

# CONCRETE HIGHWAYS

## HIGHWAY 4 TURNING LANE - LETHBRIDGE, AB



### PROJECT TEAM

#### ENGINEERING CONSULTANT:

EBA Engineering Consultants Ltd.

#### CONTRACTOR:

Volker Stevin Contracting Ltd.

#### CONCRETE SUPPLIER:

Burnco Rock Products Ltd.

#### OWNER:

Alberta Transportation

### THE CHALLENGE

At the intersection on Highway 4 (43 Street), within the City of Lethbridge, heavy trucks transporting goods from the United States have caused severe rutting in the existing asphalt. Alberta Transportation has undertaken frequent repairs to this section of road which historically has lasted between one and two years.

### THE SOLUTION

Alberta Transportation was very interested in having a durable, long-term solution to the rutting issues experienced at this intersection. After consultation with the Cement Association of Canada and Concrete Alberta, a concrete overlay was chosen to solve the rutting problems for this intersection. The concrete construction was completed over a two day span while traffic was easily rerouted around the construction.

### PROJECT DETAILS:

- Two turning lanes, 40 m in length and 3.7 m wide.
- Average of 125 mm asphalt thickness left under the concrete inlays.
- The asphalt was removed to an average depth of 100 mm on the inside lane and 125 mm on the outside (the heavy truck traffic) lane.
- Concrete was hand-placed one lane at a time.
- Joints were saw cut at 1.5 m.
- Minimum Compressive Strength: 20 MPa at 3-days and 30 MPa at 28-days.
- Synthetic Structural Fiber was utilized (no dowels or tie bars were used).

#### ABOUT THE CEMENT ASSOCIATION OF CANADA (CAC)

The CAC is the voice of Canada's cement industry. A vital contributor to the country's economy and infrastructure, the industry provides a reliable, domestic supply of cement required to build our country's sustainable communities and is committed to the environmentally responsible manufacturing of cement and concrete products. Visit [www.cement.ca](http://www.cement.ca) for more information.

#### ABOUT CONCRETE ALBERTA

Concrete Alberta represents over 93% of the concrete producers in Alberta, and is fully funded by the membership of Producers, Associates and Affiliates. Visit [www.concretealberta.ca](http://www.concretealberta.ca) for more information.



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