

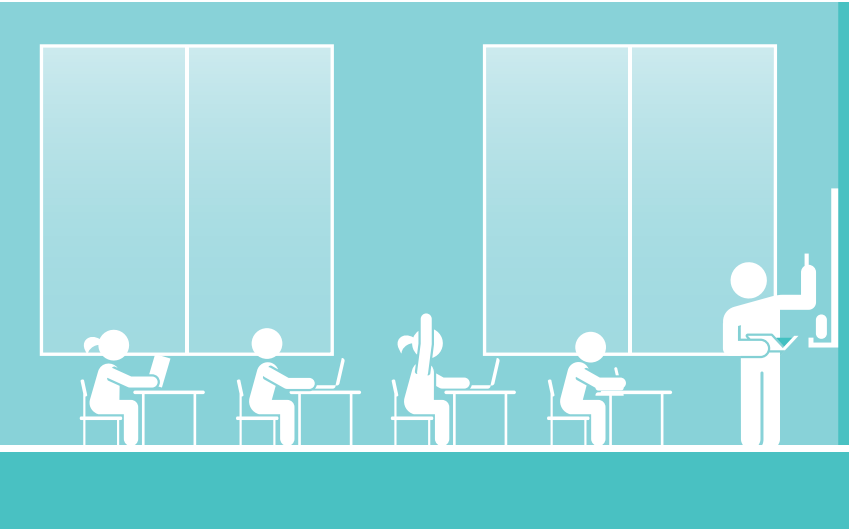


Coal Harbour PHASE 2

Combined Development Permit & Rezoning Text Amendment

January 2021

Executive Summary



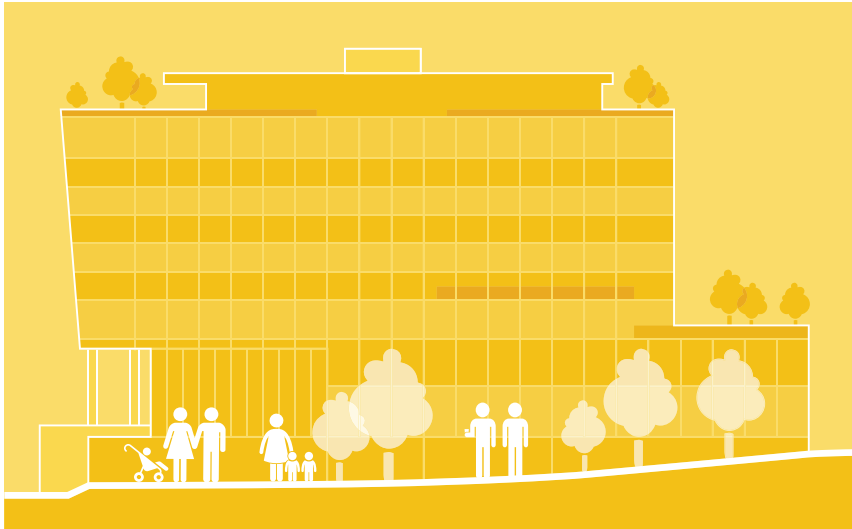
School

A new 340-student elementary school will provide an important learning infrastructure to support those living in Downtown Vancouver.



Child Care

The new childcare centre is designed to care for 65 children ages 0–5 with the program organized into 2 Infant-Toddler Groups and 2 Preschooler Groups.



