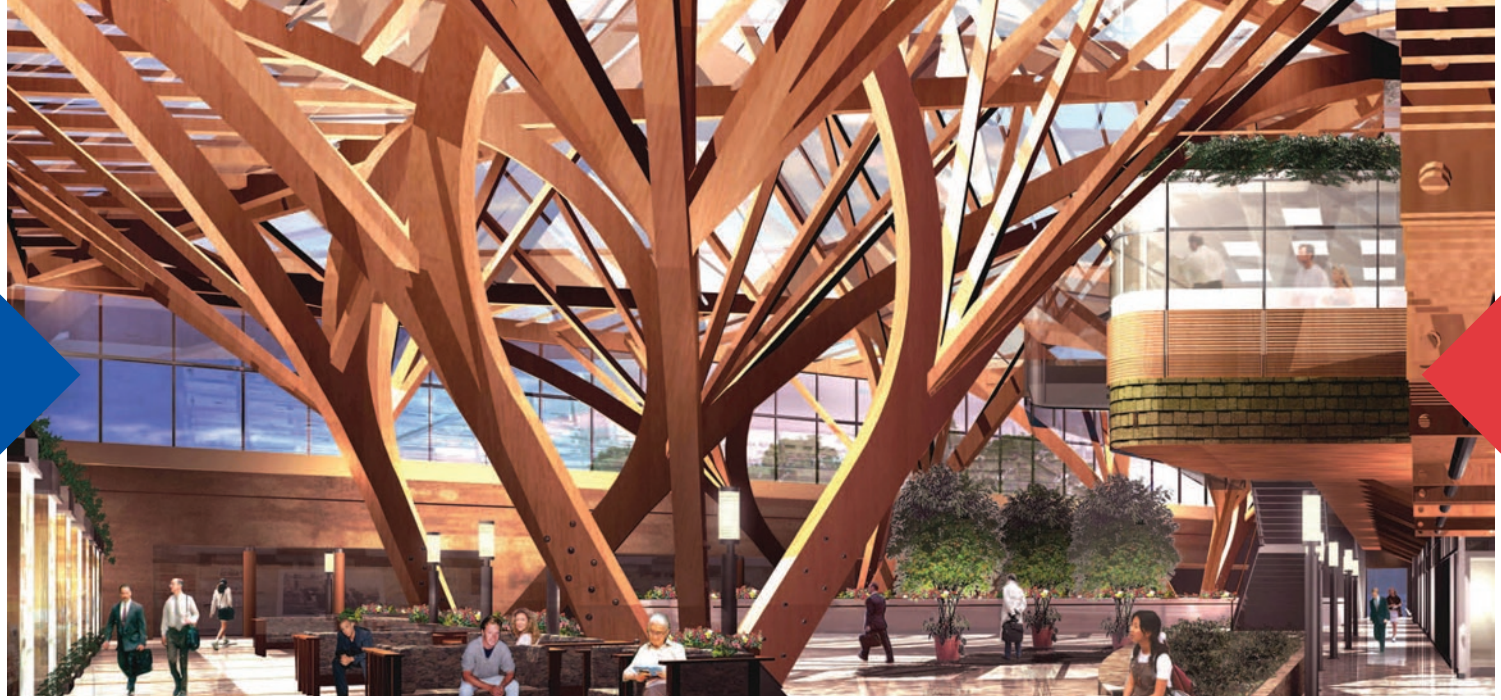

HI-FOG® water mist fire protection

HI-FOG® water mist fire suppression delivers intensive care to Canadian hospital

Serving more than one million people in the area of Mississauga, Ontario, Credit Valley Hospital's reputation for innovative, high-quality patient care greets you at the front door of the facility's Carlo Fidani Regional Cancer Centre. A stunning 3,000 square foot lobby featuring arched wooden beams that sweep across the ceiling welcomes patients and visitors. The structural supports, made from Douglas fir, create a restful ambiance designed to promote healing, relieve stress and calm patients. These spectacular design elements made outstanding fire protection especially important for the building's management.

