

# Bayview Elementary School

Vancouver School Board

Vancouver, British Columbia





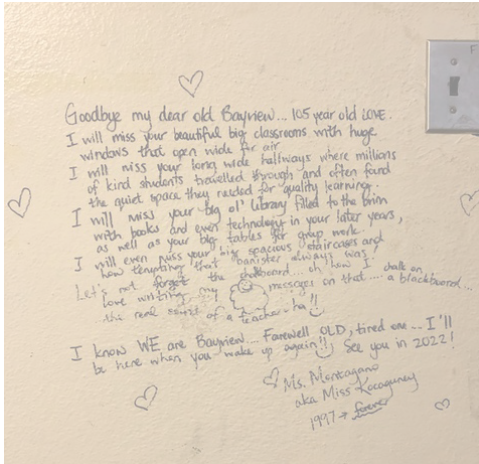
Bayview Elementary is a new school building in the Kitsilano neighbourhood of Vancouver constructed on the footprint of the beloved 1913 school. We were challenged to create a school that the community would grow to love as much as the existing building with a tight budget and perspective program.

The new school is a two-storey, mass-timber structure of approximately 3460sm with a long northsouth axis. The school capacity is 365 students (13 classrooms + 2 Kindergartens) and includes a multipurpose room for shared community use. The all-wood structure uses CLT panels and glulam beams that allowed for fast erection of the superstructure, and an efficient use of the small site. The CLT is exposed throughout the interior, enhancing the learning environment with the natural beauty of wood.

The spatial arrangement of the program is necessarily compact and resourceful with a 25% reduction in building area from the existing school and no reduction in capacity. The main features include: a large community space adjacent to the main entry and classrooms aligned to the east and west with a central gymnasium on the ground floor that connects to a large learning commons at the heart of the ground floor. This space is open to the second floor connecting to an open concept library massing with a higher volume that acts like an ocular, projecting into the existing mature tree canopy. The informal learning spaces include a variety of corridor learning commons with, smaller breakout rooms and operable walls to combine classrooms. Throughout the school there is a strong visual connection between the interior spaces and the canopy of mature trees that surround the site.







## Farewell Old Bayview...

Prior to the demolition of the building, the community hosted a farewell Bayview event in which they wrote beautiful farewell letters on the walls of the school. Approximately 300 bricks were salvaged as a fundraiser.

## New School Construction

Construction Budget: **\$20 million CAD**  
Building Area: **3,460 sm**  
Site Area: **8,850 sm**



The existing Bayview Elementary school was a beloved heritage building that was part of the community for 105 years. It was constructed in 1913 in a classical revival style.

In 1929 a major addition was built onto the south side consisting of a classroom block and gymnasium making the school into a typical barbell plan. The school building was listed as a Category 'B' on the Vancouver Heritage Registry. Unfortunately, the existing school was deemed high seismic risk and too expensive to seismically upgrade by a margin of \$12 million. In addition, the existing building had no elevator or accessible toilet stalls and was unsprinklered.

The challenge was to create a building the community would grow to love as much as the existing. The brief was to design a new 2-storey school located on the east side of the site in the same location as the existing building, with the same operating capacity as the existing school but with a 25% reduction in

area. The operating capacity of the school was 365 students (2 kindergarten and 13 classrooms). The area of the existing school was 4580sm, the provincial area standards allotted an area of 2875sm. The existing school hosted a preschool run by a parent foundation and an out-of-school care program that had a capacity of 78 children. These programs were to be maintained in the new building. An additional area of 15% was granted (431 sm) to be utilized as a Neighbourhood Learning Centre (NLC) to house the programs. The replacement school would also consider the integration of salvaged elements of historical significance in the new building.



## A Tight Site

The Bayview site exists nestled into an established community of single-family dwellings in the west side of Vancouver. The existing site area is less than half the provincial standard for school area (8,849 sqm (0.88 Ha), MoE standard for school area is 1.9 Ha).

The site has a 2% slope from the north east corner to the south west corner with a change in elevation of 2.75m. A landscaped outdoor play area was built by the community in 1970 in the south west corner of the site and consists of a berm play hill, boulders for climbing and mature coniferous trees. There were no parking spaces existing on the site. School buses serving a District Special Education Class park on 6th Avenue. For a new school of this size, the City of Vancouver required 24 onsite parking spaces and 1 loading space.

The existing main entry was located off Collingwood Street, which is narrow and has a relatively high volume of traffic. Based on geotechnical data, the better soil conditions for new construction were on the east side of the site.

## Jericho Kids' Club

An important priority was the retention of the long-standing out-of-school care program operated by Jericho Kids' Club. This program has a licensed capacity of 78 which requires approximately 375 sm of activity, kitchenette and storage space, in keeping with the childcare licensing requirements administered by the Vancouver Coastal Health Authority. The school community also valued the retention of two preschool programs operated by Bayview Community Preschool Society and Bayview Parent Participation Preschool. Each program has a licensed capacity of 19 and could likely continue to share a space of approximately 90 sm. Together the out-of-school care and preschool space requirement would be 465 sm.



