

# Natural Advantage

*One hundred percent recyclability is just one environmental benefit of concrete pavement.*

All pavements eventually have to be replaced, but did you know that at the end of their life, concrete pavements can be crushed and re-used?

Typically, the recycled material is used as granular fill, base course for new pavement, or as aggregate to strengthen new concrete pavement.

State and local agencies have specified recycled aggregate for all types of concrete pavements. In fact, some state departments of transportation allow up to 100% of recycled concrete aggregate in concrete mixtures.

Even though concrete properties vary when using recycled aggregate, there are no special construction techniques for paving new concrete made with recycled concrete aggregate.



Reusing the concrete pavement minimizes the amount of non-renewable resources required for a new pavement structure.

## Away from Landfills

Concrete is an almost inert material. Because of its inert nature, but also because it cures to a solid form, it is ideal for using industrial by-products that otherwise would have been deposited in landfills.

Many of these materials actually enhance the properties of concrete pavement!

Reusing these materials also lightens the load on our landfills. Examples of these materials include industrial co-generated materials such as fly-ash (from power generation industry) and blast furnace slag (from steel manufacturing).

Aggregate, for example, can contain blast furnace slag. It is not uncommon to replace 20-50% of the cement with either fly ash or blast furnace slag.

**Concrete is  
100%  
Recyclable**

Another added benefit of using these materials in concrete pavement is the reduction of CO2 emissions associated with concrete production.

Yet another product commonly recycled and reused in concrete is steel. Reinforcing steel used in concrete pavement is often made from recycled steel.

And like concrete itself, old rebar is recycled into new. Incidentally, did you know that steel and concrete are among **the most** recycled materials in the world?

## Save some Green!

By eliminating the cost of removing old concrete and factoring in savings on disposal costs, potential use of recycled materials, and potential road damage from transport of virgin or waste materials, some states have estimated savings of up to **50% to 60% savings** from using recycled aggregates versus buying new aggregate.

In-place recycling techniques have the potential for saving even more money. Using an in-place system also saves on wear and tear of highways and roads, saves fuel, and improves air quality by reducing exhaust fumes.

Recycling concrete is a smart and environmentally-conscious choice that saves resources. With in-place recycling, the process has become even more cost-effective, too!



**Saving dollars and natural resources ...** Concrete helps save money for taxpayers, business, and government agencies because it conserves resources, redirects materials away from landfills, and requires few repairs over its expected life span. (Photo: ACPA Staff)

In-place concrete recycling reduces construction costs because a contractor doesn't have to locate a recycling center or pay for trucking the materials away. This saves money for taxpayers and agencies.



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