

March 30, 2023 by Matias Bessai

## Building A Landmark: Calgary's \$500 Million BMO Centre Centre Expansion

Every now and then, a project outside of the Greater Toronto Area comes along with the potential to grab the attention of the development enthusiasts and urbanists of this city. This time, we're suggesting a project located about 3,000 kilometres to the west in Calgary, where since 2019, planning has been underway to transform the city's premier convention venue, the 500,000ft<sup>2</sup> BMO Centre, with the goal of delivering a new state of the art facility that is both internationally competitive and visually distinct. Now, just a few short years later, the completed steel frame of the BMO Centre Expansion is primed to deliver a striking new landmark to beloved Stampede Park in Alberta's largest city.



Leading edge of the canopy at the BMO Centre Expansion rising in Calgary, image courtesy of CMLC and Calgary Stampede

The BMO Centre Expansion is being led by the Calgary Municipal Land Corporation (CMLC), acting as development manager on behalf of their partners, the Calgary Stampede, to oversee the investment of \$500M to design and construct a 565,000 ft<sup>2</sup> building addition crafted to meet the

needs of the contemporary conventions market. The project is also a key factor in the activation of the CMLC's longer term goals for the Rivers District Master Plan, striving to create a culture and entertainment hub around Stampede Park.

“The masterplan envisions the Rivers District as a vibrant mixed use community that is anchored by major cultural and entertainment institutions,” said Kate Thompson, President and CEO of CMLC. “This is a really exciting project, not just for the Calgary Stampede but for all of Calgary. We are building the largest convention centre in all of western Canada, and with that comes a new entry point into the Stampede Park.”



Looking northwest at the complete design of the BMO Centre expansion, image courtesy of CMLC and Calgary Stampede

With these goals in mind, the design team of [Stantec](#), [Populous](#), and [S2 Architecture](#) rose to the occasion and delivered an impressive plan with awe-inspiring features both inside and out, like expansive, column-less ballroom spaces; but with these expressive and bold designs, they also created an interesting conundrum. While the design was spectacular enough that the clients were instantly sold on it, one question loomed over the project: could it actually be built? This was the question that fell to [RJC Engineers](#) and their collaborators, [Magnusson Klemencic Associates](#) and steel subcontractors [Walters Group](#).



Looking at the cantilevered floor on the west side of the building, image courtesy of CMLC and Calgary Stampede

To understand the scope of the structural solutions they devised in order to make this project possible, it's important to begin with a review of how this landmark design came to be, what these feature design elements actually look like, and the starting point upon which everything was hinged.

“The BMO Centre started its life in the early 1980s as a dual purpose consumer and agriculture show building,” Jim Laurendaeu, Vice President of Park Development and Operations at the Calgary Stampede, told us. “It was built in a different era and for a different city.” Opened in 1982, the BMO Centre has provided Calgary with a reliable facility for consumer shows, thriving as a venue for local businesses to gather for industry events and exhibitions. But over the next 40 years, Calgary has experienced significant changes.

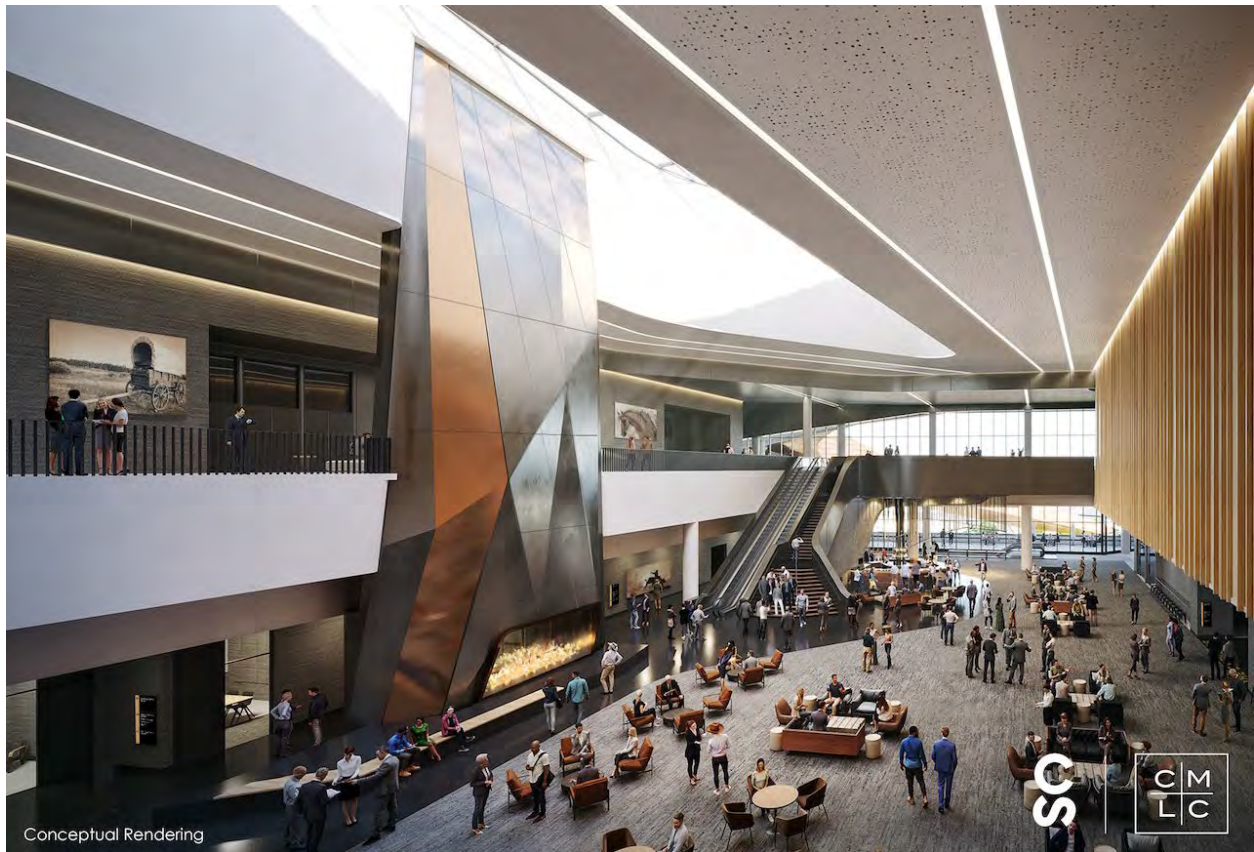
For one, the population of the city has exploded from less than 600,000 in the early 1980s to its current mark of 1.6 million. Beyond that, infrastructure projects like the expansion of the international terminal at Calgary International Airport in 2016 were pointing towards the evolution of the city into an international destination, and one of the major indicators of that trend has been the popularity of the BMO Centre as a venue for larger conventions. According to Laurendaeu however, despite a number of renovations, the limitations of the structure were becoming harder to work around.



