

Rotman School of Management Expansion

Since the opening of the original Rotman School of Management building in 1998, many of the programs have doubled in size and the scope of research has increased. To accommodate this and future planned growth, the School undertook a major expansion of its facilities. The Rotman Expansion was designed by Kuwabara Payne McKenna Blumberg Architects (KPMB). The intent of the new building was to provide a direct expression of Rotman's core mission to promote the power of creativity, innovation, and integrative thinking in 21st century business education.

The expansion building is located directly to the south of the existing School of Management building on St. George Street. In addition to the original school building, the design responds directly to the scale of the existing buildings in the surrounding context. Separated by a service lane to the east, the expansion building is configured to maintain views and minimize shadow impact on respected Massey College. On the west, the new building wraps around the historic St. George House and relates to the scale of the pedestrian realm of the adjacent street. The buildings 10 storey main volume corresponds to the larger city scale established by the Robarts Library across St. George Street.

Reinforced concrete was the material of choice to support this architectural intent. Concrete was utilized throughout the buildings structure from the foundations to the roof. Always versatile, concrete was also used as part of the finish material palette in select locations throughout the building. Below grade the building has a double height storey with an intermediate mezzanine. This generous vertical height accommodates the stepped seating of the seven lecture rooms located at this level. The building's columns are founded on top of weathered shale with reinforced concrete spread footings and the floor structure is a 125mm slab-on-grade. The perimeter concrete basement walls are typically 400mm thick and cast against a concrete caisson shoring wall. The architectural design incorporated two mechanisms to help bring natural light down to this lower level. The first is a unique sunken courtyard which not only brings in light, but also allows direct views to and from St. George Street. The second mechanism is an internal atrium up to the underside of the 5th floor.

A central core extends the full height of the building and incorporates the elevator shafts, distribution of services, and the washrooms. Core walls are typically 300mm thick and within the washrooms were designated as Architecturally Exposed Concrete (AEC).

In the upper levels, circular AEC columns are provided in public areas or at perimeter



Owner:	The Governing Council of the University of Toronto
Architect of Record:	Kuwabara Payne McKenna Blumberg Architects
Engineer of Record:	Yolles, A CH2M HILL Company
General Contractor:	Eastern Construction Company Limited
Material Supplier:	Armtec Limited Partnership St Marys CBM
Additional Participants:	<ul style="list-style-type: none">• Aluma Systems Inc.• Carpenters Local 27• Coffey Geotechnics• Gilbert Steel• Ironworkers Local 721• LIUNA Local 506• Structform International Inc.
Project Facts:	<ul style="list-style-type: none">• Located in Toronto, Ontario• Completed September 2012• 35 month project• Floor Area 161,500 SF• Floors below grade - 1• Floors above grade - 10• 9,000m³ of concrete• Cantilever feature stairs• Architecturally exposed concrete (AEC)• Circular AEC columns• Central core extends the full height of the building



walls. Other columns are square in section, designated AEC and located within demising walls between offices and study rooms. The lack of a built-up finish assembly on top of the structural columns helps maximize the useable area within the rooms.



From ground floor to 4th floor a large opening is provided the floor slab for the central atrium. A dramatic stair which cantilevers 8.5m into the atrium interconnects the floor levels and is intended to promote collaboration by intensifying opportunities for exchange.



In the design of cantilever feature stairs, response to vibration is often a governing criteria. This response is not just a function of the stair itself, but also of the stiffness and mass of the adjacent floor where the stair connects. If the surrounding floor is framed in structural steel, the resulting depth of framing is substantially increased to maintain the same level of performance as the concrete floor framing.

In addition to the use of concrete as a primarily structural material, it is also used as cladding elements on the building. Precast panels in varying widths are used in combination with curtain wall panels to provide the building's exterior envelope. Panels are cast from ultra-high performance concrete which is coloured dark grey. Panel thickness is only 30mm. A complimentary interior partition wall also makes use of the precast panel construction.

The architectural vision for the Rotman School of Management Expansion was to foster collaboration and creative problem solving, and to create a vibrant global hub that grounds the identity of the school and gives it an international presence. For the design team, concrete was the material of choice to help realize the vision. Concrete was adaptable to be employed in a range of structural solutions and configurations. Beyond just fulfilling structural purposes, concrete also performed equally well as a finish and cladding material.



*2012 Ontario Concrete Award
Winning Project
Architectural Merit*

In 2000, the Ontario Cast-In-Place Concrete Development Council (OCCDC) was formed to aid the owner/developer, architect/engineer and design-build contractor in the decision-making process of choosing the best construction material for the framing system of new cast-in-place structures.

OCCDC promotes the benefits of reinforced concrete as the construction material of choice based upon the following advantages:

- fast-track construction
- costs savings
- structural advantages
- environmental considerations
- local economy benefits

The Members of the OCCDC include (alphabetical order):

- Aluma Systems Inc.
- Carpenters District Council of Ontario
- Concrete Forming Association of Ontario
- Ironworkers District Council of Ontario
- LIUNA—Ontario Provincial District Council
- Ontario Formwork Association
- PERI Formwork Systems Inc.
- Ready Mixed Concrete Association of Ontario
- Reinforcing Steel Institute of Ontario



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