

# MID TO HIGH RISE RESIDENTIAL Cast-In-Place

## TWO ST. THOMAS



### PROJECT CREDITS

#### OWNER

Bentall Kennedy Ltd. in Partnership with Kingsett Capital

#### ARCHITECT OF RECORD

Hariri Pontarini Architects

#### ENGINEER OF RECORD

Jablonski, Ast & Partners

#### GENERAL CONTRACTOR

PCL Constructors Canada Inc.

#### FORMING CONTRACTOR

Structform International Limited

#### MATERIAL SUPPLIER

St Marys CBM

#### ADDITIONAL PARTICIPANTS

- BASF Canada
- LIUNA Local 183

### PROJECT FACTS

#### LOCATION

Toronto, Ontario

#### TOWERS 26 STOREY AND 11 STOREYS

**START DATE** August 2015

**COMPLETION DATE:** July 2018

**CONTRACT VALUE** \$130 Million

**TOTAL CONCRETE** 16,000 m<sup>3</sup>

**COMPLETION** September 2015

#### PROJECT SUMMARY

Located at St. Thomas & Charles Streets, Two St. Thomas is nestled in the Yorkville area of downtown Toronto.

This Luxury residential complex includes one 26-storey tower and one 11-storey tower with more than 30 floor plans in a total of 251 suites build over 4 levels of underground parking containing 157 stalls.





## SUSTAINABILITY

The project was targeted LEED silver – it features:

- Double glazed windows
- Energy Star rated appliances
- Dual Flush Toilets

Well planned for bicycle parking, electric car charging stations and the L12 terrace area is an outdoor amenity space with areas of green roof as well as landscaping with planters.

## SPECIFIC STRUCTURAL ENGINEERING CHALLENGES POSED BY THE DESIGN

- The tight site in the Downtown location required the application of Shotcrete to pour the perimeter foundation wall below grade as well as a number of interior walls & columns. This reduced the amount of formwork and space required in the hole to pour the below grade structure.
- Preservation of the designated historic 8 St. Thomas building required a full caisson wall to be constructed against the foundation to allow for the excavation to take place.
- Routine inspections were required inside the 8 St. Thomas building to monitor for cracks or other signs of movement during the Tie-back drilling through the caisson wall.
- A small opening in the basement level of 8 St. Thomas was required to create a bike storage room that was tied to the Two St. Thomas parking garage P1 level. An approval was given for a concrete header that allowed the contractor to cut an opening in the existing brick foundation wall to gain access into the 8 St. Thomas basement. In this way, there was no need to install temporary means of support while the cut was made.

## PROJECT DESCRIPTION

### Architectural Merit

Designed by the architectural team of Hariri Pontarini Architects, Two St. Thomas has a modern design of glass, stone, wood & copper finishes.

The Building exterior from ground to level 4 is a Precast Panel with a limestone cladding. It is an Algonquin limestone that is sourced from Ontario and then built into the precast panels.

Two St. Thomas has a range of designed suites with over 30 floor plans. It has a striking two storey lobby, a 12<sup>th</sup> floor outdoor lounge, a dining room with gourmet kitchen, a fitness studio and an in-house pet spa.



The building is also unique in that it contains a vestibule connecting the towers to a room built underneath a neighboring and occupied building.

Two St. Thomas has a professionally curated original art collection displayed throughout the building, and while it stands out in the Bloor-Yorkville area, it still blends in with the aura of the neighborhood.

Achieving LEED Silver includes a high-performance energy efficient building with many sustainable features for occupant comfort while bettering the environment.

### **Material Development, Innovation & Specialty Concrete Construction**

With more than 30 floor plans, many of the units feature unique shapes with a high level of surface finish which required a superior concrete mix and specialized forming techniques to achieve the developer'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 coordinated 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 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 the 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 mixed concrete to achieve more predictable set times in the cold winter months.

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 project greatly increased the surface durability and service life in the four levels of parking structure below ground.

