

## I-90 Roadway Paving

### Air Entrained Concrete

Erosion of busy roadways is a costly issue especially in areas subject to snow and ice and heavy use of studded snow tires. The Washington State Department of Transportation (WSDOT) has paved a 600 foot section of the I-90 highway near Spokane with HARD-CEM concrete to assess durability and longevity. The test highway experiences significant abrasion and rutting from high traffic volumes and studded tire wear in winter months. Cost-effectively hardening the surface of highway concrete without negatively affecting other aspects of concrete performance has always been a challenge. Cementec worked closely with (WSDOT) contractors & engineers on comparative performance testing over a twelve month period.

HARD-CEM was added to the concrete at the plant from a silo at a rate of 67.4lbs/yd. The 600 foot single lane test section was poured and finished in less than 3 hours. The contractors were impressed with the ease of handling, texture, and finishing. The next test phase includes a series of comparative measurements on the roadway over the winter months. We are committed to incorporating HARD-CEM into longer stretches of highway in 2005. A hardened paving concrete that could significantly extend the roadway surface lifespan, represents major potential costs savings.

## Integral Concrete Hardener

HARD-CEM is engineered to provide concrete with superior hardness and improved durability for demanding construction projects. HARD-CEM is unique in its ability to enhance the integrity of air-entrained and non air-entrained concretes. HARD-CEM provides significant advantages for projects needing enhanced durability including: paving, bridges, parkades, industrial floors, precast pipe, dams, spillways, stilling basins, and erosion control structures.

## Cementec Industries

HARD-CEM was engineered by Cementec for concrete subjected to mechanical (direct or water-borne) action causing erosion. Cementec is an award winning engineering, production and distribution company with special expertise in the research and development of proprietary products for the oil & gas and construction industries. Cementec is a member of ACI, the Transportation Research Board, and APEGGA.

Cementec is a strategic partner with Teck Cominco Limited an integrated natural resource and materials company with expertise in exploration, mining, development, smelting, refining and materials processing. Teck Cominco Limited ([www.teckcominco.com](http://www.teckcominco.com)) provides quality materials and technical solutions to the global marketplace.

## Contact Us

Toll-free 24 hour order desk: 1.866.212.5042  
or 1.866.256.1367 [www.hardcem.com](http://www.hardcem.com)

For more information contact Cementec 1.403.720.6699  
or [info@cementec.ca](mailto:info@cementec.ca)

See related documents on HARD-CEM product usage, performance testing, and project summaries.

HARD-CEM is a registered trademark of Cementec Industries Inc.



## PROJECT PROFILE

*Owner: Washington State Department of Transportation*

*Prime Contractor: Scarsella Brothers*

*Paving Contractor: ACME Concrete Paving*

*Concrete Supplier: ACME Concrete*

*Total Area: 15,750 ft<sup>2</sup> (1,463 m<sup>2</sup>)*

*A road paving video is available.*

