



# PRAIRIE ARCHITECTS INC. Enriching The Human Experience

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# 80 Atlantic Avenue

by SUSAN PEDERSON

**H**ullmark Sun Life (Atlantic) LP's new project, 80 Atlantic, is the first mass timber wood-framed commercial building to be constructed in Toronto in a century. That's quite something. The five-storey (plus one-storey mechanical penthouse) stunner, located in Liberty Village, was envisioned partially as a result of 2015 changes to the Ontario Building Code that now allows wood-framed structures taller than four storeys. Marrying wood with high-performance materials will result in this modern edifice being completed in late 2018, if all goes according to plan.

At the planning stages, however, there was just one slight problem: finding industry experts who have experience beyond the ubiquitous concrete and steel that is the soul of modern Toronto. A steep learning curve between architects, developers, and the construction industry meant digging deep into stores of creativity on all fronts.

"It is taking a lot of patience and a lot of innovation," says Aly Damji senior VP, commercial real estate with Hullmark. "In Toronto, there is this period of tremendous construction, so you are already leaning on formwork and concrete trades. Getting the tier one contractors engaged in this project given its unfamiliar construction method – at least in Ontario – as we go along in the design process has been a challenge. This challenge has been somewhat offset by the leasing market, which has shown excitement for the project and physical characteristics;

prior to the start of construction approximately 70 percent of the building was pre-leased to tenants."

Richard Witt, executive principal with Quadrangle, the architects on the project, adds, "The owner was looking for a certain quality in this community, and it's a heavily contextualized driven project, based on the qualities of the neighbourhood. We wanted to reinvent the post and beam typography."

That reinvention began by utilizing concrete for the ground floor and engineered timber frame for the top four storeys using nail-laminated timber (NLT) – two-by-eight and two-by-ten lumber on edge and nailed together into prefabricated panels supported on glulam beams and columns. The elevator and stair cores remain reinforced concrete. The original building concepts considered cross-laminated timber (CLT), but NLT was selected by the team for cost and esthetic reasons.

Andrew Bayne, principal at RJC Engineers explains, "The tight site constraints combined with below-grade parking, ramps, loading dock space, and at-grade commercial occupancies with transfer structures required a concrete solution at the lower levels to meet client vision. Although current NLT panels have a lot of engineering behind them to meet current building codes, it's a framing system representative of what was built in downtown Toronto in the early part of the century, where sawn lumber was readily available to fasten on site in a similar fashion.

"Mass timber requires unique connection solutions, so we are co-ordinating with the supplier and their staff for such expertise as they know how to design and construct them."

Ryan Desjardins, project manager of Eastern Construction Company, says, "We went through a considerable preplanning process with the consultants and project team, really figuring out where the mechanical and electrical services should go, and ensuring a structure of this type could support roof top mechanical units, for example. We also had to devise creative ways to hide the services to keep in line with the architects' design of exposed timber."

Raised access flooring provides a mechanical plenum, while wiring and conduit running the height of the building is disguised by routed chasers, and by running services within the concrete core in the centre of the building.

The result: heavy timber construction for an office setting, with a building typography that is esthetically striking and cost-effective. Unique window glazing showcases its building materials, including a solid stone, non-load-bearing wall and provides impressive views to its adjacent communal space and its sister building, 60 Atlantic (a retrofit and adaptive reuse of an older building).

"This building will marry a traditional look with an ultra modern esthetic, thanks to thinset porcelain tile on an aluminum honeycomb rainscreen backing, state-of-the-art heating and a unique window glazing

curtain," says Witt. "It is a carbon positive and sustainable structure."

Native trees were a critical component of the landscape architecture plan, in fact, and Vertechs Design Landscape Architects worked closely with The City of Toronto and urban forestry to ensure the project encompassed as many native shade trees as possible.

"There is a continuous soil trench below the sidewalk," explains Viive Kittask, principal landscape architect. "All trees must be salt resistant and able to thrive within tree grates that are flush with adjacent unit pavers."

"The design for 80 Atlantic is an extension of 60 Atlantic next door, which we designed, encompassing a shared, sunken courtyard and the same palette of materials such as weathering steel, to ensure a cohesive feel."

Site sustainability was key with the landscape design, and low-impact design features like the highly visible green roof and soil trenches to support tree growth tick the sustainability box, albeit not without adding complexity to the job.

"Proving adequate soil volume is key on both streetscapes, and the placement of trees was the biggest challenge because of the existing below grade utilities," adds Kittask.

And while the trees in 80 Atlantic's landscape are not destined for use in any construction projects anytime soon, the enthusiasm for brick and beam buildings that harkens to an early time (and require a different trade skill set) is only increasing.

"We were ecstatic to get our hands on this project," says Desjardins, a notion seconded by everyone on the design and construction team. Clearly, everything old is new (and much improved) again. ▀

**LOCATION**  
80 Atlantic Avenue, Toronto, Ontario

**OWNER/DEVELOPER**  
Hullmark Sun Life (Atlantic) LP

**ARCHITECT**  
Quadrangle Architects Limited

**CONSTRUCTION MANAGER**  
Eastern Construction Company

**STRUCTURAL CONSULTANT**  
RJC Engineers

**MECHANICAL/ELECTRICAL/COMMUNICATION CONSULTANT**  
Smith + Andersen

**ACOUSTIC CONSULTANT**  
HGC Engineering

**LANDSCAPE ARCHITECT**  
Vertechs Design Landscape Architects

**TOTAL SIZE**  
90,000 square feet (total BOMA rentable area)  
82,500 square feet (office area)  
7,500 square feet (retail area)

**TOTAL COST**  
\$59 million