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In this issue:

One King West

Green Building Technology

Stucco and EIFS



Photo courtesy of Dave Walker, Big Sky Photography.

One King West

by Don Procter

For some people, One King West is a striking example of what a tower should look like. It is tall, slender and stately.

Set in the heart of Toronto's downtown, the 51-storey condo/hotel distinguishes itself from the pack of tall condo buildings popping in the

core—simply because it is the most slender tower on the planet by height-to-width ratio: for every 11 feet it rises, it is only one foot wide.

Visually dramatic as it may be to passers by, to Jean-Francois Furieri it is what's inside One King West that sets

it apart from others. Particularly what's inside the 15-storey Dominion Building, a 1913 heritage designated banking temple married to the slender tower to comprise One King West.

Featuring some of the finest interior space of any commercial building in Toronto, the 92-year-old building is replete with coffered ceilings, fanciful wood panelling and ornate plaster details. It is the real visual gem of One King West, says Furieri, the principal of Iconoplast Designs Inc., the plaster restoration contractor for the \$100 million project.

Furieri's contract has not been easy. "This job represents all the challenges of a plaster restoration project. We have a lot of complicated interventions that require the greatest precision. We have to make our work inconspicuous and that is tricky on such a large scale."



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The contract calls for the restoration and replacement of ceilings, arches, cornices, capitals and columns. Along with having many complex geometrical patterns, the old building has "very deep" details, which add to the challenge, he says.

Iconoplast's work is further complicated by the nature of the site and the structural design of the slender tower. To build the ultra-thin tower with a minimal sway at its top within a narrow 15-metre width, a structural framework that tied into the old building had to be devised. The challenge was to engineer that framework in a fashion that would not interfere with the historically protected architectural elements in the 92-year-old bank building.

The decision was to join the two buildings by an embedded steel system in the concrete shearwalls. To meet seismic code requirements and to reinforce the old building which carries part of the load of the new building, steel cross bracing was installed in the stately Edwardian building.

The obvious location for the cross bracing was in the ceiling of each floor plate, but because some of the interiors of the building were historically designated by the city, installing the cross bracing without destroying ornate plaster ceilings such as that featured in the three-storey grand Banking Hall was next to impossible, explains architect Jamie Rasor, job captain, Carson Downey Architect Inc., the project architect for One King West. Consequently, an

