



# CORE SHOPPING CENTER IN CALGARY

Limestone  
and ceramics bring  
new light to  
a Canadian mall

There's a lot to be said for experience and expertise when an installer takes on a challenge like the four-storey Core Shopping Center in the heart of downtown Calgary (Canada). Thirty years ago the Core started life as three separate shopping centers: the Sears Centre, the Calgary Eaton Centre and Toronto Dominion Square, which also housed the Devonian Gardens botanical park.

In 2008 20 VIC Management Inc. hired MMC Architects to draw up plans for a massive renovation of the properties.

MMC's design called for cutting back existing store fronts by 6-9 m and exposing all four storeys of shops to sunlight flooding through a 230-m-long point-supported glass skylight reminiscent of the Galleria Vittorio Emanuele in Milan, Italy. Though contained within a skyscraper infrastructure by contact on each corner with the TD Trust Tower, the Home Oil Tower, the Dome Tower and the historic Lancaster Building, today the stores on each level of the Core emanate the relaxed ambience of a more private outdoor setting.

## Overcoming the Logistical Difficulties

In order to overcome the logistical difficulties of performing the renovations while the mall was functioning, general contractor Ellis-Don met constantly with the client, city regulatory agencies, and subcontractors to collaboratively solve challenges as they arose. When it came to installing new tiles on floors, walls and columns throughout the three-block-long Core, Ellis-Don chose Friesen Floors of Abbotsford (Canada).

Over the last 20 years, Friesen Floors has focused on the installation complexities of large multi-unit residential and high-use retail/commercial settings. Their forte is working through those "logistical difficulties" and driving for the



end result.

Because so many trades were working on the premises at the same time, and all at night, of course, Gord Allert, Friesen Floors' project manager, had to manage a work schedule that often needed resources to be reallocated at a moment's notice. Work began slowly in October 2008, with the tile installations in the TD Square end of the mall being completed first because other trades had finished their work in that locale. Next came the washrooms throughout the Core as work picked up in 2009. Here the crews installed 10 x 61 cm white porcelain tiles called "Post-Lab Polished", using ULTRAFLEX LFT adhesive for large-format tiles, manufactured and distributed on the Canadian market by Mapei Canada Inc. Allert selected specially talented artisans to install the colored accent tiles throughout the washrooms.

In 2010 the tile installation work began to steamroll, with 75% of the entire project being completed between April and October 2010, and Allert had to manage as many as 50 crewmen in different locations.

### Treating and Levelling the Substrates

In total, 16,000 m<sup>2</sup> of floor space had to be treated with PRIMER L and levelled with NOVOPLAN EASY self-leveling underlayment. Close inspection of the plans showed that the glass railings at the edges of the walkways had to all be laid level, so Friesen Floors had to make sure that all their tiles were flat and level and tiled in alignment with the storefronts about 3 m away. Elevations changed as much as 5 cm in 3,7 m. In reality, the tile pattern was 30 x 30 cm, and any lippage was unacceptable for the safety of the shoppers, so the Friesen Floors crew kept the plane flat at the railing and storefront by using NOVOPLAN EASY. The 30 x 30 cm natural limestone slabs from the Middle East were difficult to maneuver and required flat surfaces to give the smoothest installation.

The food courts on the fourth floor presented another area where NOVOPLAN EASY played an important role. The installers worked with 30 x 60 cm large-format ceramic tiles from Italy and they could not easily lift the tiles and re-lay them; so they had to have absolutely

### In the previous page.

The Core Shopping Center is located in the heart of downtown Calgary in Canada. It was built in 1977 and lately renovated.

**Above.** The Center's all four storeys of shops are exposed to sunlight flooding through a 230-m-long point-supported glass skylight reminiscent of the Galleria Vittorio Emanuele in Milan, Italy.

**Below, left.** In the washrooms 10 x 61 cm white porcelain tiles with colored accent were installed using ULTRAFLEX LFT adhesive for large-format tiles.

**Below, right.** Some floor substrates in the Center had to be treated with PRIMER L and levelled with NOVOPLAN EASY and certain areas in the mall needed the quieting effects of MAPEGUARD SM sound-reduction membrane.