## Bayview's Spectacular Trees

The school site is surrounded by a rich variety of mature trees both deciduous and coniferous including oak, plum, fir, pine, birch, chestnut, spruce, maple, cherry. A total of 42 existing trees with an average height of 20m. During early studies of the site we recognized that most views of the proposed building would be seen through these trees and that the building materiality should exist in harmony with the seasonal variation of the colours the trees.



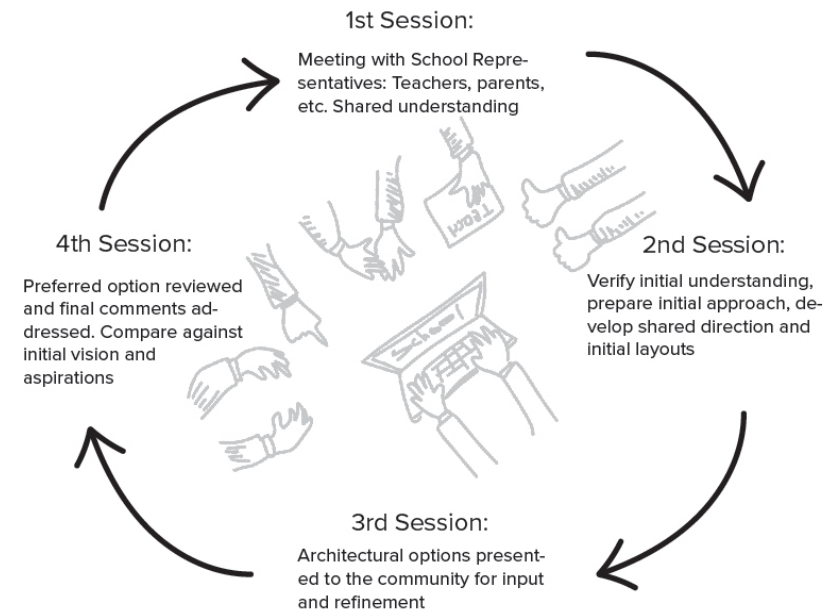
The Bayview community love their school, they are a committed, passionate and engaged group of people that supported us and contributed throughout the design process from the first envisioning sessions, well into construction documents where we were reviewing millwork and finishes - crowding open houses and writing in-depth, multi-page summaries of project goals.

At the outset, we worked with a group of dedicated stakeholders that included representatives from the Vancouver School Board, the principal, librarian, teachers and parent representatives and representatives from the child care operators. We are especially grateful to all of these individuals for the invaluable input.

Our first envisioning session with the stakeholder group was focused on facilitated listening. We began building our relationship with the stakeholders by hearing their needs and desires and ensuring all voices were heard and all possibilities considered with open minds. Together, we looked critically at the existing site and the existing building. We gathered information about what was working well and what wasn't. At the end of the session, we developed a shared understanding of the desired quality of spaces and the high-level site strategies. We also introduced a series of engagement activities for the staff and students.

During our second session, we verified our understanding of what we heard in the first session, presenting our detailed site analysis, our observations of the way the school community utilized the existing building and reporting back on the results of the engagement activities - for which we received an overwhelmingly high response rate. We developed a shared direction towards preliminary options in terms of site layout and program relationships.

During the third session we presented our options for continued refinement with the group's input. During the fourth session we reviewed the preferred option and final comments. We also looked back to the vision and aspirations set at the beginning of the project and validated this against where we had come.



## Stakeholder Working Group

Vancouver School Board (VSB) District Principal Kathy O'Sullivan

Vancouver Project Office (VPO) Project Manager Kent Grier

VPO Director: Ernest Fanthorpe

VSB Planner: Maureen Cowin

VSB Facilities: Gilbert Francisco

Bayview Principal: Brigitte Biorn

Librarian: Brett Whitelaw

Teachers: Ebru Montagano, May Dalgleish, Susan Jung, Sam Asmoucha

Parent Advisory Council: Knut Boeck, Tanya Kyi

Jericho Kids Club Rep: Tyler Summers

Bayview Community Preschool: Karalyn Archibald





New School Library

clean air \* Colour  
 Playing!  
 (Talking circle) page 1 small / large / pair groupings  
 work collaboratively  
 gathering place  
 story telling flexible space  
 covered area technology  
 imaginative play beautiful  
 Natural lighting

## Engagement Activities

One of our engagement activities for the greater school community was a Teacher survey in which we asked the staff to think about what was most important to the learning environment, how it shapes/enhances their own process and how it can enhance the children's experience within as well as outside the building.

In another activity, we asked students to draw their favourite indoor and outdoor spaces in their existing school and to create an idea collage to help the design team develop a vision for the new school.

