

# GREENER HIGHWAYS

## The Concrete Alternative

Heavy trucks use between 0.8% and 6.9% less fuel when traveling on a concrete pavement versus an asphalt pavement. These fuel savings lead directly to a reduction in greenhouse gas emissions and air pollutants.

See reverse for specifics on savings and reductions  
for a portion of I-80 in Salt Lake City, Utah >>>



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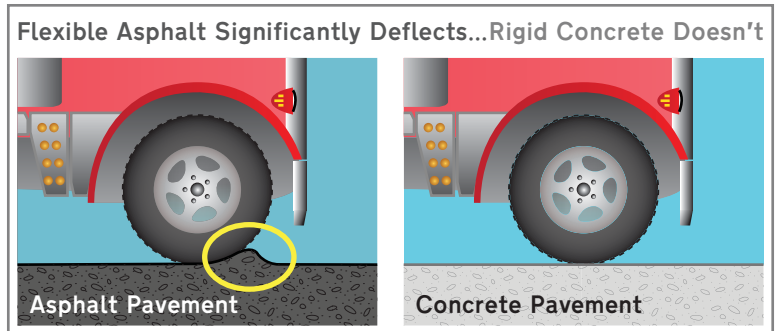
Fuel savings and reduced emissions translate into real opportunities for greening a short segment of I-80 >>>

## An Environmentally Friendly I-80

Highway agencies can realize significant economic and environmental benefits for the public during highway improvements with concrete pavements. Concrete's low pavement deflection reduces truck fuel consumption rates compared to asphalt surfaces. These reduced consumption rates translate into direct dollar savings as well as reductions in various engine pollutants.

The results for the short segment of I-80 from State St. to the mouth of Parleys Canyon present a compelling case. The charts below show a range of potential annual fuel savings and reductions in pollutant emissions that can be achieved if this I-80 corridor is reconstructed with concrete, rather than switching to asphalt.

The case study is based on results from a study performed by the National Research Council of Canada's (NRC's) Centre for Surface Transportation Technology (CSTT) in January 2006. The research concluded that trucks use up to 6.9% less fuel on rigid concrete pavements than flexible asphalt pavements, due to concrete's lower pavement deflection.



## Annual Impact of Reconstructing the 4 miles of I-80 from State St. to the mouth of Parleys Canyon in Concrete instead of switching to Asphalt

### Economical Impact



Fuel Savings (gallons/year)

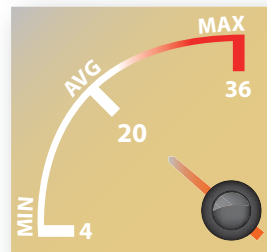


Dollar Savings (U.S. dollars/year)

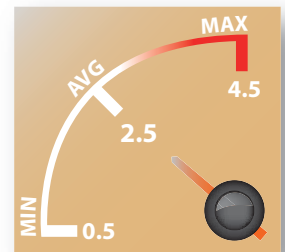
### Environmental Impact



CO<sub>2</sub> Reductions (tons/year)



NO<sub>x</sub> Reductions (tons/year)



SO<sub>2</sub> Reductions (tons/year)

References: EPA 420-F-05-001, February 2005. NRC-Canada, CSTT-HVC-TR-068, Taylor and Patten, January 2006.

Assumptions: Traffic volume of 94,000 vehicles per day with 16% trucks, truck fuel mileage of 5.5 miles/gallon, and a local diesel fuel price of \$2.90/gallon.