# Case Study ONTARIO CAST-IN-PLACE CONCRETE DEVELOPMENT COUNCIL



# **NATIONAL HOLOCAUST MONUMEN**

ETE AWARD WINNING PROJECT FOR ARCHITECTURAL HARDSCAPE



# **Project Summary**

The National Holocaust Monument is a national symbol that honours and commemorates the victims and survivors of the Holocaust. The monument stands on a one-acre site in downtown Ottawa, symbolically across from the Canadian War Museum.

> Configured to create the points of a star, a symbol of Jewish identity.



#### **OWNER**

**National Capital Commission** 

# **ARCHITECT OF RECORD**

Studio Libeskind

# **ENGINEER OF RECORD**

Read Jones Christoffersen Ltd.

# **GENERAL CONTRACTORS**

UCC Group Inc.

#### **MATERIAL SUPPLIERS**

Hanson Ready Mix

# **ADDITIONAL PARTICIPANTS**

- Aluma Systems Inc.
- Carpenters Union Local 93
- Claude Cormier + Associes
- Harris Rebar
- JWK Utilities & Site Services Ltd.
- LIUNA Local 527
- · Sika Canada · WSP Canada Inc.
- Ironworkers Local 765

# **QUICK PROJECT FACTS**

1 Acre

LOCATION

Ottawa, Ontario

September 2017

COMPLETION

290 Tonnes of Rebar 3,112.5 m3 of Concrete



# NATIONAL HOLOCAUST MONUMENT

The National Holocaust Monument is a national symbol that honours and commemorates the victims and survivors of the Holocaust. The monument stands on a one-acre site in downtown Ottawa, symbolically across from the Canadian War Museum.



The monument is comprised of six triangular, concrete volumes configured to create the points of a star, a symbol of Jewish identity.



The project incorporated 90,000 square feet of custom engineered form work for walls with complex geometries and heights varying from 3 meters to 20 meters high.

Over 290 tonnes of custom detailed steel of varying sizes was used.

Over 3,000 m³ of concrete was used, of which over 1,000 m³ was Self-Consolidating Concrete. The extensive use of Self-Consolidating Concrete was chosen because of its high performance, durability and because it required minimal use of mechanical vibration. The flexibility of the Self-Consolidating Concrete allowed for an even, smooth flow and allowed the concrete to reach the most difficult parts of the forms, leaving a superior exposed architectural finish, maintaining consistent concrete features that produced continuity from one element to the next.

Hand painted monochromatic photographic landscapes of Holocaust sites are embedded in concrete walls of each of the triangular spaces.



A significant portion of the project was constructed during the winter months, which required temporary heated enclosures and constant monitoring of temperatures and curing conditions.

Hard & soft landscaping, removal of contaminated soil, site servicing, electrical, mechanical, landscape lighting, custom metal work and commemorative interactive signage elements rounded out this iconic project.

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 Canada



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