

Hamilton Health Sciences Center Hamilton, Ontario



Project Description:

The Hamilton Health Sciences (HHS) project is a new facility for the Cardiac, Vascular and Stroke Research Institute (CVSRI). It encompasses 52,040 square feet deemed as Generic Lab, 28,600 square feet as Experimental Pathology (including an animal holding colony) and 78,930 square feet as office fit up. The total project scope totals 197,700 square feet including mechanical service area and atrium.

Hamilton Health Sciences is a family of five unique hospitals and a cancer centre, serving more than 2.2 million residents of Hamilton and Central South and Central West Ontario. Their facilities offer a range of acute and specialized services, catering to health care needs from preconception through to aging adults. Each of their hospitals has specific areas of expertise and together, Hamilton Health Sciences is one of the most comprehensive health care systems in Canada.



Current Status:
Under Construction

Project Type:
Design Build Maintain

Project Capital Cost:
Total construction cost
Original: \$76,000,000
Final: On Budget

Project Schedule:
Original Completion Date: May 2009
Actual Completion Date: On Schedule

Role in Project Management and Design:

As part of the steering committee, Black & McDonald took part at the highest levels of project design, architecture, planning, installation, procurement, operations and maintenance. Black & McDonald provided project management for and self-performed on electrical, mechanical, sheet metal, communications, maintenance and service.

Key Individuals and Their Roles:

Samir Raza, Mechanical and Electrical Manager
Jason Chobotiuk, Division Manager

Subconsultants:

This project was an ABE Joint Venture-led project with Parkin Associates contracted for Architectural design engineering, and VRM for electrical and mechanical engineering.

Key Challenges and Solutions Implemented:

The challenges facing the project team are known and the highly skilled resources of Black & McDonald with related experience from similar projects are being applied here.

The first challenge revolves around designing, building and operating a high-end Medical Research facility and Animal colony under a Joint Venture within a fixed budget and schedule for a project that has a fluid and evolving scope.



The needs of medical research change faster than construction progress. So the changing needs of the end users must be met without any cost or schedule impact on the project, thus assuming a large portion of the risks for cost and schedule uncertainty.

Secondly, the project involves creation of a cutting-edge Animal Colony and Research Facility with many innovative features in functionality. Installations will require mission critical operation with 24x7 operational support with shared services with Hamilton General Hospital.

The risks for both challenges here are mitigated through the experience of the Black & McDonald team of Jason Chobotiuk and Samir Raza at the University Health Network Medical and Related Sciences project. Pre-emptive actions can be planned and processes put into action to reduce the risks of delays and re-work. Their strategy will be to incorporate strong and consistent

communication skills, orchestrate extensive team interaction throughout the project, and apply their effective change and scope management experience to provide the solutions.



Client Reference:

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Relevance to future projects:

The Hamilton Health Sciences project underlines once again Black & McDonald's abilities to address the needs of highly complex projects within mission-critical and often hazardous environments and develop solutions that mitigate the risks of the client.

The Hamilton Health Sciences project re-enforces the value of an integrated approach to the design, construction and maintenance operations. At the outset of planning and design, Black & McDonald as the electrical and mechanical constructor, and the facility maintenance operations manager, contributed value-added experience and technical support to the design engineering process – as a prime decision maker and stakeholder. Constructability, fast-tracking, and quality issues were identified and resolved as best value for the cost. Concurrently, B&M's facility maintenance & operations team focused on maintainability, best LCC value that targeted whole life sustainability and a manageable life cycle plan. The result is a facility designed and constructed with the end-users' needs in mind, and with quality, reliability and sustainability visibly a priority throughout the project development and construction process.

The unique benefits of having B&M as both E&M constructor and Facility Manager were evident over the entire design-build process, as their continuous self examination of compliance to design reflected their commitment to maximizing an effective maintenance management program that will mitigate any chance of service failure over the entire concession period. These valuable documented lessons learned at Hamilton Health Sciences will be applied to future Black & McDonald projects.
