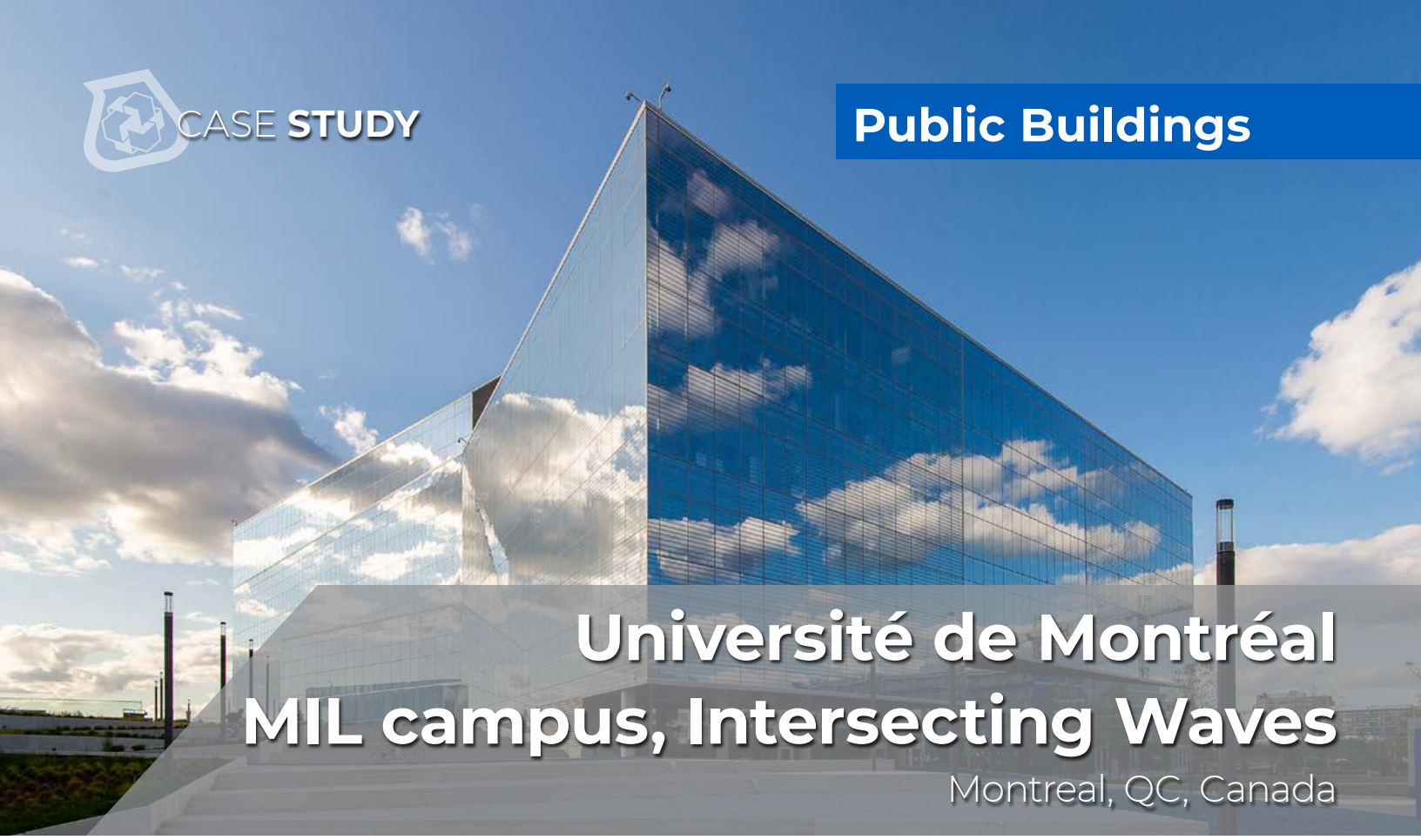
CASE **STUDY**

Public Buildings



Université de Montréal MIL campus, Intersecting Waves

Montreal, QC, Canada

Project **Information**

Project category:
Public Buildings

Years of construction:
2016-2019

Year of MAPEI involvement:
2021

MAPEI coordinator:
François Croteau

MAPEI distributor:
Prosol inc. – Montreal

Project owner:
Université de Montréal

General contractor:
EBC

Installer:
Carreaux Cera Design (Richard Adam)

Artist:
Alain Paiement

Photographer:
Ralph Thompson (PhotoImagerie) and Scott Murray

Project **Overview**

A new-build science campus needed high-grade materials to create an exterior tiling installation. MAPEI's science-backed products were selected to bring the artist's vision to life through a showcase piece that was built to stand the test of time.

Products Used

Keraflex*™ *Super Ultracolor*® *Plus FA

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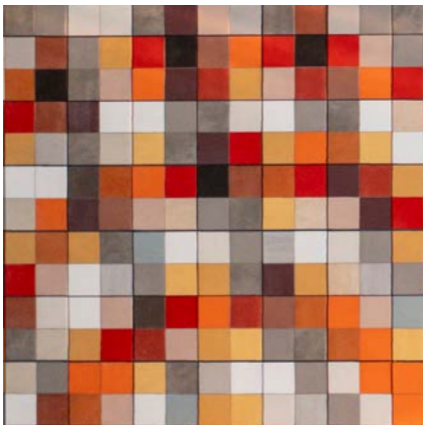

Putting high-tech materials into a high-tech complex

The story behind the Université de Montréal's new MIL Science Complex begins over 100 years ago, when Montreal was Canada's biggest metropolis and economic engine.

