



MURO residential-tower renovation

Vancouver, BC, Canada



Project Information

Project category:
Residential

Years of construction:
2020-2022

Years of MAPEI involvement:
2021-2022

MAPEI representatives:
Dave Randall and Anthony Petrunia

MAPEI distributor:
Prosol inc.

Project owner:
Reliance Properties Ltd.

General contractor/installer:
ETRO Construction Limited

Installers:
Coast Performance Restoration Inc and
Robertson Floors Ltd.

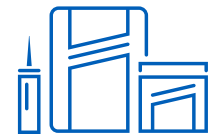
Mural artist:
Douglas Coupland

Photography:
Take Off Photography



Project Overview

Douglas Coupland rose to fame when he coined the term "Generation X" within the title of his influential 1991 novel. A visual artist as well, Coupland's painted works now rise above the West End skyline of Vancouver, British Columbia, as they adorn all four sides of the renovated 15-storey MURO residential tower. The renovation received major assistance from several MAPEI products that were used.



Products Used

- Kerapoxy® CQ**
- Mapefloor™ Finish 450**
- Mapefloor PU 400 FC**
- Mapeguard® 2**
- MAPEI SM Primer™**
- MAPEI Ultralite® Mortar Pro**
- Mapelastic® AquaDefense**
- Planitop® 12 SR**
- Planitop 15**
- Planitop X**
- Planitop XS**
- Primer L™**
- Primer SN™**
- Ultraflex® LFT™**
- Ultraplan® Lite**

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Famed visual artist and MAPEI take part in high-rise renovation

Overlooking the English Bay public beach on Burrard Inlet and located at 1770 Davie Street, The Berkeley was an aging, 15-storey housing complex in the trendy West End section of Vancouver, British Columbia.

With help from MAPEI's building and renovation expertise, and an array of MAPEI products, the building has been transformed into a modern residential tower renamed MURO.

"MURO is mid-century and very modern. An extensive, two-year renovation has combined the modern conveniences of today with the clean lines and spacious suites of the past. And with four 15-storey Douglas Coupland murals now wrapping the concrete tower, MURO makes a colourful statement in Vancouver's most colourful neighborhood," states owner Reliance Properties Ltd. on its company Website.

The Vancouver-raised Coupland first made his mark as an author with the release of the 1991 international best-seller "Generation X: Tales for an Accelerated Culture," and he has written several more books since then.

Besides his writings, Coupland is renowned as a visual artist. In 2016, he created a public art installation called "The Golden Tree" that is located on the corner of Marine Street and Cambie Street in Vancouver.

According to Coupland, the MURO project would prove to be a special undertaking. "This would be the first

time that an entire building serves as my canvas," he said.

MAPEI on the job

For MAPEI's role in the project, seeing the renovation to its conclusion would pose some interesting challenges, according to MAPEI Sales Representative Anthony Petrunia.

Together with colleague Dave Randall, MAPEI Business Development Manager for Western Canada, Petrunia acted as MAPEI coordinator for the renovation project by pulling together products from three product lines – including Concrete Restoration Systems.

"To start with, they completely gutted the building," Petrunia said, referring to ETRO contractors' initial demolition. Following that, the building envelope had to be restructured for seismic upgrades.

Furthermore, all floors had a noticeable sag towards the middle of the building, creating a gap of up to 3-1/2" (8.9 cm) that required leveling.

Exterior concrete repairs and surface preparation

The exterior facades needed preparation before Coupland's painted murals could be added. "Multiple MAPEI products were used in unique applications on both the interior and exterior of this building," Randall said.



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On parts of the facades where a fast-setting, vertical and overhead repair mortar with corrosion inhibitor was needed, **Planitop X** and its extended-working-time partner **Planitop XS** were applied. Transfer beams off the roof and elevator-shaft wall required a form-and-pour solution, so those were repaired using **Planitop 15** mortar.

Other parts of the building facade, where reinforcing steel had been left exposed, were repaired using **Planitop 12 SR** mortar. This product is sulfate-resistant, making it great for surfaces that are subject to extreme exposure.

On the roof trellis, waterproofing was required; the solution was to apply the same covering that is typically used for exterior parking decks.

The covering consists of **Primer SN** epoxy primer that was followed by **Mapefloor PU 400 FC** polyurethane basecoat, and then covered with **Mapefloor Finish 450**. *Mapefloor Finish 450* is an aliphatic, polyurethane topcoat that is specifically designed to provide a protective wear coat for elevated concrete surfaces in areas that are exposed to direct sunlight.