HI-FOG solutions for Credit Valley Hospital

» *At a Glance*

Less Water
Concerned that traditional sprinklers would cause mold problems if they went off, hospital officials chose HI-FOG because the system uses 70-90 percent less water, which limits water damage.

Flexible Design
HI-FOG blended perfectly with architecture in the lobby, disappearing into the decor. Hospital officials were worried a traditional sprinkler system would make the lobby look like a prison.

Easy Installation
The bendable stainless steel tubes were easy to install, adapting seamlessly into the innovative but complex wooden design.

Business Challenges
Designers had to identify a fire suppression system that could quickly and effectively suppress or extinguish fire in a lobby rich in wood. The system also had to aesthetically blend in with the natural look and feel of the restful outdoor decor. While the solution had to be nearly invisible, it also needed to effectively protect people and property while minimizing water damage. "Looking to create a »

"With traditional sprinkler systems there's water damage, and the need for mold mitigation strategies afterward is enormous. With water mist all you have is dampness that you have to wipe up."

– Stewart Dankner C.E.M, Manager, Maintenance and Engineering Services, Credit Valley Hospital

Marioff
A UTC Fire & Security Company

"You don't even see the misting devices and that's the wonderful thing about the system."

» warm, healing environment, wood was the obvious choice when selecting building materials for the lobby. [But] it did not meet the Ontario Building Code (OBC) performance standards due to the inability of conventional sprinkler systems to adequately protect the complex network of curving beams. Steel met OBC requirements but lacked warmth," said Sean Stanwick, a freelance architectural magazine writer.

Engineers also recognized that conventional ceiling-mounted sprinklers would not be able to suppress or extinguish fire in a setting where wood was a predominant design element. An internal hospital report stated, "An effective fire protection solution was needed to allow the project to be designed with glue-laminated bent wood."

Limiting damage was a major concern for this critical care facility. Traditional sprinkler systems that use high volumes of water were not an option. "We wanted to reduce damage from water because underneath the lobby is a patient care area. With traditional sprinkler systems there's water damage, and the need for mold mitigation strategies afterwards is enormous. With water mist all you have is dampness that you have to wipe up, which is the wonderful thing about it," said Stewart Dankner C.E.M, Manager, Maintenance and Engineering Services, Credit Valley Hospital.

The Ontario Fire Marshall deemed the HI-FOG test an "unqualified" success.

The HI-FOG Solution

After passing a rigorous performance test at the National Research Counsel of Canada (the Ontario Fire Marshall deemed the test an "unqualified" success) Credit Valley Hospital installed Marioff's HI-FOG water mist fire suppression system, seamlessly integrating spray heads into light fixtures. "The water mist system has created the opportunity for designers to explore complex details and materials that might not have otherwise been permitted when used with conventional sprinkler systems," said Stanwick.

HI-FOG uses 70-90 percent less water than traditional sprinklers. Less water means less damage, faster cleanup and minimal business interruption or impact on patients and patient care. HI-FOG uses high pressure to force pure, potable water through specially designed and patented sprinklers. The resulting mist, consisting of fine droplets, suppresses or extinguishes fires by cooling the fire itself and the air surrounding it, blocking the radiant heat and displacing the oxygen from the seat of the fire. The small droplets vaporize fast, absorbing heat very efficiently and ensuring safe evacuation of the occupants.

HI-FOG was easy to install, with small, bendable stainless steel tubes adapted into the beams and disappearing into the unique décor. "You don't even see the misting devices and that's the wonderful thing about the system. We didn't want it to be a clinical setting; we wanted it to be environmental and green. The amount of sprinklers we'd need with a traditional system would have made the lobby look like a prison with so many steel bars everywhere," said Dankner.

"You don't have any structural or water damage because it cools the fire so quickly – that's the best thing about it."

Results

The 3,000 square foot lobby and a 1,000 square foot corridor at The Carlo Fidani Regional Cancer Centre are now protected with a HI-FOG water mist system seamlessly integrated into the hospital's decor.

"Everything seems great and there are no issues with it at all. If this system goes off, it immediately extinguishes the fire so you don't have any structural or water damage because it cools the fire so quickly – that's the best thing about it," said Dankner.

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