Built in 1910, the Canadian Pacific Railway's marshalling yard served for three-quarters of a century as the Montreal island's central industrial-transport hub. It connected the manufacturing and textile sectors in working-class Mile End and Park Extension neighborhoods to markets across the country.

In 2006, with the old railyard now sitting idle for over 20 years, the Université de Montréal took ownership of the land with the vision of transforming it into a new, ultra modern campus for the university's growing pure-sciences and health-sciences disciplines. Due to the assistance of three levels of government and extensive public consultations, what became known as the MIL campus grew into a major public-beautification project – literally connecting Montreal's high-end Outremont borough with the multicultural Park Extension area through a wide, invitingly stylish pedestrian bridge that spans the remaining two rail links.

The transformation would not be quick or easy. First, the land needed to be decontaminated of its heavy metals and other environmental degradation that it suffered through its industrial past. The land-restoration work alone would prove to be a five-year endeavor. Once plans for a new major roadway and the pedestrian overpass were finalized, the construction of the Science Complex finally got underway in 2016, with the towering complex inaugurated in 2019. Work on other parts of the campus, such as student housing, is still underway as of 2022.

MAPEI on the job

While the overall project is expansive, MAPEI's contribution was focused. The job entailed bringing to life the vision of artist Alain Paiement through a work titled *Ondes croisées* (Intersecting Waves), which consists of a 7,000-square-foot (650-m^2) exterior that is conceptualized by a multicolored ceramic-tile pattern that was precisely planned and installed.

The university describes the completed work like so: "On the patio floor of the aperture formed to provide the air intake supplying the laboratories of the Science Complex, two large waves formed by tiles colored in shades of red and blue intersect. They represent a phenomenon related to several scientific disciplines. The intersecting of the waves also refers to the meeting of the neighborhoods of Park Extension and Outremont, now linked by the MIL campus."

"The precision-colored tiles are all 12" [30 cm] square and, being exposed to the rain and freeze/thaw conditions, it was important to have a mortar and grout solution that would stand up to the weather, as well as the test of time," said MAPEI sales representative

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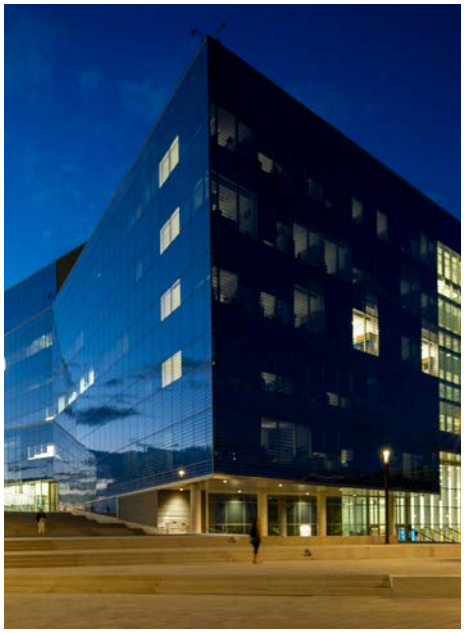
François Croteau, who served as MAPEI's representative on the project. "The substrate for the tiles consists of dozens of 24" (61 cm) square concrete slabs sitting on bases atop a roofing membrane. Each slab had to be tiled individually, with four correctly colored tiles placed accordingly."

To help successfully navigate that task, installers from Carreaux Cera Design used ***Keraflex Super*** premium mortar. With its enhanced resistance to freeze/thaw environments, extra smooth formulation that uses Easy Glide Technology™ for ease of application and a consistency that allows adjustability, *Keraflex Super* met all the criteria for the job. It is MAPEI's most recently developed mortar in North America, representing over 80 years of research and development history within the company's international laboratories.

The grouting for each slab was equally important, as grouting represented the last layer of protection from the elements. The installation is not physically accessible to the public – only to maintenance workers – and is highly visible from public areas of all the complex's higher floors; the installation forms the base of the aperture.



To maintain the beauty of the artwork and preserve the color quality, ***Ultracolor Plus FA*** ultra premium, polymer-modified grout was used. *Ultracolor Plus FA* features MAPEI's High-Hydrated Cement Technology (HCT™) to eliminate the common problems related to Portland-cement grout, such as color consistency and efflorescence (the white film that can appear on tile surfaces over time). Additionally, its formulation incorporates DropEffect™ technology, which reduces surface absorption to help repel water, dirt and grime from penetrating grout joints.

How fitting that MAPEI was able to contribute advanced-technology mortar and grout to an art installation for a new university campus that is devoted to cutting-edge scientific learning and research. May the creativity put into the finished product spur future generations of students who are looking towards scientific breakthroughs of their own.

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