

BC Children's and BC Women's Hospital Redevelopment

Vancouver, BC, Canada (2020)

PRODUCTS USED:

Krytol Internal Membrane™ (KIM®) Krytol T1®

OWNERS:

BC Children's Hospital
BC Women's Hospital + Health Centre

ARCHITECTS:

ZGF Architects L.L.P.
HDR Inc.

ENGINEER:

Morrison Hershfield

GENERAL CONTRACTOR:

Ledcor

BACKGROUND

For over five decades, both the BC Children's Hospital and the BC Women's Hospital + Health Centre have played a large impactful role in the lives of many children and women alike in British Columbia (BC), Canada. For instance, BC Children's is a leading teaching and research facility that provides care for the most critical of young patients. At the same time, BC Women's remains one of the more active Canadian maternity centers available. Combined, the two hospitals do a lot of important health-care work. In fact, they have noted that each year, they care for at least 7,400 babies born there, and just in 2013 alone, BC Children's had supported around 200,000 patient visits.

However, the two hospitals only had so much capacity, and the number of patients was increasing steadily. To accommodate this increase and provide state-of-the-art care, BC Children's and BC Women's decided that they would need to expand their facilities. In response, they started a three-phase redevelopment project. Phase 2 included the construction of a new acute care center that would contain new surgical, imaging, and emergency facilities, as well as neonatal intensive care beds and a high-risk labor and delivery suite.

A critical requirement for this new care center was to ensure the facility could continue to operate during an emergency. To meet this goal, the new facility would need internal concrete water tanks to supply emergency drinking water and separate gray water tanks to collect the hospital's wastewater. That way, the hospitals could remain operational and provide patient care during an emergency situation, such as a natural disaster. However, for this system to function effectively, they'd need the right waterproofing solution.

SOLUTION

Because the tanks were below grade on one side, their concrete interior could not have a typical waterproofing coating. If they did receive such a coating, it's likely that the vapor drive from outside would delaminate it.



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To avoid this dilemma, the construction team initially considered using a polymer-modified cementitious coating. However, this too was vulnerable, and that plan was soon shelved in favor of Kryton's Krytol T1 solution. The solution itself offered a way to give the tanks the durable interior waterproofing coating they needed, using Krytol® technology to chemically react to water ingress with interlocking crystals that could block any pathways for water. Not wanting to take any chances in these critical areas, the team also added Kryton's KIM admixture directly to the concrete for maximum protection.

However, that was far from the only appeal of using Kryton's solutions. Adding to that, both Krytol T1 and KIM came with on-site support from Kryton, giving the construction team additional waterproofing insight for the design review, pre-construction meeting, waterproofing installation training, and post-construction review.

Based on these benefits, the team decided to use more Krytol T1 to waterproof the newly constructed and fully accessible therapy pool for the children's health center.

Overall, the construction was a success, allowing BC Children's and BC Women's to confidently move on to the third phase of their redevelopment project, which involved moving in to the new facilities and completing the renovations of existing buildings.