## What we learned:

- Large, flexible classrooms
- An abundance of natural light/ventilation
- Visual / auditory attenuation
- Storage, storage, storage
- Library should be flexible for group, individual & quiet experiences
- Library should be a hub/centre of school
- Kindergarten should include common area
- Kindergarten located at end of hall because of noise
- Breakout spaces are important throughout school
- Outdoor play areas separated into primary and intermediate divisions
- Outdoor learning areas are important
- Brick facade of original building preferred
- Grass field and mud hill play areas well used by kids & community
- Out-of-school care & preschool important for school
- Out-of-school care should be connected to play field with clear site lines to play area and a direct link to the gymnasium, main entry and servery
- Community spaces should be located near the main entry for ease of access
- The main entry for the replacement school should be located on w6th or w7th avenue to make use of the greater street width as well as existing and preferred patterns of pick-up and drop-off traffic.
- Not supportive of a large onsite parking lot taking away outdoor play area; work with the city authorities to minimize onsite parking due to relatively small school site area.



“can we have a glass floor?”

“The “mudhill” is the best”

“We love our library & the Tree”

“A few more basketball courts please”

“Big Windows”

“Outdoor covered play area”

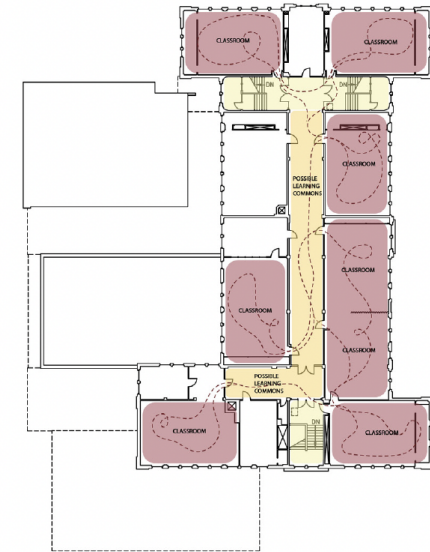
“A really big swing”

“We love our front entry doors”





Study of the Existing Building



Existing School Corridor

## Educational Vision for the New Bayview: Learning from the Existing Building

In addition to the engagement workshops, we made careful observations of how the school community occupied the existing building and grounds. What impressed us most was they ways the school community was utilizing the wide corridors for informal learning outside the classrooms. We observed that the corridors were populated with furniture. There were also a number of existing operable walls that were being utilized for team teaching.

We were challenged to provide this informal student-led learning space with the reduced area. Our aim for the learning environments of the new building was to develop a compact floor plan and develop the concept of an activated corridor that the community was already familiar with by nesting the corridor with many varied opportunities for different scales of learning with a variety of spaces and flexible furniture.



Activated Corridor

Our approach to designing spaces that allow for informal, student-led learning involved providing a diversity of connected spaces with a variety of spatial conditions. For the new Bayview, we provided different opportunities on the lower floor and the upper floor. On both levels, we designed the corridor with as much attention to detail as if it was a classroom space. On the Upper Floor classrooms push in and out to allow for a dynamic central corridor that includes a series of open and enclosed learning commons and breakout rooms. This corridor is thought of as a light-filled, active space with many spaces and places to gather in varying group sizes.



