

Earth Day 2009 Special

Things You May Not Know About Pavements, the Economy, and the Environment

Concrete pavements impart some surprising benefits to the environment, as well as the national economy. Here are just a few:

Concrete pavements contribute to a stronger economy – Innovative technology allows thin panels of concrete (from 2 to 8 in.) to be placed over distressed asphalt or well-worn concrete. Why is this important to our economy? Because these concrete overlays (and other types of concrete pavements) are particularly well-suited for "shovel ready projects" called for in the *American Recovery and Reinvestment Act of 2009 (ARRA)*. ARRA is, of course, aimed at creating and sustaining jobs that will have a direct and positive, long-term impact on the economy. The ARRA and these projects also will go a long way toward meeting the needs of the nation's crumbling transportation infrastructure.

Concrete pavements are recyclable – Concrete is the most recycled construction material in the world, according to the Construction Materials Recycling Association. Recycled concrete can be used as aggregate in new concrete pavements, to create base materials for new

roadways or as ‘rip-rap,’ large pieces of concrete used for erosion control and flood prevention. Up to 100% recycled aggregates have been used on a new concrete pavement, a true testament of recyclability.

Concrete pavements help urban areas stay cooler – Concrete is light-colored and reflective to help reduce urban temperatures. Recent “thermographic” images showed the ambient temperatures an average of 15°F lower on concrete surfaces than asphalt pavements.

Concrete pavements help fight traffic congestion – Concrete pavements do not require perpetual maintenance, repair, and replacement as often as asphalt. This means fewer traffic disruptions. It also means less risk of workzone accidents.

Concrete pavements provide better long-term value — Concrete pavements are built to last. With less maintenance and fewer repairs, this mean better investment of tax dollars, as well as fewer construction-related bottlenecks.

Concrete pavements reduce dependency on oil imports – Vehicles traveling on concrete roadways requires less fuel because there’s not as much “rolling resistance” as with asphalt pavements. Concrete pavements also require less fuel to construct than asphalt roads do. In fact, according to a Federal Highway Administration Technical Advisory, an asphalt roadway requires about 5-1/2 times more diesel fuel to construct than a concrete road designed for the same traffic. Although the actual data from the original advisory have changed, the trend is still very accurate.

Concrete pavements require less energy to light the way – Concrete’s naturally light color is naturally reflective, which provides better visibility for enhanced pedestrian and vehicle safety, in fact, about 30 percent, compared to a dark asphalt surface. The natural light color also means concrete surfaces require less energy to illuminate.

Concrete pavements help reduce workzone dangers – Because concrete pavements need significantly fewer disruptive cycles of maintenance, there will be less frequent repairs and replacement. Also, because they result in fewer work zones, there's less danger to road crews and motorists, as well as fewer highway fatalities.

Concrete pavements last longer – Concrete pavements typically remain in service on highways and roadways after 30, 40, or 50 years. Asphalt typically lasts 20 years or less, but requires with costly repairs and maintenance along the way.

Concrete pavements hold their own – Rigid concrete pavements are safer because they hold their shape, resist potholes, and offer excellent skid-resistance for vehicles for the long haul.

Concrete pavements are made from locally produced raw materials – Concrete is made from an abundant supply of locally-produced natural resources (essentially limestone, rock, water, and other products that are in plentiful supply in the United States).

Concrete pavements use materials diverted from landfills – Concrete pavements today typically contain significant amounts of fly ash (a by-product from energy plants) and/or slag cement (a by-product from steel manufacturing plants).

Concrete instills civic pride – Concrete can be colored and used in decorative applications that not only allows designers and builders to show a little flair, but also makes people feel better about their community.

Concrete creates peace of mind – Concrete pavements' durability and quality means infrequent maintenance, fewer repairs, and less reconstruction than petroleum-based asphalt

pavements. That leads to motorists who are less stressed, have more time for important things in life, and are able to focus better when driving.

About the ACPA

The American Concrete Pavement Association is the national trade association for the concrete pavement industry. The primary mission of the ACPA is to create and maintain a strong national presence through dynamic, strategic leadership; effective technical expertise and resources; and persuasive advocacy on behalf of the concrete pavement industry.

Founded in 1964, the American Concrete Pavement Association is headquartered in Chicago at 5420 Old Orchard Road, Skokie, IL 60077. Telephone: 847/966-2272. Fax: 847/966-9970. The Association's Washington, DC office is located at 500 New Jersey Ave., NW , 7th Floor, Washington, DC 20001. Phone: 202-638-2272. Fax: 202-638-2688. Visit our technical website at www.acpa.org. Visit our public website at www.pavements4life.com

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For additional information or electronic photos, contact Bill Davenport, Vice President – Communications, American Concrete Pavement Association, 5420 Old Orchard Road, Suite A-100, Skokie, Illinois 60077. Phone: 847-966-2272. E-mail: bdavenport@acpa.org.