## PROJECTS

smooth, level subfloors. All the floor tiles were laid with ULTRACONTACT RS, a rapid-setting adhesive for large-format tiles that allows installers to drop-and-go without back-buttering, saving time and getting the floors ready for shoppers to re-enter the mall each morning. Fast-drying ULTRACOLOR PLUS grout was used for the joints and also helped keep the crews on schedule.

### Sound-reduction Membranes and Waterproofing

Certain areas in the mall needed the quieting effects of a sound-reduction membrane, so Friesen Floors crews installed 4,700 m<sup>2</sup> of MAPEGUARD SM. Before laying the membrane, substrates were treated with SM PRIMER.

Waterproofing was an additional requirement in the washrooms and on the botanical wall elements leading from the fourth-floor food courts to the Devonian Gardens, which were also being renovated. The solution in this case was the application of MAPELASTIC HPG liquid waterproofing membrane. Installers also used MAPECEM 100 to make concrete repairs to 4500 m<sup>2</sup> of substrates throughout the project.

### Laying on the Columns

One exceptional challenge involved the installation of the limestone slabs over columns that stretched from the ground floor to the fourth-floor food courts, as much as 15 m high in some areas.

Friesen Floors first worked carefully with the engineers to ensure that the backer board being used was securely attached mechanically to the steel frames of the columns, making certain they could carry the weight of the large-format tiles. Next, they laid the slabs using ULTRAFLEX LFT adhesive and grouted the



**Left.** The floor porcelain tiles in several areas were laid with ULTRACONTACT RS, a rapid-setting adhesive for large-format tiles. Fast-drying ULTRACOLOR PLUS grout was used for the joints.

**Right.** On the botanical wall elements leading from the fourth-floor food courts to the Devonian Gardens waterproofing was carried out with MAPELASTIC HPG liquid waterproofing membrane.

**Above.** Limestone slabs were laid on the columns using ULTRAFLEX LFT adhesive and grouted the joints with ULTRACOLOR PLUS.



joints with ULTRACOLOR PLUS.

Wherever challenges arose, the crew used their experience and Mapei's extensive range of substrate preparation and ceramic tile and stone installation systems to fashion a solution. "Over the two years, we worked through the winter twice," Herb Friesen said. "We had to be very aware of freeze-thaw issues because other trades would open up parts of the project and our installation materials would be exposed to big drops in tempera-

ture. We usually found ways to close off our working areas, get the heat back up and keep on working." By participating in daily updates and weekly meetings with the general contractor and the other trades, the crews were able to bring the ceramic tile and stone installation in on time for the 2010 Christmas shopping season.

"And the contractor, architects, property owner and customers were all delighted with the new updated look," Friesen added.

**Above.** All the floor porcelain tiles in the food courts were laid with ULTRACONTACT RS, a rapid-setting adhesive for large-format tiles. Fast-drying ULTRACOLOR PLUS grout was used for the joints and also helped keep the crews on schedule.

## TECHNICAL DATA

**The Core Shopping Centre,** Calgary (Canada)

**Period of Construction:** 1977

**Project:** WZMH Partnership

**Period of Intervention:** 2009-2010

**Intervention by Mapei:** supplying products for preparing, levelling and waterproofing the substrates; repairing concrete elements; installing ceramic tiles and stone slabs

**Project:** MMC Architecture

**Client:** 20 VIC Management, Inc.

**Main Contractor:** Ellis Don

**Installation Company:** Friesen Floors

**Works Management:** Gord Allert, Friesen Floors

**Mapei Distributor:** Golden Flooring Accessories

**Mapei Co-ordinator:** J. D. Eckmire, Mapei Canada Inc. (Canada)

## MAPEI PRODUCTS

Preparing and waterproofing substrates: SM Primer, Primer L, Mapeguard 2, Mapelastic HPG

Repairing concrete elements: Mapecem 100

Laying ceramic tiles and stone slabs: Ultracontact RS, Ultraflex LFT, Ultracolor Plus

N.B. These products are manufactured and distributed on the Canadian market by Mapei Canada Inc.

For further information see the websites [www.mapei.com](http://www.mapei.com) and [www.mapei.ca](http://www.mapei.ca).