New Activated Corridor

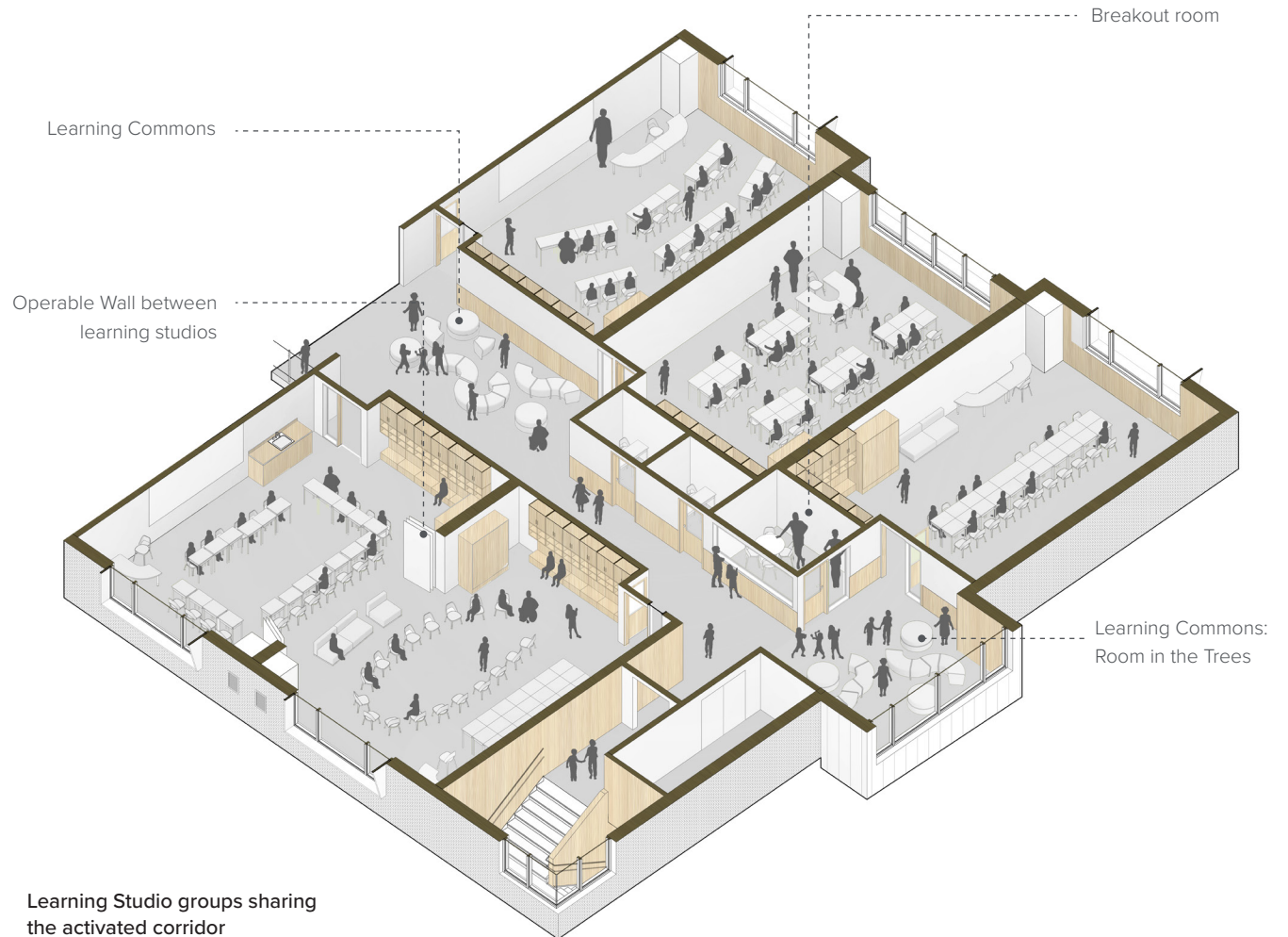




## Classrooms

The Upper floor classrooms are grouped in five classrooms that share learning commons and breakout rooms. The classrooms on the west side have operable walls to create larger classrooms for team-teaching. All classroom spaces have generous windows for daylighting and views with exposed CLT walls and ceilings.

The two kindergarten classrooms are grouped at the north side of the main floor with smaller classrooms connecting to a shared commons space that has direct access to an outdoor play area that is designed for the younger children.









## Rooms in the Trees

At the either ends of the upper floor corridor, learning commons form their own room that allow for collaboration between the north and south classroom groups. These spaces offer an opportunity for students to learn in spaces with a view to the beautiful canopy of existing trees.

## Open Library – Heart of the School

The library is located at the middle of the upper floor, adjacent to the floor opening that connects the library to the ground floor. The library is thought of an open and inviting space with a simple and adaptable shape that allows for the creation of multiple learning spaces: from large and small group study, to quiet areas for individual study. The library opens up to the corridor to encourage activity to flow out into learning commons and increase the area of the library. By not have a strong boundary wall, the library becomes a welcoming space that encourages students to use it as a resource in informal and formal learning.









## Gym Learning Commons

The Ground Floor has spaces dedicated to supporting community and gathering including the gymnasium and the multipurpose room.

The corridor is centred around the Gym Commons which includes a platform and teaching wall outside the gymnasium that is connected to the second level by a large opening in the upper floor. This space has a strong visual connection to gymnasium as well as a direct siteline to the south main entrance and the north entrance with a view to the heritage doors. It was thought of as an inward-looking space where the school community could come together in a large group for presentations, eating lunches, a foyer for gathering during performances and sporting events in the gymnasium and even be utilized as an open classroom for multiple classes.

## Biophilia

Mass timber is the primary structural element throughout the school, and exposed throughout the gymnasium, library, stairwells and circulation spine. Exposing these elements provides a warmth to the interior spaces as well as saving costs related to additional finishes typically employed. The soffit of roof overhangs at the main entry canopy and the entry canopy for the multipurpose room are exposed wood to tie together the indoor and outdoor experience. The wood brings warmth and biophilic feeling. The use of natural materials improves the learning environment.



## Adaptability is Key

With limited building area, it was important to ensure that all spaces in the school were adaptable to multiple uses.

The multipurpose room on the ground floor includes the school server, a preschool program and a before and after-school care program. It is adjacent to the main entry with generous glazing and multiple doors to the exterior to accommodate community access to the variety of program spaces. There is a large roof overhang to the south to provide shading for the southern exposure.

This space was designed to be highly adaptable to accommodate a multitude of community and school uses including the licensing requirements for the out-of-school care program. In order to ensure this important program had enough area to support the enrollment demand, we carefully considered all storage requirements for both the school and the out-of-care program. This involved a detailed inventory of all storage items including all program supplies and furniture and school lunch tables.

At the north end of the multipurpose room we included a large operable wall opening into the gymnasium that can be used to connect the spaces for performances. The gymnasium floor level is 600mm lower than the multipurpose room to further enhance the stage experience. In addition the space is wired for stage lighting.

The east end of the multipurpose room connects to a large server which serves both the school and out-of-school care program. This space has a pass through window that connects to the gym learning commons.

The space for the pre-school program is located adjacent to the multipurpose room. Since the program runs during the school day, this space can be utilized by the out-of-school care program after hours which increases their licensed area. In addition, the preschool program space is designed like a classroom for future flexibility.





