

CONCRETE ROADWAYS INTERSECTION APPROACH - MEDICINE HAT, AB



PROJECT TEAM

ENGINEERING CONSULTANT:

EBA Engineering Consultants Ltd.

CONTRACTOR:

Volker Stevin Contracting Ltd.

SUB-CONTRACTORS:

Proform Concrete Services Inc.

CONCRETE SUPPLIER:

Burnco Rock Products Ltd.

OWNER:

Alberta Infrastructure and Transportation

THE OPPORTUNITY

The Trans-Canada Highway at Dunmore Road in Medicine Hat is one of the City's busiest intersections with a particularly high volume of truck traffic. The braking and turning action of heavy vehicles at this controlled intersection caused severe rutting in the existing asphalt pavement. The frequency of asphalt resurfacings led to a search for a more permanent solution to ensure that vehicles would not continue to damage the pavement surface. The goal was to break the cycle of ongoing maintenance and to keep the roadway open on an extended basis.

THE SOLUTION

The owner was interested in having a durable long-term solution to recurring asphalt rutting problems at this intersection. Previous experience with full-depth concrete pavement at other locations had demonstrated that concrete pavement does not rut or deform under heavy vehicle loading. Using concrete pavement provided the benefits the owner required. Construction of the new concrete pavement was completed while traffic was easily rerouted around the intersection.

PROJECT DETAILS:

- Existing asphalt thickness was 130-160 mm over 300 mm of granular base. Two through lanes, 145 m east bound lane, 100 m west bound lane.
- Average concrete thickness 230 mm, edge thickened at transition between concrete pavement and adjoining asphalt pavement.
- Minimum Compressive Strength 32 MPa at 28 days.
- Tie bars 15M epoxy coated used between concrete panels.

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 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 for more information.



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