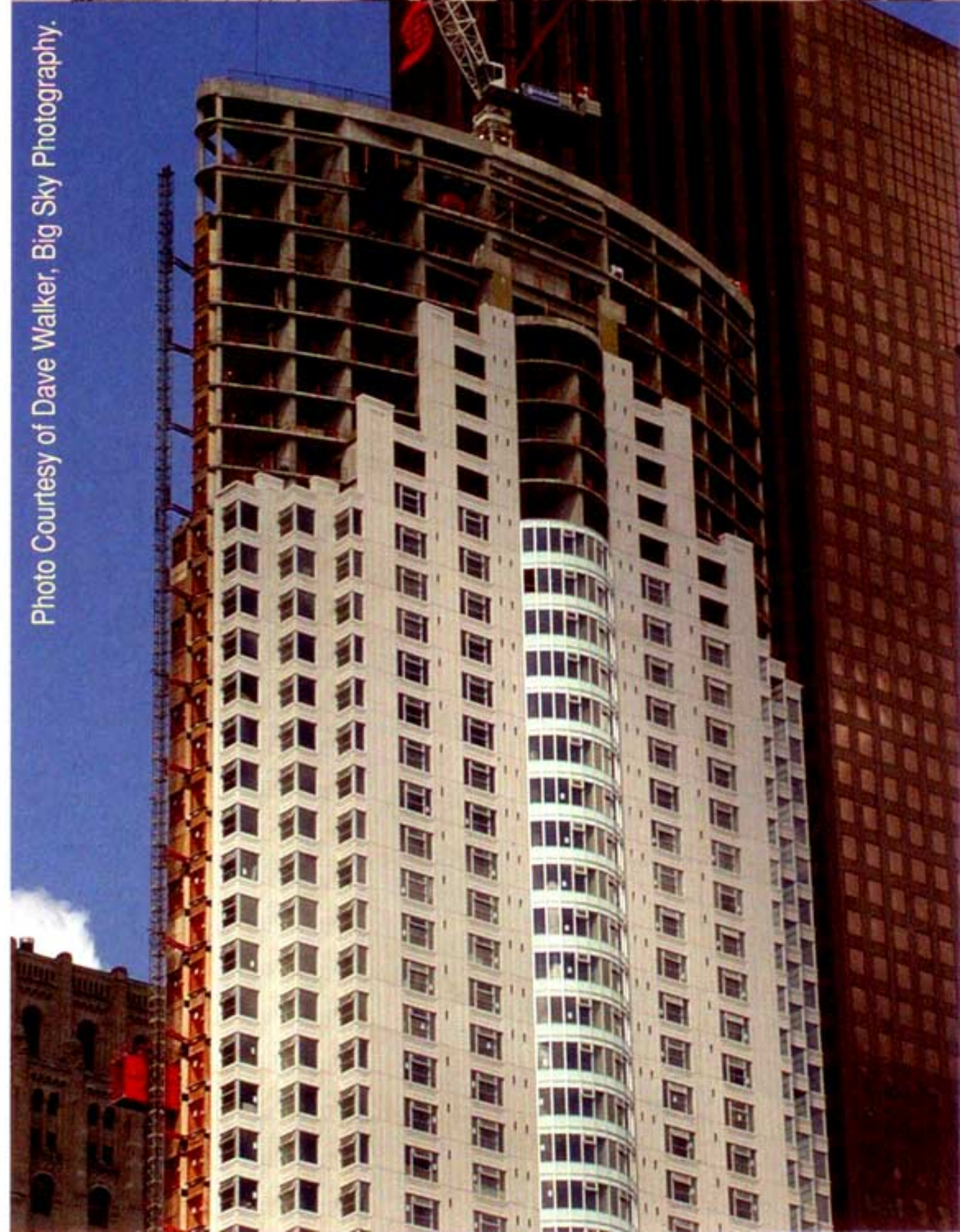


Photo Courtesy of Dave Walker, Big Sky Photography.



ingenious method of cross-bracing the floor above the hall was done with the cross-bracing covered over by a concrete mixture called Isocrete and a 50-millimetre finish coat. Being four times lighter than conventional concrete, Isocrete was light enough for the floors to support without damaging the ornate ceilings below.

The concrete flooring is supported by a capered clay tile system between primary and secondary steel beams with a tension steel rod. "What it means is each floor is done like a keyed arch," adds architect Rasor. "All the building's steel was fire protected by the clay tile."

The cross bracing work went off without a hitch. "Everything went extremely well, just lots of sweat and lots of effort on everybody's part," explains Rasor, who credits the project's structural engineer Yolles Group Inc., Lorvin Steel Ltd., and construction manager EllisDon Corporation and his own architectural firm for working out the details.

"When all the structural steel work had been completed and all of the temporary steel supports had been removed, our job was to replace the original details and do invisible mending," explains Furieri, a third generation plasterer. "Even though we take the care as preservationists, it is not always possible to salvage the historic fabric." In some areas castings were made of the original plaster details, such as column capitals which were re-attached to the columns.

A lot of the original ceiling was well preserved because it had been covered by dropped ceilings. Typical of the era, the plaster work was originally made of a brown coat and a lime putty coat.

A number of techniques are used to restore the plaster, says Furieri. Pinning is one method of stabilizing existing delaminated plaster. This involves reinforcing around the perimeter of the cracked and delaminated plaster by drilling



on angle 1/4-inch holes and injecting them with a PVA modified gypsum plaster. The PVA plaster fills voids in delaminated areas, bonds the two plaster coats and creates a key or lock on the lath side. Screws are countersunk to strengthen the bond.

Where plaster molds are required, a self-thickening Thixotropic mold-making process is employed. To make the mold of a ceiling medallion, for example, Iconoplast uses a mould compound called Polygel 40 brushed on about one fifth of the medallion and overlapping onto the ceiling about two inches. This becomes the molding margin or toweeling line for casting the piece, explains Furieri. The compound is re-applied until the piece to be duplicated is covered by 1/4-inch thickness.

Once cured, the compound is then covered with a shell case that covers the urethane and keeps its shape for reproduction. A thin coat of plaster is brushed on the compound, further coats contain a mix of plaster and burlap



until a thickness of 3/8-inch is obtained. He says any thicker than 3/8-inch can jeopardize the stability of the mould.

Furieri says it is difficult to meet the modern-day fast-track construction schedule at One King West because plaster restoration methodologies creep to a different timeline. “In some one-foot sections we have as many as seven different moulds. That’s a lot and everything had to fit the way it did in 1913.”

Furieri is no stranger to the plaster restoration, having done a spate of major theatre restorations in New York City and Pantages Theatre in Toronto. He was featured on Bob Vila’s This Old House, explaining the step-by-step process of the creation of a replica of an ornate ceiling medallion for a home in Savannah, Georgia.

As for the Dominion Building, he says when it was completed 92 years ago, it was on the forefront of architectural design in Toronto. Once his job is completed, “It will go back to its original splendor. The idea is that when we are finished you shouldn’t be able to tell we’ve been there.”

He adds, “It is important that we preserve these kind of buildings. We’re lucky enough to still have some of them. Let’s not turn them into parking lots.”

One King West features 574 residential units on 51 floors, including a penthouse for sale at \$8 million. Floor plates in the slender tower are just under 742 square metres. [CWCJ](#)