## Resource Rooms & Sensory Room

Resource teachers provide an ever-growing need for specialist teachers to support a diversity of learners. These teachers have very different needs relative to the classroom teachers - they move everywhere in the school and even between different schools. Our approach was to centralize a special shared office on the ground floor adjacent to the administrative area that was connected to a breakout room. We gave this space a unique identity by incorporating an arched heritage window reclaimed from the existing school. Our goal was to make this a special space that was held in high esteem by the school community. We also included a sensory room located on the ground floor that was adaptable to future needs. The school is designed to be accessible including a central elevator. Universal design principles can improve the sense of self-efficacy in school buildings by creating inclusive and accessible learning environments that support the diverse needs of all students.

## The Learning Circle

A main landscape feature is the learning circle adjacent to the main entry. The school community expressed the importance of a circular gathering space and how it instills a sense of belonging and inclusion and can be an important place for problem-solving and decision-making.

We designed a circle out of repurposed glulam beams, cut as benches and stacked with overlapping ends on top of each other to form a circular seating area. This circle also forms a series of wood steps for children to walk up and down.







The spatial arrangement of the program is compact and resourceful with a large community space adjacent to the main entry and classrooms aligned to the east and west. The ground floor includes a main entry off of 7th avenue at the south end with a centralized administration area; adjacent to the entry is large, adaptable community multipurpose space at the southwest corner with a generous servery. The gymnasium, adjacent to the multipurpose room is lowered by 600mm; an operable wall between the spaces allows the multipurpose room to transform into a stage.

The gymnasium connects to a large learning commons at the heart of the ground floor. The gym exits to a commons space with raked seating and the corridor is deepened into a commons for informal

learning and social gathering. This space is open to the second floor, connecting to the library. The ground floor also includes the kindergarten classrooms, a large resource room and a sensory room.

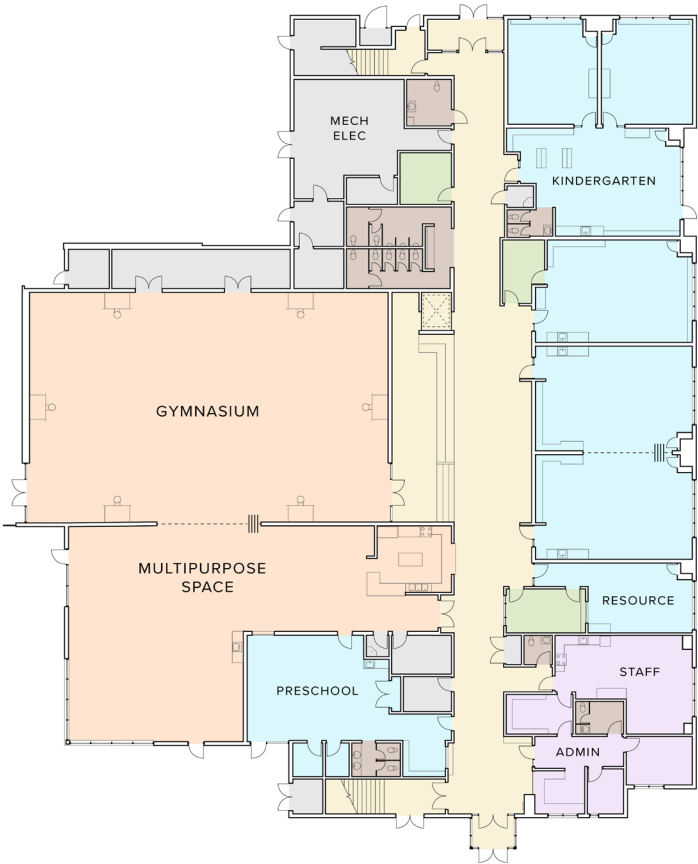
The upper floor includes ten classrooms that flank either side of a central open library. The corridor is animated with open learning commons supported by smaller breakout rooms grouped around five classrooms. Operable walls between some classrooms allows for classrooms to be connected for collaborative teaching. The corridor and the open library massing have a higher volume.

Throughout the school there is a strong visual connection between the interior spaces and the canopy of mature trees that surround the site.

