

Simcoe County Road 27 — Elmvale, Ontario



Project:

Simcoe County Road 27 — Elmvale, Ontario

Location:

County Rd 27 (CR 90 south to Ardagh Rd),
Springwater, Simcoe County, Ontario

Date:

2025

Contractor / Producer:

GIP Paving (Barrie)

Client:

County of Simcoe

Surface Tech Product:

ACE XP™ Aramid Fiber (Single Dose)

What We Did

On County Road 27 south of Elmvale, GIP Paving produced and placed 1,900 tons of ACE XP aramid fiber-reinforced asphalt — a new-build placement running from the CR 90 intersection south to Ardagh Rd, bringing fiber reinforcement to a rural Ontario county corridor built for harsh Canadian winters.

Reinforced Mix: An aramid fiber-reinforced mix with ACE XP at a single dose, produced at GIP Paving's Barrie

plant.

Vertically Integrated Delivery: GIP Paving handled both production and placement — fiber dosing at the plant flowed straight through to the paving train with no workflow changes.

County Corridor New Build: 1,900 tons placed along the CR 27 alignment from CR 90 south to Ardagh Rd, a rural arterial exposed to heavy seasonal freeze-thaw.

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Project Scope & Objectives

Simcoe County's rural arterials take a beating: hard freeze-thaw cycling, spring load restrictions, and steady truck traffic between communities. The CR 27 project paired GIP Paving's Barrie plant production with ACE XP aramid fiber reinforcement, delivering a new pavement structure from the CR 90 intersection south to Ardagh Rd engineered to resist the thermal and fatigue cracking that shortens pavement life in Central Ontario.

Challenges Overcome

Ontario's climate is one of the toughest proving grounds in North America for asphalt — deep frost penetration, repeated freeze-thaw cycling, and heavy spring moisture. The three-dimensional aramid reinforcement in every tonne of mix adds tensile capacity where conventional pavements crack first, while the single-dose addition ran through GIP's standard plant production and paving operation without process changes.



Fiber-laden mix at the paving train — County Road 27 placement, Simcoe County, ON

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Economic & Environmental Advantages

- **Freeze-Thaw Durability:** Aramid fibers add three-dimensional tensile reinforcement that resists the thermal cracking driven by Ontario winters.
- **Single-Source Efficiency:** With GIP Paving producing and placing the mix, fiber integration was seamless from plant to mat.
- **No Process Changes:** Single-dose fiber addition ran through standard plant production and conventional paving equipment.
- **Extended Service Life:** Distributed reinforcement extends fatigue life on a corridor exposed to heavy seasonal loading.
- **Lower Life-Cycle Costs:** Longer-lasting pavement reduces the frequency of future maintenance interventions on the county network.
- **Sustainable Pavement Design:** Extending service life reduces future construction impacts and greenhouse-gas emissions.

Client Feedback and Results

The 1,900-tonne placement delivered a uniform, reinforced mat along the full CR 27 alignment — expanding Surface Tech's Canadian project portfolio and giving Simcoe County an in-service benchmark for fiber-reinforced pavement performance under Central Ontario conditions.

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Project Photos

Field documentation from JOB-2026-014 — 1,900 tons of ACE XP-reinforced mix, County Road 27, July 2025.



Fresh ACE XP-reinforced mat placed along the CR 27 alignment.



Fiber-reinforced mix on the lute — paving train working behind.

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Case Study



GIP Paving's Barrie plant — production source for the reinforced mix.



The new reinforced lane under traffic control on County Road 27.

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