

St. Gabriel's Passionist Church

The new church of St. Gabriel of the Sorrowful Virgin Roman Catholic Parish and the Passionist Community of Canada was designed to reflect the eco-theology of Father Thomas Berry, and his belief that we must all work to establish a mutually enhancing human-earth relationship. The structure makes effective use of glass and concrete components towards achieving both an aesthetic design and inspirational space for worship.

Concrete played the dual role of structural component and architectural element in this project. Designed by the collaborative efforts of both an artist and architect, this project makes ample use of exposed concrete surfaces. Concrete contributes significantly to the sense of grandeur and permanence appropriate for the groundbreaking worship space. While the entire south façade wall is glazed with clear glass, the 3 remaining walls exposed architectural concrete that serve as a constantly changing canvas for the dynamic play of natural light that filters through the coloured glass panels of the continuous perimeter skylight. This light is further fractured by wall-mounted dichroic coated reflectors, spilling into the midst of the congregation and across the concrete walls and floor.

The exposed concrete walls combined with the raised concrete access flooring provide the perfect acoustical environment for a church. The resonance enables the organ to sound like it is being played in an ancient stone cathedral.

St. Gabriel's church is distinctly different from most suburban churches that are corralled by huge asphalt parking lots. St. Gabriel's accommodates the majority of its parking spaces in a concrete underground structure. This unprecedented investment ensures that a large portion of the ground plane remains devoted to the "green-roof" garden.

Concrete was a logical choice for the superstructure because of the underground parking. The use of concrete contributed to achieving a number of



- Owner:** Passionist Community of Canada
- Architect of Record:** Larkin Architect Limited
- Engineer of Record:** Carruthers & Wallace,
part of the Trow Group of Companies
- General Contractor:** Martin-Stewart Contracting Ltd.
- Material Supplier:** St Marys CBM
- Additional Participants:**
- Aldershot Landscape Contractor Limited
 - Aluma Systems Inc.
 - Camino Modular Systems Inc.
 - Carpenters Local 27
 - David Pearl
 - Enermodal Engineering Limited
 - Haworth Ltd.
 - Ian Gray and Associates
 - Ironworkers Local 721
 - LIUNA Local 506
 - National Concrete Accessories
 - Ronco Steel Centre Limited
 - Salit Steel
 - Structform International
 - UCC Group
 - Unilock
 - Weissbau Inc.
- Project Facts:**
- Construction from March 2005 to August 2006



LEED credits, such as the substitution of “slag” for a portion of the cement content and for the recycled content in the reinforcing steel used. Exposed throughout the building on floors, walls and ceilings, the architectural concrete structure saves precious natural and financial resources by eliminating the need for finishes such as drywall or paint. Composed of 1-1/2" thick concrete panels, the raised access floor in the nave (central open area of the church) and narthex (the entrance or lobby area) forms a plenum component of the displacement ventilation strategy. This approach helps to maximize energy efficiencies while providing a handsome, durable and practical finish underfoot.

The thermal mass of the exposed concrete walls, together with the raised concrete access floor supplied by Haworth, serve as heat sinks that absorb the sun's energy and release it back into the worship space when the temperature cools. The thermal mass of the 350mm thick concrete walls combined with R-25 insulation on their exterior side also helps to retain heat during winter and reduce heat gain in the summer, thereby contributing to even greater energy savings.

Concrete is also used as an integral part of the exterior design of St. Gabriel's. An iconic roof scupper constructed of cast-in-place concrete spills rainwater from the narthex roof into a cast-in-place concrete water feature that highlights the need to conserve and protect water as the precious natural resource because of its use as a symbol of purification in the rite of Baptism.

A generously proportioned piazza designed to be used as a seasonal outdoor gathering space and staging area for weddings and funerals incorporates several series of pre-cast pavers in a pattern inspired by the mid-century work of Bauhaus modern artists Josef and Anni Albers.

Incorporating these and other sustainable design strategies contributes to an understanding of early scriptural teachings that emphasized the sacredness of all creation and not just the sacredness of human kind. The new building as a sacred space presents a “Gestalt whole”, and, like the medieval cathedrals of Europe, becomes itself a form of Catechesis, engaging the senses and inviting transformation.



2007 Ontario Concrete Award winning project for 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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