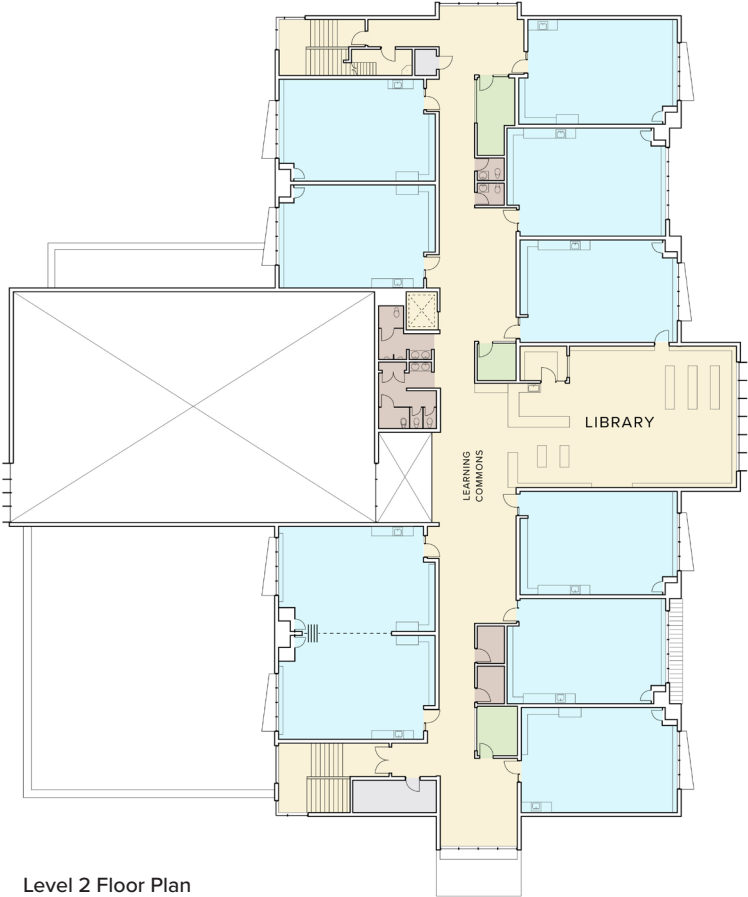
The floor levels are connected by wide staircases at the north and south end. These stairwells are thought of as bright, active spaces with glazing to the interior and exterior and doors on hold-open devices to increase their connectivity to the corridor. There is also an elevator provided for accessibility.

The interior finish materials include sheet linoleum flooring throughout, carpet tiles in the administration area and library, hardwood gymnasium flooring, painted gypsum walls with plywood paneling to the lower 900mm of corridor walls and exposed CLT panels for selected walls and ceilings.





Level 1 Floor Plan



Level 2 Floor Plan

- |                                |                      |                       |
|--------------------------------|----------------------|-----------------------|
| Classrooms                     | Restrooms            | Large Gathering Space |
| Learning Commons / Circulation | Storage and Services |                       |
| Breakout Rooms                 | Offices              |                       |

## Siting: Maximizing Space for Outdoor Play

The new building has a footprint of about 2100 sm, which rests almost directly over the footprint left from the demolished building. We shifted the building to the east as much as possible to maximize the size of the playfield. We were able to negotiate a relaxation from the municipal authorities to the required onsite parking spaces. We provided 2 accessible parking spaces and a loading space rather than the 24 spaces required by the City. this significantly increased the area dedicated to outdoor playfields and playgrounds.

## Supporting Active Transportation

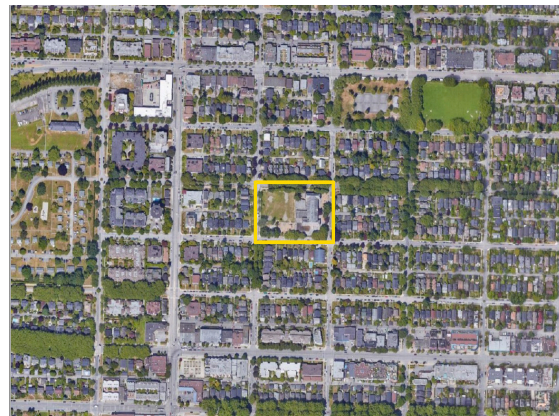
Bicycle parking in multiple locations including secured bike Storage, lockers and showers for staff to encourage active transportation.

## Landscaping & Pedestrian Flow

New landscaping, including an asphalt surface surrounding the new building as well as new play areas on the east and south was provided with existing climbing and play apparatus reused and relocated from the existing site. There is an existing raised sloped play area in the southwest corner of the site that has historical significance to the school. We upgraded this area with small interventions like stepping logs, ground slide and a raised wood deck for outdoor learning. We replaced the existing grass field on the west side of the site, which was poorly draining and muddy. The new field includes irrigation and a new drainage system below.



Site Plan



Context Plan



## Carving and Extruding Brick Planes

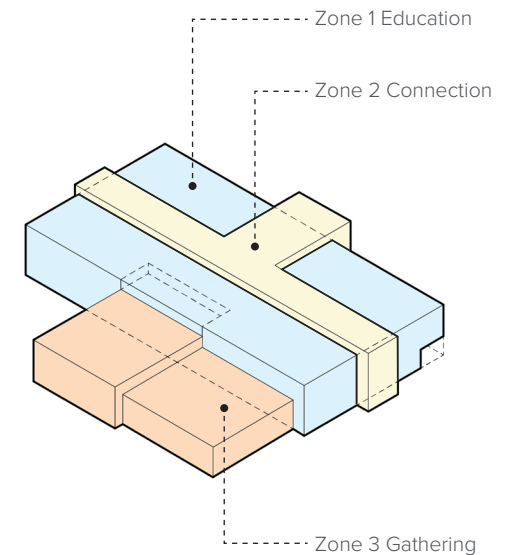
The massing of the singular plane of brick along the east elevation is carved away to introduce a variety of niches along this facade. This movement is reflecting internally through the varying width of the upper floor corridor. The height of the building is modest to respect the surrounding residential neighbourhood scale.