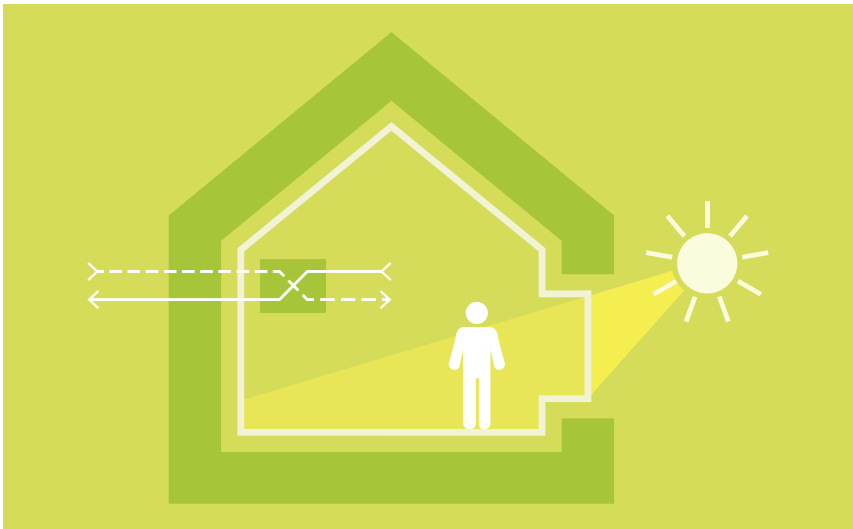
Social Housing

The residential component of the project will provide 60 units of much needed social housing with a focus on larger family type units.



Expanded Community Use

The completion of the new building will provide additional community resources and services.



Sustainable Design

The project will be built to Passive House standards to align with Vancouver’s Climate Emergency Response and Zero Emission Building Plan. The project will not use fossil fuels, it will reduce energy consumption and embodied carbon in its materials; additionally it is targeting LEED Gold.



Public Realm

The proposed development responds to the unique site location facing the seawall and directly adjacent to Coal Harbour Park, while ensuring a distinct sense of place.

Project Team



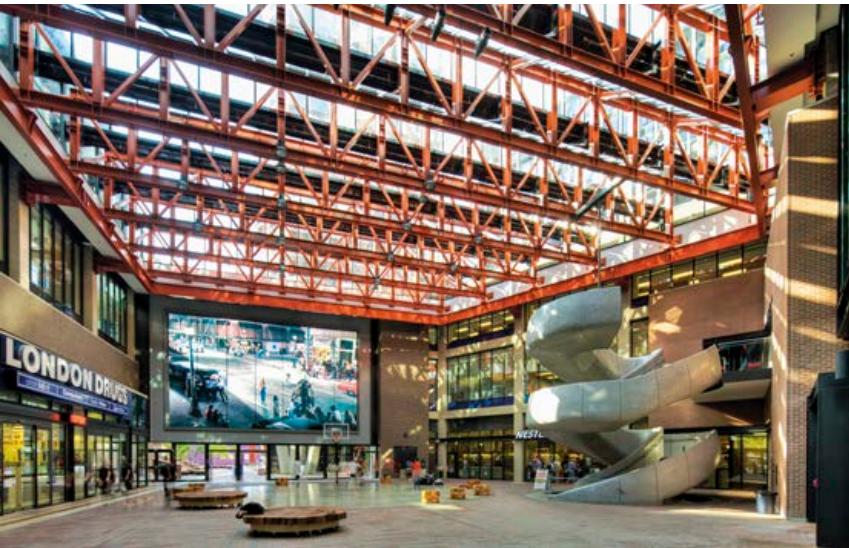
City of Vancouver – Client

The City of Vancouver is the Project Manager and sponsor of the Childcare and Social Housing. This project will complete a vision that started over twenty years ago and began with the construction of the adjacent Coal Harbour Community Centre and Coal Harbour Park



Vancouver School Board

Vancouver School Board is the sponsor of the School. VSB is a large urban and multicultural school board, committed to providing the highest quality learning experience to all students, helping them reach their intellectual, social and physical potential in a safe and inclusive learning environment.



Henriquez Partners Architects

Henriquez Partners believe that socially responsible community development and environmental stewardship are the foundation of good design.



A2M

A2M is an international leader in promoting Passive House strategies with such approaches as PHPP modeling, dynamic simulation, and building envelope thermal bridging.



PFS Studio

PFS Studio is a leading Canadian planning, urban design and landscape architecture firm offering consulting services nationally and internationally.

