



AGA KHAN MUSEUM & ISMAILI CENTRE

2014 ONTARIO CONCRETE AWARD WINNING PROJECT FOR STRUCTURAL DESIGN INNOVATION

PROJECT OVERVIEW

Imara (Wynford Drive) Limited, acting on behalf of the Aga Khan Development Network, appointed Carillion for pre-construction planning services and construction.

The two facilities each total almost 100,000 square feet constructed in reinforced concrete, structural steel, structural glazing, large skylights, stone flooring and cladding timber framing. The projects were designed two prominent architects from around the world – Japan’s Fumihiko Maki for the museum and India’s Charles Correa for the Ismaili

Centre. The project also includes 210,000 square feet of underground parking in a two-level underground parking structure, and stunning landscaping features. The development incorporates a unique combination of contemporary design features and interpretive elements from traditional Islamic architecture. The level of quality, workmanship and materials demanded is extremely high.

AGA KHAN MUSEUM

The museum, clad in white granite, rises 45 feet above ground with walls that cantilever outwards and inwards on all four sides. It houses permanent exhibits of Islamic art and artifacts from the personal collection of His Highness the Aga Khan’s family, along with large galleries for visiting exhibitions and a 350-seat auditorium for cultural events and live performing arts with a multi-faceted dry-wall ceiling.



OWNER

Imara (Wynford Drive) Limited

ARCHITECT OF RECORD

Moriyama & Teshima Architects

ENGINEER OF RECORD

CH2M HILL

GENERAL CONTRACTOR

Carillion Canada Inc.

FORMING SUPPLIER

Alliance Forming Ltd.

MATERIAL SUPPLIER

St Marys CBM

ADDITIONAL PARTICIPANTS

- Aluma Systems Inc.
- Avenue Building Corporation
- BASF Canada Inc.
- Carpenters Local 27
- Gilbert Steel Ltd.
- Ironworkers Local 721
- LIUNA Local 506
- Premform Ltd.

PROJECT FACTS

LOCATION Toronto, Ontario

COMPLETION February 2014

BUDGET \$200 million

VOLUME 35,000 m³

QUICK PROJECT FACTS

- 17 acre campus – a museum and religious/cultural centre totaling 100,000 square feet each;
- Includes 200,000 square feet underground parking, and performance theatre;

- Offers structural glazing, structural glazed skylights, stone flooring, stone cladding and exposed timber framing.





ISMAILI CENTRE

The Ismaili Centre, Toronto, was designed to respond to the traditions of Islamic architecture in a contemporary way using modern materials.

A distinguishing feature of the building is the multi-faceted glass roof of the prayer hall (Jamatkhana), that can accommodate 1,500 people, which recalls the corbelling in many of the traditional domes in the Muslim world. The glass dome, which represented a difficult technical challenge, rises to a height of 65 feet above the roof and is made of two layers of high-performance glass and fritted to deflect the heat of the sun. A clear sliver of glass facing east toward Mecca runs down the translucent roof. The orientation of the building is determined by its urban context, which provided a grid with which to work. Set against the grid is the circular prayer hall. The prayer hall is spanned by a double layer of glass sitting

on elegant structural steel trusses of various depths and dimensions. The glass rises in the shape of a cone and is pieced together to form a fractal skin.

The Ismaili Centre also includes spaces for institutional, social, educational and cultural activities.

LANDSCAPING

The 741,000 square feet of publicly accessible grounds contain five negative edge pools with surrounding hard and soft landscape to create a park setting bordered by the Aga Khan Museum to the east and the Ismaili Centre to the west.

The park is inspired by the traditional “chaar bhag” or formal four-part garden with reflecting pools, walkways, and components suited to the climate of Toronto. It includes spaces for educational programming and outdoor gatherings as well as offering a place of tranquil reflection.

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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