



# Niagara Health Complex and Walker Family Cancer Centre

by Laurie Jones

**W**hen the Niagara Health Complex and Walker Family Cancer Centre opened on March 24, 2013, it was indeed a cause for celebration.

With a slogan stating, “One Million Square Feet of Care,” it is the largest newbuild hospital project ever to be completed in the province of Ontario. The 970,000-square-foot complex will house significant high-tech services that were not previously available in the area.

“This hospital will be replacing the St. Catharines General Hospital, which is over 100 years old, and an ambulatory and administrative building called the Ontario Street site,” says Gloria Kain, chief planning and development officer for the Niagara Health System. She adds it is exciting for St. Catharines, Thorold, and Niagara-on-the-Lake to have new programs for a number of medical needs in the combined community catchment. “Cardiac catheterization is a program that we are partnering with Hamilton in developing. The longer-term mental health services that used to be part of the psychiatric hospital beds in Hamilton have been divested to this new facility.” The Niagara Health Complex will also offer acute and critical inpatient services, surgical services, women, babies and children’s health, emergency and ambulatory services under one roof.

The state-of-the-art facility has a capacity for up to 399 beds, and of those, 80 per cent are single rooms. “This design will significantly help as infection control will be much easier with the separate rooms,” says Kain. “Hospital acquired illnesses are always a concern, so we have installed sinks for hand sanitizing in every patient room and other areas

for staff and visitors.” She adds that the operating suites are lined with Corian walls, which also help with infection control. “This product is non-porous and virtually seamless so the cleanability is greatly improved over plaster or paint. We went with poured epoxy on the floors for cleaning and durability.”

With a \$759-million price tag on this project, costs were covered through the Province of Ontario, private funding and local fundraising efforts. It takes an extended team to put all the pieces together on such a complex facility, and heading that consortium was Plenary Group. “This is one of the first projects in Ontario to be created under the design, build, finance, maintain approach (DBFM),” says Mike Marasco, CEO, Plenary Group. “In one procurement, the bidders proposed a fixed price for everything from the design of the facility through to the construction and maintenance for 30 years. After that time, the owner, Niagara Health System, is guaranteed provisions for the condition of the asset on hand back.”

Marasco says performance guarantees are in place over the 30 years, so only a portion is paid upon substantial completion and the rest is paid over the span of the contract.

“This is a safeguard to ensure the concessionaire maintains the infrastructure and corrects design flaws that come up that are beyond the hospital’s control.”

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– Mike Marasco, CEO,  
Plenary Group

When the project began in 2006, Cannon Design was brought on board to act as the planning and compliance team. The team worked directly with the hospital to put together project requirements and specifications that would govern the competing teams for the St. Catharines hospital project. “We have a P3 procurement method for delivering large infrastructure projects in the province,” says Walter Gaudet, associate principal. “Input came from literally hundreds of meetings with user groups that included physicians, nurses, occupational therapists, technologists and maintenance people.”

He notes the meetings went on for a great length of time until all the details were ironed out, eventually



producing multiple binders of information that were carefully distributed for feedback. "It was a three-year construction timeline and we were involved in crafting the material, which is now being used as a template by the province."

One of the aspects that Cannon Design spearheaded was the single patient room option. "The Ministry realized that not having patients share rooms reduces the amount of cross infection, resulting in quicker recovery times for patients and ultimately saves money for the government," says Bill Smeltz, principal.

The winning bidders for Plenary Health Niagara's architect team were B+H Architects and Silver Thomas Hanley Architects. "We worked very closely with our partners at PCL Constructors and the Plenary Group," says Bill Nankivell, CEO and partner in charge, B+H Architects. "One of the key drivers of our whole design for this hospital focused on producing a very compact and efficient building. The single

patient room also gives everyone a bed by the window, creating a more relaxing environment. It is a beautiful location with views out to farmland, greenery and wilderness, so we wanted to take advantage of that."

A single elevator bank off the main entry to the hospital serves all of the in-patient towers and much of the core of the hospital. This part of the design is helpful for security but it can also zone off certain areas to minimize infection spread. "We put a lot of thought into the vertical circulation," says Nankivell. "There is a very clear separation between back of house, front of house, areas that the public can access and areas that are just for patients and staff and servicing. This way, people will not accidentally wander into spaces where they do not belong." Beyond the direct patient care, the hospital has community spaces to promote education and community participation in the health and wellness environment of the Niagara System.

**LOCATION**

1200 Fourth Avenue  
St. Catharines, ON

**OWNER**

Niagara Health System

**OWNERS' ADVISOR**

Infrastructure Ontario

**DEVELOPER**

Plenary Health Niagara

**COMPLIANCE ARCHITECT**

Cannon Design

**DESIGN-BUILD CONTRACTOR**

PCL Constructors Canada Inc.

**ARCHITECT**

B+H Architects and Silver Thomas Hanley Architects in Joint Venture

**STRUCTURAL/LEED/  
BUILDING ENVELOPE CONSULTANT**

Halsall Associates Limited

**MECHANICAL/  
ELECTRICAL CONSULTANT**

Smith and Andersen Consulting Engineering

**FACILITIES MANAGER**

Johnson Controls Inc.

**FOOD SERVICES CONSULTANT**

Trend Foodservice Design & Consulting

**LANDSCAPE ARCHITECT**

Quinn Design Associates Inc.

**TOTAL CONSTRUCTION COST**

\$759 million

**TOTAL AREA**

970,000 square feet

**A Leader in Healthcare Architecture**

*St. Joseph's Healthcare Hamilton, Junivital Centre for Integrated Healthcare*

Working throughout the Niagara region, Cannon Design is proud to support the Niagara Health System in the planning, design and compliance of their new Niagara Health Complex and Walker Family Cancer Centre – "a million square feet of care".

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The emergency area is visible from the main entrance of the hospital but has a dedicated short-term parking. People can pull up to the door to bring the patient inside quickly. A separate area on the side of the building was designed for emergency vehicles so there is no congestion with the public. A long, glass corridor links the emergency department internally to the main hospital entrance and is flanked by a public plaza with a rest space and greenery.

The Walker Family Cancer Centre occupies the ground and second floor of one wing of the hospital. It is adjacent to the main entrance but has its own distinctive covered entrance area. "With cancer treatment, we wanted to give respect and dignity to patients," says Nankivell. "It is a regional cancer centre but fully integrated with the main hospital."

With such a large footprint, the construction details were different than

most taken on by PCL Constructors Canada. "This project is a little different in that it is an all new build, whereas other hospitals have added on to existing campuses," says Reynder Van der Meulen, construction manager. "There are approximately 38 departments so it has a lot more to it than the average hospital project." He noted when the designers have a relatively clean sheet to start with, they are not hemmed in by some of the constraints that are in existing facilities. "They put a lot of thought into adjacencies, the flow of people, patients and staff."

Before opening day, stakeholders and partners, staff and friends, and the community were invited in to the Niagara Health Complex and Walker Family Cancer Centre for a preview. "We had over 20,000 people come through in a six-week period," says Kain. "That is a testament to the pride of the residents knowing they will have this wonderful hospital in their area." ■



*Proud to be associated with the Niagara Health Complex and Walker Family Cancer Centre project.*

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*We are pleased to be part of the Niagara Health Complex and Walker Family Cancer Centre project!*

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