Site Context

The Coal Harbour development at 480 Broughton Street is a valued community amenity within the Marina Neighbourhood of Downtown Vancouver.

Located directly along the waterfront and overlooking Coal Harbour, the site is surrounded by local amenities and parks. The seawall connects the project to Harbour Green Park to the east and Stanley Park to the west. The proposed new mixed-use building will complete Phase 2 of the originally envisioned Master Plan and the Coal Harbour Community Centre and Park (Phase 1), providing key community amenities to the Coal Harbour area. The Phase 2 development has been designed to generally conform to the Preliminary Development Permit obtained in 1998.

1

Coal Harbour Marina

2

Vancouver Convention Centre

3

Vancouver International Water Airport

4

Burrard Transit Station

5

Cardero Park

6

Harbour Green Park

7

Marina Square

Property Lines

Community Centre Access



Site History

The project site is located north of the existing shoreline on land reclaimed from the harbour as part of the site's maritime and industrial history.

Prior to the arrival of Europeans at the Straight of Georgia in the 1700s, the shoreline south of what is now Coal Harbour Marina was a densely forested bluff terminating at the waters edge. The waters in this area were part of the traditional fishing grounds of the *xʷməθkʷəy̓əm* (Musqueam), *Skwxwú7mesh* (Squamish) and *səlilwətaʔ* (Tsleil-Waututh) peoples. A prominent and shared settlement, *Xwáy̓xway* / *ᖃʷáʔxʷəy̓* (Whoi Whoi), existed nearby at what is today known as Lumberman's Arch.

The settlement of non-indigenous people in the vicinity of Coal Harbour began in the 1860s. In 1862 William Hailstone, Sam Brighthouse and John Morton laid claim to "Lot 185", stretching from Burrard Street to Denman and from English Bay to Coal Harbour. The 550 acres was granted to the three men for the sum of 114 pounds sterling.

In 1887, The Canadian Pacific Railway line was extended from Port Moody to Coal Harbour. The project site was the western termination point of that line. The rail lines allowed the area to flourish into a mixed industrial site serving mainly the marine sector, including Boat builders, marine electrical and repair shops.

With the withdrawal of the Canadian Pacific Rail from the area in the 1980s, the land under the control of Marathon Realty was redeveloped as part of the Marathon Lands Project.