Archival image shows layout of the BMO Centre (Left), pre-expansion, within Stampede Park, image courtesy of CMLC and Calgary Stampede

"In the early 2010's, it was starting to become clear that the BMO Centre had not kept pace," he explained. "We were missing out on a lot of economic development because we just weren't competing in that convention market." Unlike consumer shows, which cater to locals, conventions often involve bringing outsiders to a given city for an event. In this way, hotels see a boost in visitors, restaurants see a boost in sales, and overall, a city can profit greatly from a thriving conventions community.

When it was ultimately decided that a large-scale expansion was the next step for the BMO Centre, Laurendeau stressed the importance of making Calgary an internationally competitive destination for conventions. "We really wanted this building to be the first of a new generation of convention centres," he said, and how that was achieved was through an understanding of the programming needs.



The design of the interior spaces recognizes the needs of the modern convention market, image courtesy of CMLC and Calgary Stampede

Before planning could begin however, a site needed to be determined, and the Stampede Corral building was quickly identified as a viable position. Constructed in 1950, the arena was home to the Calgary Flames before they moved to the Saddledome located immediately to the east. The Corral remained active after the move, hosting hockey games during the 1988 Winter Olympics, plus many concerts and other events; eventually though, it was apparent that the building was no longer a suitable venue for arena-style events, making it a natural candidate to make way for the new BMO Centre expansion.



Looking northwest at Stampede Corral on the site of the future BMO Centre Expansion, image courtesy of CMLC and Calgary Stampede

The expansion structure addresses all the things that are missing in the existing building. Offering three levels of programmable space, the project delivers over 100,000 ft<sup>2</sup> of new exhibition space, with the first floor specifically designed for events that could expect over 10,000 attendees. At the same time, the building recognizes the importance of smaller meeting and breakout spaces, providing 38 new meeting rooms, and is highlighted by a pair of ballrooms at the top level, amounting to a total of 70,000 ft<sup>2</sup> of floor space for the largest black-tie events.

Beyond sheer volume however, both the exhibition spaces and ballrooms can be programmed to meet the needs of different users because of one key feature: the minimal presence of columns in the floorplan. While building technology has made great strides to allow designs like this to become more common, plans at this vast scale, with remarkably long spans and few columns, present a host of structural challenges that require highly engineered solutions.



The uppermost floor is occupied by 2 column-less ballroom spaces, image courtesy of CMLC and Calgary Stampede

“Right from the outset, the big challenge was how to create that long span configuration down low and support things like the ballroom and meeting spaces above,” explained Geoff Kallweit, Associate at RJC Engineers and Project Engineer for the Expansion. Taking on this challenge however, was exactly what the team signed up for, and in turn, being a part of the effort to bring a new piece of the city’s identity to life.

“Part of it is functional. You’ve got to be able to sell this space, so you really want it set up in a way that suits all the different needs,” said Kallweit, “but there’s also a side of it that’s about creating a visual destination.” To find out how the team of engineers accomplished this, stay tuned for our next story, taking a look inside the details of the robust structural systems supporting the BMO Centre Expansion.