## Covered Outdoor Play Space

The provincial school guidelines do not provide funding for covered outdoor play area. In the rainy lower mainland climate, outdoor covered areas are important part of year-round outdoor play. The design embeds multiple, smaller outdoor covered areas by maximizing the cantilevering of floor and roof CLT panels to their limit. This provide cover under the library extrusion, at the main building entry and at the multipurpose room.

## Massing Zones & Materiality

The massing of the building is compact and efficient, clad in brick - a robust material that is reminiscent of the existing school building – but light in colour, introducing a contemporary and fresh aesthetic. The brick is used to clad spaces of education. In contrast to the white brick, a dark metal cladding is proposed for spaces of gathering such as the multipurpose room and gymnasium as well as the circulation spine thru the centre of the building. A central extrusion of the library massing has a higher volume and acts like an ocular projecting into the mature tree canopy along Collingwood Street. This material has a lightness of character but with a darker colour that draws the eye.



Massing Zones Diagram

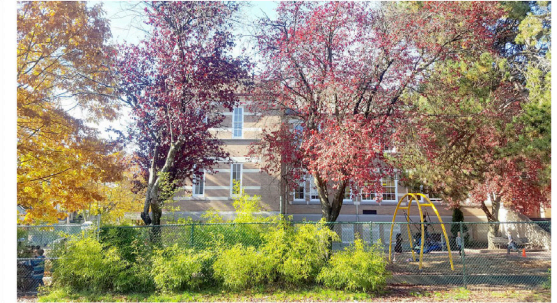
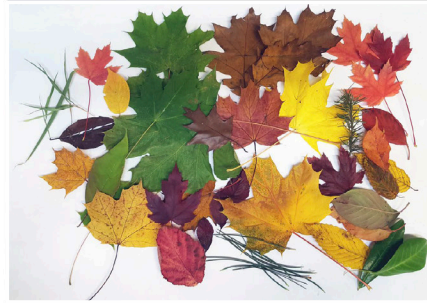


## Colour Inspiration

Bayview elementary school is surrounded by a rich variety of mature trees. During early studies of the site we recognized that most views of the proposed building would be seen through these trees and that the building materiality should exist in harmony with the seasonal variation of the colours the trees.

A colour study of the trees over the seasons provided inspiration for the proposed colour scheme.

Shades of green accent the white brick and contrasting dark grey metal cladding materials. A deep red and an orange colour are randomly introduced to provide a playful element reflection the nature of our young use group.



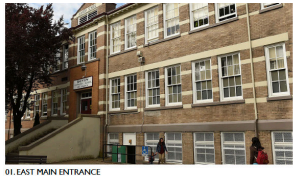


## Heritage Elements

The original building was fully documented through photographs and archived by a heritage consultant prior to the building of the new replacement school. Two character defining classical architectural elements were restored and installed in the main floor interior corridor of the new school serving as a visual reminder and tactile representation of the historic building's character and craftsmanship. The existing architectural detail drawings that illustrate the two elements will be reproduced and displayed

beside each architectural element noting the original architect's signature. These include an arched window that was incorporated into an interior wall at a resource room and an original doorway that was incorporated into the ground floor corridor at the north entry. In addition, during demolition, a cast concrete sign in the pediment with the school name was salvaged for future use in the landscape. The arched window which was on the upper floor of the north elevation represents the classical architectural character of the 1913 building. The window includes multi-paned fixed windows and an operable central

folding casement window with the original hardware. The existing interior vestibule doors, transom and sidelites on the east entrance of the 1929 building have the original wood framed stained glass lead windows, original doors and hardware. Two church pews that have been a part of the Bayview school experience for generations of students were refurbished and are in the gym commons of the new school to continue being used as a place to sit and socialize.



01. EAST MAIN ENTRANCE



02. SOUTH EAST CORNER SHOWING SOUTH ENTRANCE



03. WEST ELEVATION & GRASS PLAY FIELD

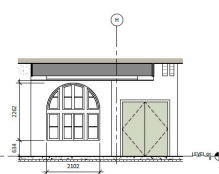


04a. NORTH ELEVATION SHOWING HERITAGE WINDOW TO BE SALVAGED AND INCORPORATED INTO NEW SCHOOL

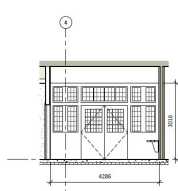


04b. ORIGINAL 1913 WINDOW TO BE USED IN THE INTERIOR OF THE NEW SCHOOL

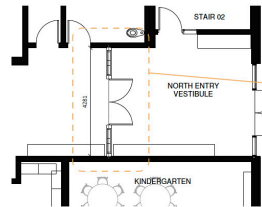
HERITAGE WINDOW LOCATED IN A BREAKOUT ROOM OFF OF THE MAIN CORRIDOR ON LEVEL 01. THIS BREAKOUT ROOM IS THE LARGEST OF THE 5 ROOMS PROVIDED. IT HAS A PROMINENT LOCATION AND WILL BE USED AS A COLLABORATIVE LEARNING SPACE FOR ALL STUDENTS OF THE SCHOOL.



