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SUMMER 2011

The Gale Centre

Niagara Falls
Hot New Ice Venue

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Niagara Falls' Hot New Ice



The Gale Centre Complex is a great new venue for this tourist city's hockey enthusiasts

Ontario loves ice. And in a province with around 1,000 ice pads, including about 750 arenas, Niagara Falls' new four-pad Gale Centre Complex is gaining attention from around the region and beyond.

The complex replaced aging buildings dating from the '50s to '70s and was funded by municipal bonds and generous gifts from donors—including local businessman Bob Gale, for whom it is named. The 204,000-square-foot structure has four NHL-sized ice pads—one seating 2,000 spectators, and three others that seat 250 each.

This fits the best model for such municipal facilities, says Steve Hamilton, manager of recreation facilities for the City of Niagara Falls. "With four pads of ice in one location, you can optimize your revenue streams, and minimize some of your expenses."

The complex also is expected to serve as an anchor for future urban redevelopment. Located near the downtown, it sits on 16 donated acres within a 93-acre brownfield site formerly occupied by a chemical plant.

The building has expansive locker rooms, a pro shop, and a skate sharpening facility. It also includes the Niagara Falls Sports Wall of Fame, youth hockey and skating club offices, numerous food concessions, and a multi-purpose community meeting room with fireplace and servery suitable for parties and corporate gatherings. Parking is available for 980 vehicles.

To handle such an extensive project, the city hired Urban & Environmental Management Inc. (UEM) in Niagara Falls as their consultant. UEM played a key role in selecting the project team. Barry Bryan Associates, Ltd. (BBA) were the design architects, engineers and landscape designers. Aquicon Construction Co.,

Ltd. of Brampton, Ontario, was the general contractor, and KMA Contracting, Inc., a Butler Builder® with offices in Guelph, Ontario, built the wings housing the ice pads, which form the majority of the complex.

AN ECONOMICAL HYBRID

"The building is very much a hybrid of conventional and systems construction," says Rob Box, the project manager for KMA Contracting.

While the entrance lobby and central, two-level concourse are framed with conventional structural steel, the huge wings on either side of the complex were built using a custom Widespan™ structural system, capped with the MR-24® standing seam roof system.

Using systems construction for the wings just made sense, says Dave Schram, the UEM project manager.

"A metal building systems solution was the most economical method to achieve the clearspans required over the ice pads and get the building erected faster. These and a number of other factors favored the choice of Butler® systems."

Perhaps the most important of these factors, he continues, was the longevity and field-proven performance of the MR-24® roof system. "The city had been spending \$25,000 to \$30,000 a year patching the roofs on their existing ice facilities."

As the wings went up, speedy erection did pay off, recalls KMA's Box.

When the structural steel arrived at the site, it was sent out to be epoxy coated for corrosion protection, a necessary but lengthy process. "Afterward, the roof system was installed

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GALE CENTRE COMPLEX

Butler Builder®: KMA Contracting, Inc., Guelph, Ontario

Architect: Barry Bryan Associates, Ltd. (BBA) Whitby, Ontario

Size: 204,000 square feet (18,947 square meters)

Butler® Systems: Widespan™ structural system
MR-24® standing seam roof system

BY JUDY FINDSEN, PHOTOGRAPHY BY BERNARD DUPUIS

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quickly and efficiently, providing our team the opportunity to make up any lost time," Box says.

The facility's walls are a combination of extensive glazing, insulated architectural panels and pre-cast concrete. The mix of conventional elements and metal building systems presented no problems, and joining the rinks to the concourse also went very smoothly, Box says.

"Butler engineering provided extensive detailing, and was very helpful in solving unforeseen on-site issues."

MANY GREEN FEATURES

Although the project was not registered and certified with the Canadian Green Building Council, it contains many elements inspired by LEED criteria.

R-20 insulation was used in the roof system and walls.

The foundations of the former plant buildings were pulverized for fill, reducing the need for imported fill by 75 percent. The Butler® systems—which are manufactured exactly to size—also helped reduce waste at the site.

The building has high-efficiency heat pumps for space heating, and is zone-controlled by an energy management system. An underground snow-melting system for the sidewalks recycles heat from the rink refrigeration system. Extensive perimeter glazing admits natural daylight, and energy-efficient metal halide lighting is used above the skating rinks.

A COMMUNITY ASSET

The new building has proven to be far more efficient than the separate, older facilities. "The city wanted a cost-effective facility to build and to operate, and they got it with the Butler® metal building systems," Schram says.



The Gale Centre's efficient, four-pad design optimizes costs for the city, especially with the low-maintenance, weathertight MR-24 standing seam roof system that was used over the rinks. The inviting facility, with its meeting rooms and added amenities for spectators, is a popular gathering place for the community.

It also is generating excitement among hockey enthusiasts. Unlike the older facilities, it can provide summer ice, and is able to host a number of tournament events sponsored for groups outside the immediate area, and even from the adjacent United States.

The Gale Centre is home to two local junior hockey teams, and during the 2011 International Ice Hockey Federation World Junior Championships, the Canada World Junior Team conducted its final training camp practice there.

"That was a big thrill for everybody," says Hamilton.

But best of all, everyone loves to go there. During a typical 60 hours of weekly operation, the centre attracts 7,000 to 8,000 skaters.

"It's a great place to socialize. Many people have commented to me that every time they come, they are constantly running into someone they know," says Hamilton.

"It really has brought the whole community together." ▲