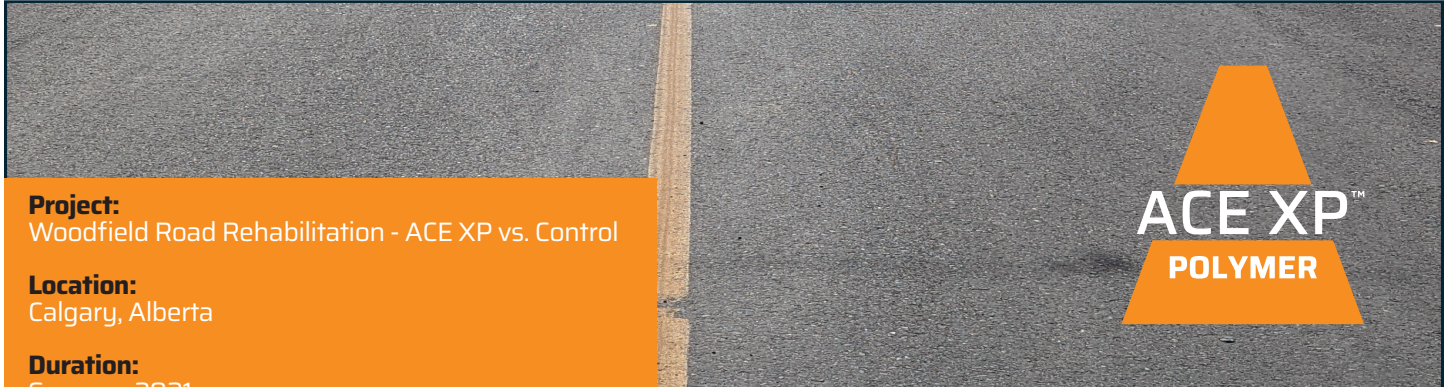


Case Study



Woodfield Road Rehabilitation, Calgary - 2021

**Project:**

Woodfield Road Rehabilitation - ACE XP vs. Control

Location:

Calgary, Alberta

Duration:

Summer 2021

Contractor:

City of Calgary

Client/Owner:

City of Calgary

Consultant/Engineer:

City of Calgary

Surface Tech Product:

ACE XP

ACE XPTM
POLYMER

What We Did

Surface Tech was integral to the planning, execution, and analysis of the project. The company provided comprehensive support, including:

Technology Training & Certification:

Surface Tech's Regional Sales Director, Alex Snell, closely collaborated with the Calgary Asphalt Plant team to provide training on dosing techniques and to expand the team's quality control and quality assurance (QC/QA) qualifications. This ensured the correct implementation of ACE XP in the asphalt mix.

Field Investigations & Sample Testing:

Surface Tech conducted extensive field investigations before and after the project, working directly with the University of Alberta to collect test samples. The project also involved collaboration with industry experts such as Phil Blankenship from the BATT Lab. ***These efforts culminated in a Technical Association of the Canadian (TAC) paper, which was presented at TAC 2022.***

Project Execution:

The project involved the application of ***1,500 metric tonnes of PG64-34 fiber-reinforced asphalt*** at the Calgary Batch Plant. The project also included the application of ***1,500 metric tonnes of PG64-34 control asphalt for comparative analysis***. The entire project was completed within three days, including the collection of samples for lab testing.

Project Scope & Objectives

The City of Calgary undertook a critical project in 2021 to evaluate the performance of ACE XP, Surface Tech's aramid fiber reinforcement technology, in the rehabilitation of Woodfield Road. ***The project focused on a comparative analysis between fiber-reinforced asphalt and conventional asphalt (control) to determine the long-term benefits in terms of durability, maintenance costs, and environmental impact.*** The road section chosen for this study was Woodfield Road, stretching from Woodbine Blvd to 130th Ave SW.

The primary objective was to enhance the pavement's lifecycle, reduce maintenance costs, and demonstrate the practical benefits of integrating ACE XP into the City's infrastructure projects.

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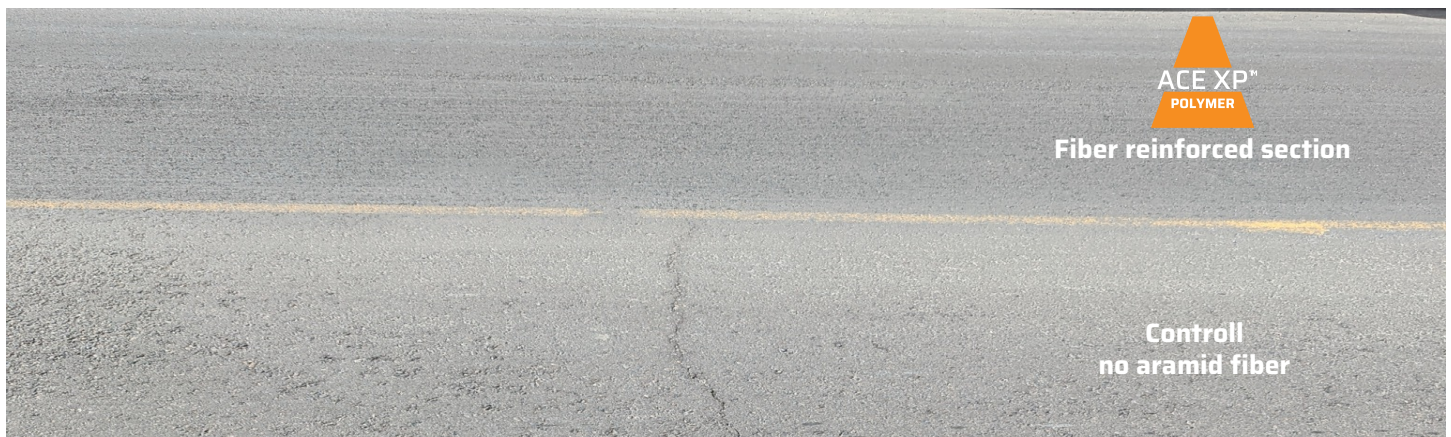


Case Study



Challenges Overcome

One of the main challenges was the precise dosing of ACE XP fibers at the Calgary Batch Plant, which was successfully managed through Surface Tech's training and the use of hand dosing equipment. The project also required meticulous coordination between the City's technicians and the University of Alberta's lab students to ensure accurate sample collection and testing.



Economic & Environmental Advantages

Economic Advantages:

The use of ACE XP provided a cost-effective solution by extending the pavement's lifecycle and reducing future maintenance needs. The technology's ease of use and storage also contributed to cost savings, as it required no special storage or shipping arrangements.

Environmental Advantages:

ACE XP's ability to enhance the durability of the pavement structure led to reduced material use and lower overall environmental impact. By cutting down on the frequency of maintenance, the project also minimized disruptions and emissions associated with roadwork.

Client Feedback & Results

The project's results were compelling. According to the findings detailed in the TAC paper, the aramid fiber-modified asphalt showed a 44% improvement in cracking resistance compared to the control samples. The IDEAL-CT and HWT tests confirmed that the fiber-reinforced mixes offered superior resistance to intermediate cracking and high-temperature rutting, demonstrating the effectiveness of ACE XP in enhancing pavement performance.

[Download the TAC Paper that includes comprehensive test data and images of fiber integration.](#)

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