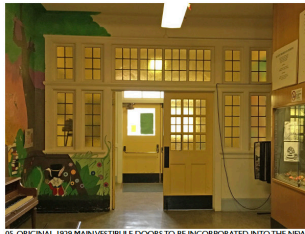
04c. PLAN & ELEVATION SHOWING HERITAGE WINDOW SCALE 1:50



05a. PLAN & ELEVATION SHOWING HERITAGE DOOR SCALE 1:50



HERITAGE DOOR AT NORTH ENTRY OFF OF THE MAIN CORRIDOR ON LEVEL 01. THE DOOR WILL BE VISIBLE FROM THE MAIN ENTRY TO THE SOUTH.



05. ORIGINAL 1929 MAIN VESTIBULE DOORS TO BE INCORPORATED INTO THE NEW SCHOOL WITHIN THE MAIN FLOOR CORRIDOR



06. HERITAGE PEWS TO BE REFURBISHED AND USED IN NEW SCHOOL





## CLT Structure

Mass timber was utilized as the primary structural element throughout the school with a combination of CLT walls, floors, roof and glulam beams. We wanted to leave as much wood as possible exposed, while managing systems integration. To this end, we made strategic choices throughout the school. The gymnasium and multipurpose room have fully exposed CLT on the wall and roof surfaces, as do the stairwells. The outside walls and ceilings of classrooms and the library also feature exposed CLT. Exposing these elements provides a warmth to the interior spaces as well as saving costs related to additional finishes typically employed.

## CLT Benefits to Students

The school environment is a pivotal place where ideas, beliefs and values are formed in developing minds. Research shows that biophilic spaces benefit student health, reduce stress, increase creativity and productivity and improved cognitive abilities. Bayview provides learning environments for children that reflects the natural world everywhere and gives them the opportunity to touch and feel the natural beauty and warmth of wood. A building that models environmental sustainability and connection with nature will naturally help our next generation to both seek out and preserve our natural world.

## CLT Benefits to School Districts

Utilizing mass timber for Bayview offered numerous advantages over traditional concrete and steel structures. One notable benefit was a quieter construction site. By utilizing factory prefabrication and the quick erection of prefabricated panels, construction noise was significantly reduced. This resulted in a more peaceful environment for the neighbouring residential community.

As well, mass timber construction enables accelerated schedules due to the efficiency of factory prefabrication and the quick assembly of the building enclosure.

Maximizing the use of CLT also maximized the efficiency of the overall structural system. The inherent thermal properties of CLT resulted in relatively thinner assemblies overall which also reduced costs. The relatively light weight of wood compared to concrete and steel reduced the size of the building foundations.

For schools, mass timber lends itself to the creation of flexible spaces, using a combination of load-bearing posts and panels with long spans made possible using composite glulam and CLT elements.



Our approach to sustainable building design began with a building massing that is compact with a good form factor, considered solar orientation and glazing design. Daylighting studies of key spaces were utilized to design external shading devices and control glare. The south elevation includes deep overhangs at the multipurpose room and horizontal shading at the upper floor learning commons. The west-facing gymnasium glazing has vertical fins to control low-angle sun.

We designed a high-performance envelope with exterior insulation and considered thermal bridging in the design of the building details.

We selected natural and healthy interior finish materials such as linoelium sheet flooring, cork pinup boards, felt and wood fibre acoustic materials.

## CLT & Sustainability

Utilizing mass timber instead of steel and concrete substantially reduces the total carbon output and reduces the existing carbon in the atmosphere through biogenic carbon storage. The CLT utilized in Bayview was locally-sourced naturally renewable timber that further reduced the embodied carbon of the building. Overall delivering a net CO2 benefit of 1,137 metric tonnes. The Global Warming Potential identified from life cycle analysis results is typically found to be 40%-60% lower for the CLT building system compared to concrete/steel building;

The CLT exterior walls and roof had the added benefit of having a higher R-value than expected due to the inherent thermal resistance of CLT. This allowed us to reduce the insulation thickness and reduce cost of cladding support system.

## Acoustics

We worked with an acoustic consultant to optimize the acoustics between classrooms, between floor and in corridor commons, the gymnasium and the multipurpose room. We utilized a variety of acoustic solutions to address the reverberation associated with the exposed wood surfaces including ceiling-hung baffles and wood fibre panels affixed to walls. In the corridors we used vertical wood battens with acoustic backing. Between classrooms we used gypsum wall board with acoustic insulation furring.

## Building Systems

The school system design is future-proofed for resiliency and net-zero energy ready. The design includes an air-source heat pump and decentralized HVAC (unit ventilators) in rooms. This allows for night flushing and cooling of individual spaces. Additionally, the building is pre-wired for future installation of photovoltaic panels on the rooftop.

At the outset, the design of the building was targeting LEED Gold certification. We continued on this path until design-development. A preliminary review by the team determined that the project could achieve a LEED V3 Silver standard (57 credit points) without a cost premium.

