

Embedded brick panel gives individuality to mall's facade

By Joanie Veitch
Contributing Writer

The design team for the Downsview Mall project took a suburban mall from its conventional stucco and brick exterior, demolished part of it, and then added an additional 15,000 square feet (1,350 square metres) of facade by using a tilt-up exterior with interesting architectural features.

The design team was comprised of WHW Architects Ltd., BMR Structural Engineering, ESCL Engineering and Construction Services and Morris and Richard Consulting Engineers, as well as DORA Construction as the general contractor for the project and Crombie Properties as the project owner.

The group worked together to come up with a plan to use an innovative tilt-up exterior with architectural features, such as embedded brick, ceramic tile accents and architectural reveals.

"We thought that, given the length of the facade, this method would make it more attractive," says Mark At-

wood of WHW Architects in Halifax. "It allowed us to use different brick patterns and colours. It gives some individuality to the facade and allows for a lot of signage, too."

The group chose the Mbrick system sold by Innovative Brick. Suited to both tilt-up and precast, the Mbrick system is a method of embedding veneer brick in concrete to create the appearance of masonry.

One of the main reasons to choose this method is the substantial money and time savings for a project, says Donald MacDonald of DORA Construction.

"It simplifies the process and speeds things up a lot on the construction end of things," MacDonald says.

When erected, the tilt-up panels produce a finished wall, creating a building exterior with all the architectural details already built-in.

Information from the manufacturer of the Mbrick system also cites reduced maintenance as one of the selling features of this process, as using the Mbrick systems helps to prevent moisture

problems later on.

"Mbrick is cast in hard-rock concrete instead of mortar, and because of this, water does not travel through the brick and mortar system the way it does in conventional masonry," states the company's Web site.

"This eliminates the efflorescence and periodic acid washing. Since the brick is cast integrally into the concrete wall, no lintel angles, building paper, flashing or weeps are required to channel water back to the exterior of the building, as would be needed with conventional masonry."

Atwood says the process was very straightforward, although there were some delays, as not all the bricks came out perfectly aligned. To fix that problem, the misaligned bricks would have to be chipped out and replaced.

"It was a fairly minor problem overall," he says.

The first square metre of concrete was poured in mid-December of last year, and the tilt-up was erected in early February.

The renovated mall was officially opened on May 1.



Top: Suited to both tilt-up and precast, the Mbrick system used in the Downsview Mall expansion project is a method of embedding veneer brick in concrete to create the appearance of masonry.

Bottom: A close-up shot of the finished product, complete with embedded thin-set brick. Photos courtesy of DORA Construction Ltd.

PROJECT FACTS

Downsview Mall Expansion, Lower Sackville, N.S.

OWNER
• Crombie Properties

GENERAL CONTRACTOR
• DORA Construction Ltd.

DESIGN TEAM
• WHW Architects Ltd.
• BMR Structural Engineering
• ESCL Engineering & Construction Services
• Morris & Richard Consulting Engineers

TILT-UP CONSTRUCTION TEAM
• DORA Construction Ltd.
• Technosurfacing Inc.
• Bird Stairs
• Quality Concrete
• Allstar Rebar
• Irving Cranes

FACILITY FEATURES
• 15,000 square feet (1,350 square metres) of new tilt-up facade on an existing mall, incorporating: the creation of six new CRU units with new storefronts; the creation of existing front facades on two fully-operating tenants; the conversion of conventional construction of structural steel, EIFS and masonry into concrete tilt-up with embedded brick, embedded ceramic tile accents and architectural reveals; and the construction of a new parking facility adjacent to complex.

OTHER PROJECT NOTES
• Cost and time savings for client
– Submitted by DORA Construction Ltd.



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