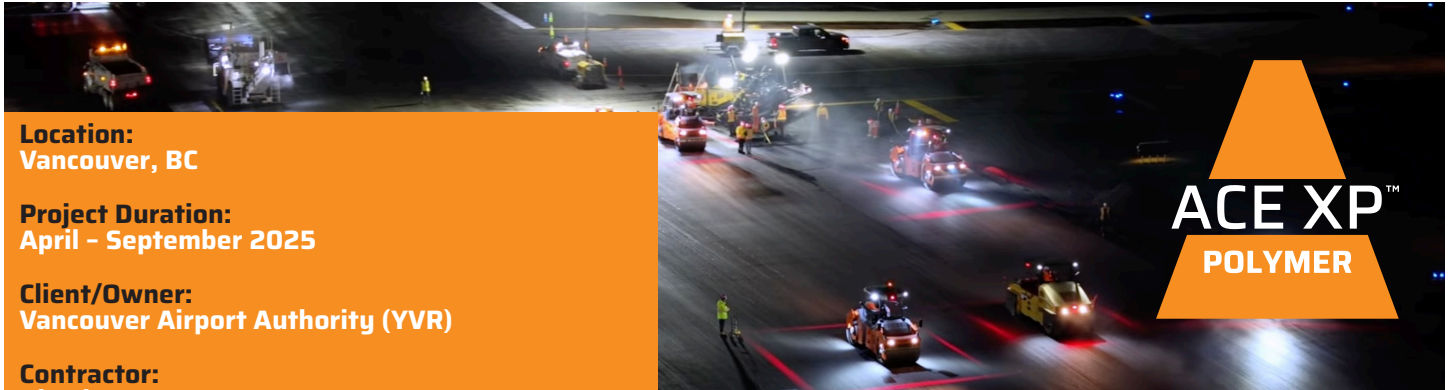


Case Study



YVR Vancouver Airport Authority North Runway Modernization

**Location:**

Vancouver, BC

Project Duration:

April – September 2025

Client/Owner:

Vancouver Airport Authority (YVR)

Contractor:

Kiewit

Producer:

Amrize

Consultant/Engineer:

Associated Engineering

Total Asphalt Quantity:

150,000 tonnes

Surface Tech Product:

ACE XP™

Project Budget: \$133 million (CAD)

Project Overview

The Vancouver Airport Authority (YVR) embarked on a landmark project to modernize its North Runway, ensuring that one of Canada's busiest airports continues to meet the demands of global travel well into the future. This complex project required precision planning, innovative engineering, and advanced materials to deliver a runway built to withstand decades of heavy use and extreme environmental conditions.

Surface Tech partnered with YVR and the Amarize team to provide ACE XP™ Polymer Fiber, a proven solution designed to extend pavement life, reduce long-term maintenance costs, and enhance overall performance and sustainability.

Challenges

The YVR North Runway project faced several operational challenges that required careful coordination and advanced planning:

Overnight Construction Window:

Work was completed exclusively during an eight-hour overnight window, ensuring minimal disruption to daytime airport operations. This demanded precise execution, from milling to paving to quality verification, all before morning flights resumed.

Tight Scheduling and Logistics:

Over 100 crew members and multiple paving units had to work seamlessly together under tight deadlines, requiring highly efficient coordination and communication.

Precision Standards:

As a runway supporting international aircraft, the asphalt mix and paving process had to meet the highest quality and performance standards for safety, durability, and longevity.

Surface Tech provided on-site technical support and dosing verification to ensure every ton of mix met the stringent requirements outlined by project specifications.

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Case Study



Surface Techs Role

On-Site Training: Guidance for plant and paving crews on proper dosing and handling procedures.

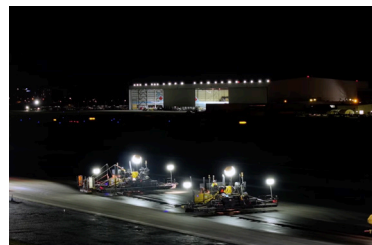
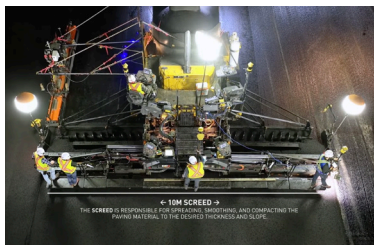
Equipment Support: Ensuring dosing systems were calibrated and operating accurately.

Documentation & Compliance: Providing SDS, ASTM specifications, and quality control records to support project compliance.

Real-Time Support: Technical assistance during production and placement. Partnering closely with Amrize, Surface Tech ensured seamless integration of ACE XP into the production process, building consistency from start to finish.

Results

Performance Factor	Outcome
Pavement Durability	Significantly enhanced with 3D reinforcement
Crack Resistance	Increased, improving long-term structural performance
Maintenance Interventions	Reduced, leading to taxpayer and operational savings
Environmental Impact	Aligned with climate resiliency and sustainability goals



Economic & Environmental Advantages

Economic Advantages:

- **Reduced Maintenance Costs:** A stronger pavement structure means fewer maintenance interventions, leading to long-term savings and minimized disruptions for one of Canada's most critical transportation hubs.
- **Operational Savings:** Efficient production and integration of ACE XP reduced downtime and improved overall workflow.

Environmental Advantages:

- **Lower Carbon Footprint:** ACE XP is EPD-certified, aligning with YVR's environmental goals and Canada's commitment to sustainable infrastructure development.
- **Extended Pavement Life:** Longer-lasting pavement translates to fewer material replacements and reduced environmental impact over the runway's life cycle.

Key Takeaway

The YVR North Runway modernization demonstrates how advanced reinforcement solutions like ACE XP™ can transform critical infrastructure. Through superior durability, reduced maintenance, and environmental benefits, the project achieved YVR's modernization goals and set a new benchmark for airport paving in Canada. This case highlights the power of collaboration, technology, and expertise in delivering infrastructure that supports both current operations and future growth.

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