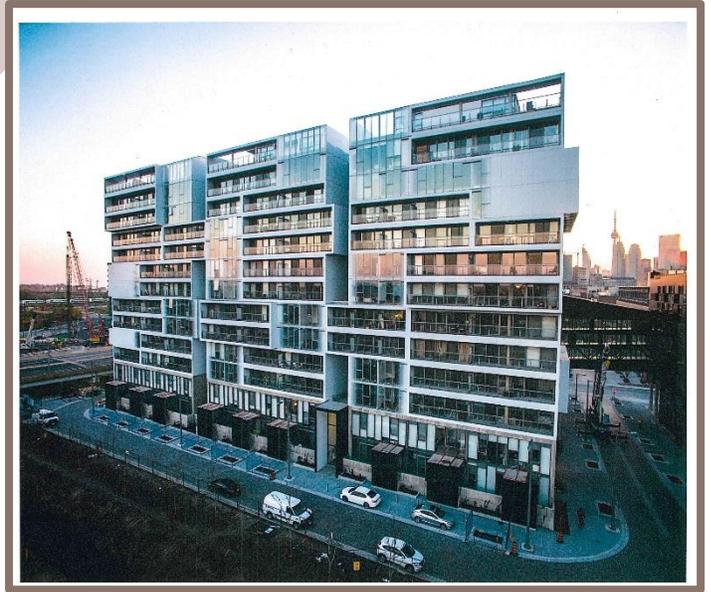


MATERIAL DEVELOPMENT & INNOVATION

RIVER CITY CONDOMINIUM PHASE 2



PROJECT CREDITS

OWNER

Urban Capital

ARCHITECTS OF RECORD

Saucier + Perrotte Architectes/ZAS Architects

ENGINEER OF RECORD

Adjeleian Allen Rubeli Limited

GENERAL CONTRACTOR

Bluescape Construction Management Inc.

FORMING CONTRACTOR

Vuemont Structure

MATERIAL SUPPLIER

St Marys CBM

ADDITIONAL PARTICIPANTS

- Aluma Systems
- BASF Canada Inc.
- LIUNA LOCAL 183
- Salit Steel

PROJECT FACTS

LOCATION Toronto, Ontario

COMPLETION September 2015

CONTRACT VALUE \$50 million

FOOT PLATE 2,250 m²

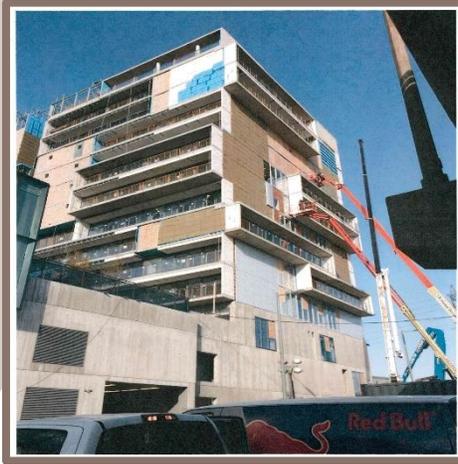
TOTAL CONCRETE 12,500 m³

PROJECT SUMMARY

River City Phase 2 Block 4 East is the second phase of a 1200 unit residential development by Urban Capital in the West Don Lands.

The second phase consists of 248 residential units in three glass mini towers connected on each floor with fully glazed passageways. There are two levels of above grade parking and an outdoor pool on the third level.





Sustainability

The project was targeted LEED Gold. The vegetated green roof was made as large as possible while still allowing some space for terraces and pathways to service doors. The building has a large cistern for storing rain water, which is used for the irrigation of the plants on the third floor courtyard.

Specific Structural Engineering Challenges Posed by the Design

- Bridging connections between the buildings to give complete access to all three towers
- Architecturally exposed concrete was used on the north and south ground floor walls as well as all ceilings within each unit and all common areas
- Concrete placement and forming procedures to construct the loft style condominium units with a 90° rotation of selected units

Architectural Merit

Designed by the architectural team of Saucier & Perrotte the River City team had just completed the first private sector development in the West Don Lands.

The second phase of the \$300 million project by developer Urban Capital included 248 units contained in a single building structured to appear as three connected 12 storey mini towers.

Each tower is connected to the other by glass passageways jutting in and out and rotating on their axes.

Phase two's sleek white exterior was designed to be a dramatic contrast to the edgy dark exteriors of the building in the project's first phase.

The distinctive building is clad in a combination of fritted and banded windows which blends the interplay between the transparent glazing and opaque white panels.

The building's aesthetics are made possible by the 90° rotation of selected units with the white walls serving as the exposed sides of rotated suites.

River City 2 has a range of beautifully designed suites and amenities that include stunning landscaping throughout the complex, an outdoor pool and dining area, a two storey glass "lightbox" lounge, a party room, two fully equipped exercise rooms and a finished guest suite.

Achieving LEED Gold includes a series of high performance energy efficient buildings with many sustainable features for occupant comfort.



Material Development & Innovation and Specialty Concrete Construction

The project involved construction of architecturally exposed concrete units on each floor level. Many of the units feature unique shapes and a high level of surface finish which required a superior concrete mix and specialized forming techniques to achieve the owner's vision.

The entire project team participated and contributed in both the planning and on-site implementations.

Included in the many challenges was the pouring of accelerated concrete throughout the forming stage and on most structural slabs while achieving the desired finish. Particularly throughout the winter months the effort co-ordinated with the team achieved excellent results.

The project was delivered using high performance concrete mixes with a quality ready mix supplier. St Marys CBM First-Up™ and Get-Set™ accelerated mixes were selected to assist with the unique forming and loading challenges while continuing to meet the schedule in the winter months.

With concrete using First-Up, forms can be removed sooner, and concrete can bear construction loads earlier than with traditional concrete.

It is designed to accelerate concrete strength gain and different formulations make it easier to customize the concrete mix to the construction schedule.

Concrete using Get-Set allows for different formulations in ready mix concrete to achieve quicker and more predictable set times in the cold winter months. This was an asset with the project requiring an architectural exposed finish in specific areas. With Get-Set they could achieve excellent surface appearance while speeding up the set time by up to 35%.

Also included in this project was a concrete which incorporated RustGuard™, a corrosion inhibitor. RustGuard chemically inhibits the corrosive action of chlorides and reinforcing steel and pre-stressed strands in concrete.

This product greatly increases the durability and service life of the parking structure.