Interior flooring and finishing

Installers from Robertson Floors Ltd. took over to work on the interior flooring. The concrete slabs that were used were verified to an International Concrete Repair Institute (ICRI) concrete surface profile (CSP) of #2, which was achieved through grinding of the stripped concrete slabs.

Next came the leveling stage, for which Petrunia and MAPEI's Technical Services Department had an innovative, tested solution.

"Our main concern for the 17,282 square feet [1 606 m²] of flooring was to keep it as light as

possible," Petrunia said. While deep-pour self-leveling underlayments can now achieve up to 4" (10 cm) in a single lift, the resultant added weight would have been unacceptable.

Formulated to provide a final dry density of about 67 lbs. per cubic foot (1 073 kg per m³) at 28



days, **Ultraplan Lite** self-leveling underlayment – bonded with **Primer L** latex primer – was the SLU of choice to tackle the weight situation.

Ultraplan Lite was fine for areas needing a maximum of 2" (5 cm) of leveling. However, its inherent properties meant that it would need to be laid down in two lifts to compensate for the extreme sag that was found towards the central floor areas, which would have negated its lightweight practicality.

Leaning on 85 years of history in finding solutions for construction challenges, MAPEI's Technical Services Department had a tested solution. The application of a high-density, structural foam-board layer in the sections that were deeper than 2" (5 cm) was a

known and tested workaround.

The installers used a foam-board filler that was bonded above and below with **Primer X**, a primer that is textured to enhance adhesion to nonporous substrates. The foam-board filler was placed on top of an undercoat of **Ultraflex RS** premium, rapid-setting thin-set mortar; its high content of unique dry polymer allowed it to achieve excellent adhesion.

The next step was to install MAPEI's "3-in-1" answer for crack isolation, waterproofing and sound reduction: **Mapeguard 2**, a next-generation membrane that is perfect for meeting the sound-deadening specs of today's residential towers.

Mapeguard 2 not only helps to prevent existing or future in-plane floor cracks, but also reduces the transmission of impact sound (footsteps, dropped objects, etc.) and airborne sound (voice, TV, etc.) through floors when installed under ceramic tile, stone or wood floor coverings.

Installers then used the versatile and fast-drying **MAPEI SM Primer** to bond the *Mapeguard 2* membrane to the substrates.

Interior bathroom/kitchen tiling

Quick-drying, premium **Mapelastic AquaDefense** liquid-rubber waterproofing membrane was applied over bathroom walls before they were tiled. Wall and floor ceramic tiles for bathroom and kitchen areas were set using **MAPEI Ultralite Mortar Pro** professional, lightweight mortar, which is formulated to be non-sag for walls and nonslump for floors.

MAPEI Ultralite Mortar Pro's Ultralite Technology™ provides twice the coverage of a standard thin-set mortar per pound/kg and contains more than

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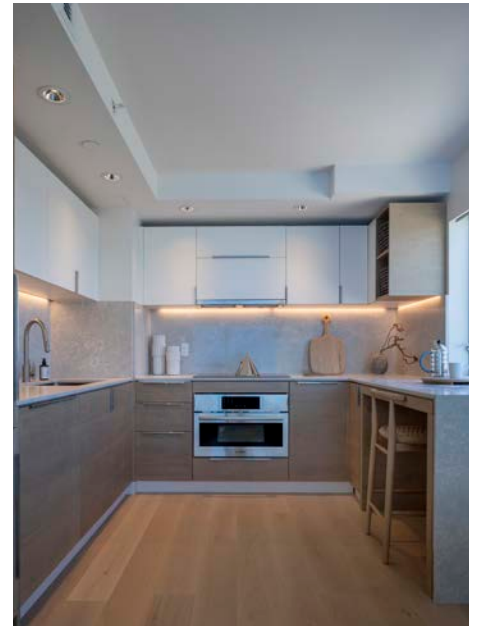
20% recycled content. Additionally, the product's smooth consistency due to Easy Glide Technology™ helped make application quick and easy.

Interior-lobby floor tile

The main lobby floor's large-format tiles were set using **Ultraflex LFT** large-and-heavy-tile mortar, which is another polymer-modified mortar harnessing Easy Glide Technology. Grouting on all surfaces (including wall tile) was done using **Kerapoxy CQ**, which contains BioBlock® technology to help protect against mold and mildew.

Because of the use of lightweight leveling and setting products, as well as high-end concrete repair mortars and MAPEI know-how, The Berkeley was successfully reborn in 2022 as MURO, a modern residential tower with improved sound reduction and updated finishes.

And moreover, Vancouver's skyline now includes at least one edifice that marks a prominent X for a generation that perhaps no longer needs to feel invisible 30-plus years after its introduction into the literary canon.



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