

# Shotcrete Used to Construct North America's Largest Skate Park

by Larry Tremere

**W**hat better way to get kids off the couch and into the fresh air than by giving them their own extreme sports park! With this in mind, the city of Calgary, Alberta, Canada, decided to construct the largest skateboard park facility of its kind in North America.

The Shaw Millennium Park, which opened in September 2000, is part of Calgary's Millennium Project, which will offer 1.2 hectares (3 acres) of extreme sport paradise to suit all levels, including beginner, intermediate, and expert; a snake run (future); and the only 9 meters (30 ft) full pipe in North America.

It was decided that shotcrete was the only method of construction that could be utilized to achieve the many surface curvatures involved in this project. ConCreate USL, Ltd., Calgary, was awarded the contract to place and finish over 500 m<sup>3</sup> (650 yd<sup>3</sup>) of wet shotcrete.

Wooden templates were constructed with various radii to maintain the different slopes, and the shotcrete was then placed and given a steel trowel finish. The 35 MPa (5000 psi) shotcrete was delivered to the site by ready mix trucks and was reinforced with 10 m (33 ft) bars at 150 mm (6 in.) spacing both ways. To control cracking, several keyway construction joints were installed in each area, and the shotcrete was installed in alternate panels. Due to the elevated air temperatures experienced on the project, the majority of the shotcrete placing had to be done in the early morning hours, and water curing was maintained for 7 days.

## Acknowledgments

### Park funding

Funds to construct the park were raised by The Parks Foundation Calgary and Calgary 2000

### Park Designers

Landplan Associates, Ltd.  
Wiebe Forest Engineering, Ltd.  
Read Jones Christoffersen, Ltd.

### General Contractor

Ellis Don Construction Services, Ltd.

### Shotcrete Contractor

ConCreate USL Ltd.  
(member of the USL Group of Companies)

### Shotcrete Supplier

Burnco Rock Products

### Testing Agency

Golder Associates, Ltd.

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Figure 1.  
Artist  
rendition of  
Shaw  
Millennium  
Park