



# MAPLE GROVE ELEMENTARY SCHOOL

by STACEY MCLACHLAN

When the design team of Shape Architecture and Toronto based firm Montgomery Sisam Architects sat down to envision an open-air design for the new Maple Grove Elementary School in Vancouver's Kerrisdale neighbourhood, they were not considering a pandemic or social distancing, they were however referencing a turn of the century concept of Outdoor Schools which was prevalent in Europe in the '30s and '40s.

The team saw those designs as an opportunity to create enjoyable, light-filled communal spaces that could take advantage of Vancouver's relatively temperate climate to connect students with the natural environment.

Little did they know that COVID would so thoroughly disrupt the world's education systems as construction was underway a few short years later, and that an open-air elementary school would be appreciated not just for its social benefits, but for its health implications as well.

The original Maple Grove Elementary School was built around 1920, and the century-old building was in dire need of seismic upgrades when the school board accepted the Shape and Montgomery Sisam bid for a redesign. But, after some consideration, it was clear constructing an entirely new building on the same site would be a better long-term investment. (The original building will continue to act as a swing school as other schools in the district go through their own renovations over the next few years.)

And so, the design team engaged in a number of stakeholder workshops with a range of community groups – the school board, parents, teachers, and even the students themselves – to uncover just what a new Maple Grove Elementary might look like. Children from every grade were invited to draw their ideal school; the architecture team juried the entries, pulling the top ideas from each grade. “One of the most common themes was access to natural light and the environment,” says Dwayne Smyth, a partner at Shape Architecture. “That’s what rose to the top.”

The team took advantage of the corner site location, positioning the school north-to-south to create two entrances and carving out open-air courtyards. While the building starts at a similar height on the north end as the neighbourhood's houses, it eventually rises up to fit all the classrooms moving southward. “This ensures that the building fits in with the houses in the community and is not overpowering,” notes Mat Chrystian, project manager for Chandos Construction.

The classroom blocks are positioned deeper into the site, separated from more public spaces to create two secured exterior courtyard spaces that bring in more natural light and function as secure outdoor teaching spaces. The north side of the building holds the administrative offices, kindergarten classroom, gym, and multi-purpose room. Strategic windows allow adjacent spaces to be visually connected, knitting smaller clusters of the school together.

“The planning of schools has seen a shift in the past decade in response to a pedagogical change; that is, a change from a teaching culture to a learning culture,” explains Robert Davies, a director and principal at Montgomery Sisam Architects. “Classrooms are no longer designed for teachers to stand at the front and speak to students sitting at desks; the layout today encourages enquiry based learning where teachers act as guides for students in their exploration of knowledge.” To accommodate this new way of thinking, Maple Grove's classrooms are clustered in groups of three based on age group, with shared break-out spaces between them to form an informal learning cluster.

Should future expansion be required, the building is sited for easy extension, and internal walls may be easily removed down the road. “When you look at the classroom configuration, there’s an opportunity to expand in multiple dimensions,” says Smyth.

Built to LEED Gold standards, oversized windows and strategic orientation allow for maximum daylight with minimal glare. High-use areas are clad in hardy brick, while cost-effective metal cladding dominate the remainder of the building; custom metal gates open and close to provide courtyard access, while white stucco soffits visually connect interior to exterior. A steel structure allowed for quick erection, while a durable concrete hardscaping offers durability and low maintenance for the school board.

Chandos Construction used innovative construction management

techniques to keep things running on time and on budget. Live monitoring security cameras were installed, detailed site and delivery maps were provided to every project member, and a thorough work sequence planned in advance with BIM and virtual design to mitigate issues and build a 4D schedule. “The 4D schedule ensured we virtually reviewed the schedule and construction process to ensure everything worked prior to executing on-site,” explains Chrystian. Chandos partnered with Vancouver staffing agency Embers for its crew: the socially responsible organization connects skilled labourers with barriers to employment with work opportunities.

Students stepped into their brand new, seismically safe school on November 30, 2020. **A**

**LOCATION**  
6199 Cypress Street, Vancouver, B.C.

**OWNER**  
Vancouver School Board

**ARCHITECTS**  
SHAPE Architecture Inc. /  
Montgomery Sisam Architects

**GENERAL CONTRACTOR**  
Chandos Construction

**STRUCTURAL CONSULTANT**  
RJC Engineers

**MECHANICAL CONSULTANT**  
Rocky Point Engineering Ltd.

**ELECTRICAL CONSULTANT**  
MCL Engineering

**TOTAL SIZE**  
47,130 square feet

**TOTAL COST**  
\$24.4 million