today. Tilt-up affords owners fast track delivery, earlier occupancy, lower cost, architectural freedom, design versatility, energy efficiency, safer construction, durability, lower operating costs, possibility for future expansion and acoustic benefits. For more information about tilt-up construction, please visit www.Tilt-Up.org.

PERVIOUS CONCRETE

Pervious concrete is a mix of coarse aggregate, cement, water and little to no sand. This mixture creates an open-cell structure, allowing rainwater to filter through to the soil while offering the durability and strength of concrete. Pervious concrete has become a perfect choice for stormwater management and can reduce or eliminate the need for large detention ponds because the pavement itself is a detention area. This stormwater management system reduces the costs for labor, construction and maintenance. Pervious concrete has been recognized by the EPA as a best management practice (BMP) to reduce pollution in our streams which results from stormwater runoff from the surface of conventional parking lots. For more information about pervious concrete, please visit www.PerviousPavement.org.

CONCRETE PARKING AREAS

Concrete parking areas offer a superior solution for green schools. While its strengths are legendary, environmental concerns and recent asphalt price increases make concrete an even smarter choice. The material is strong and durable, needs much less maintenance, is easy to construct and offers great short and long-term savings. (For an accurate cost comparison to help evaluate parking area options, ask about Concrete Pavement Analyst software.) Concrete's light-colored surface reduces "heat island" effects and also lowers lighting costs due to its high surface reflectivity. Its cooler surface results in cooler stormwater runoff, which benefits streams and lakes. Concrete parking areas provide the best value and a great return on investment. For more information about concrete parking areas, please visit www.ConcreteParking.org.