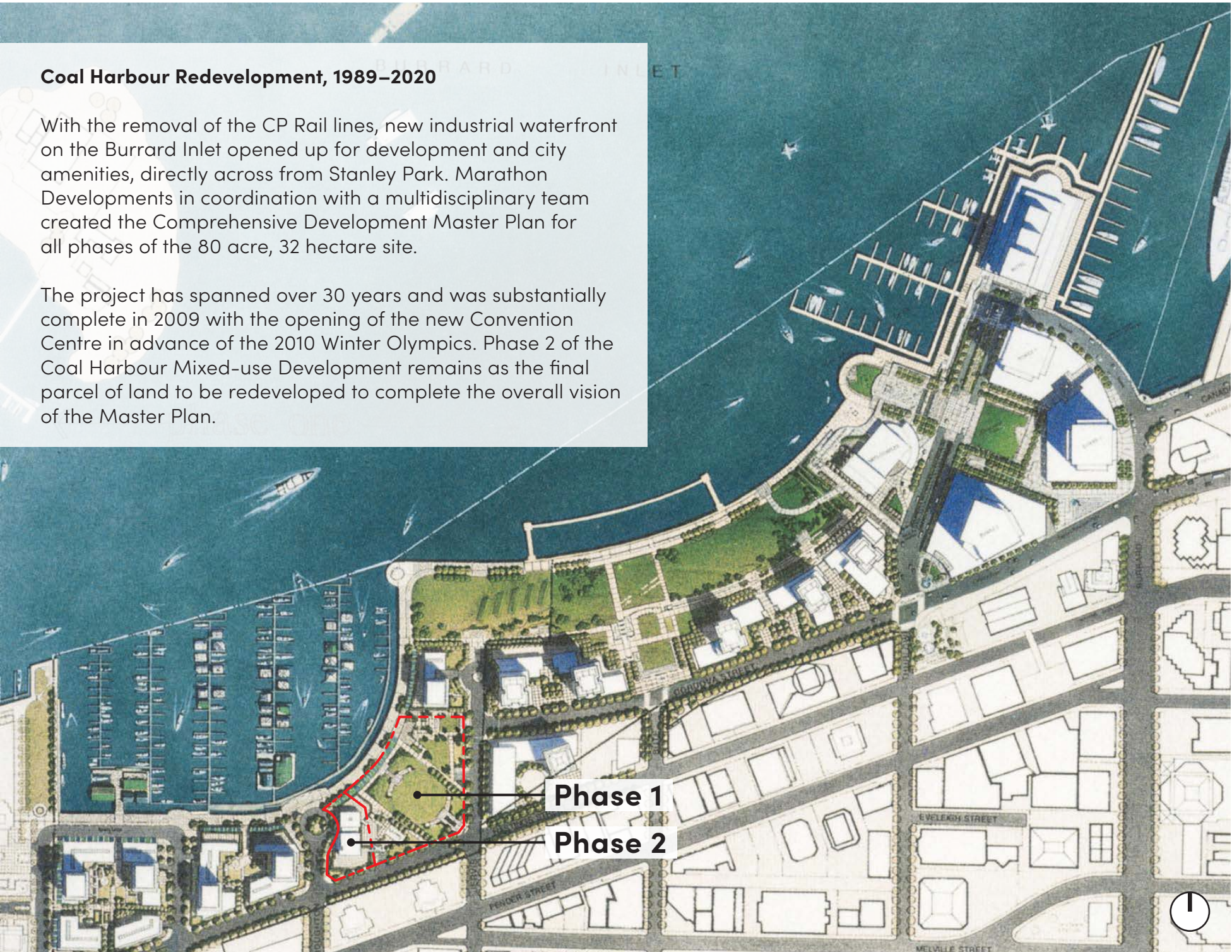
Coal Harbour – 1955

Site History

Coal Harbour Redevelopment, 1989–2020

With the removal of the CP Rail lines, new industrial waterfront on the Burrard Inlet opened up for development and city amenities, directly across from Stanley Park. Marathon Developments in coordination with a multidisciplinary team created the Comprehensive Development Master Plan for all phases of the 80 acre, 32 hectare site.

The project has spanned over 30 years and was substantially complete in 2009 with the opening of the new Convention Centre in advance of the 2010 Winter Olympics. Phase 2 of the Coal Harbour Mixed-use Development remains as the final parcel of land to be redeveloped to complete the overall vision of the Master Plan.



Coal Harbour Master Plan – PWL Partnership



A Capsule History of the Marina Neighbourhood Site

The southerly boundary of the site follows a low relief escarpment which demarcates the original high water level. The site has been largely created by filling operations at various times. By 1910 the present area of tracks was largely in place. The rail lines were surrounded by lumber storage areas, both on raised wooden platforms and on fill. During the period 1930 to 1940, the former lumber storage area was extended seaward by filling and developed for a marina and ship building and repair yard. By approximately 1960 these yards were substantially closed, with the old buildings remaining and subsequently adapted for uses such as the Keg Boathouse Restaurant. A portion of the site just north of the railyard was used as a tank farm for fuel oil storage from approximately 1910 to 1975. A shipping wharf and C.P.R. transfer slip was developed adjacent the farm; the wharf was demolished in 1977 while the C.P.R. wharf and ferry terminal continue to operate.

– City of Vancouver Planning Department, Marina CD-1 Guidelines, June 1995

Coal Harbour Master Plan

Phase 2 of the Coal Harbour Development will complete the vision of the Coal Harbour Master Plan.

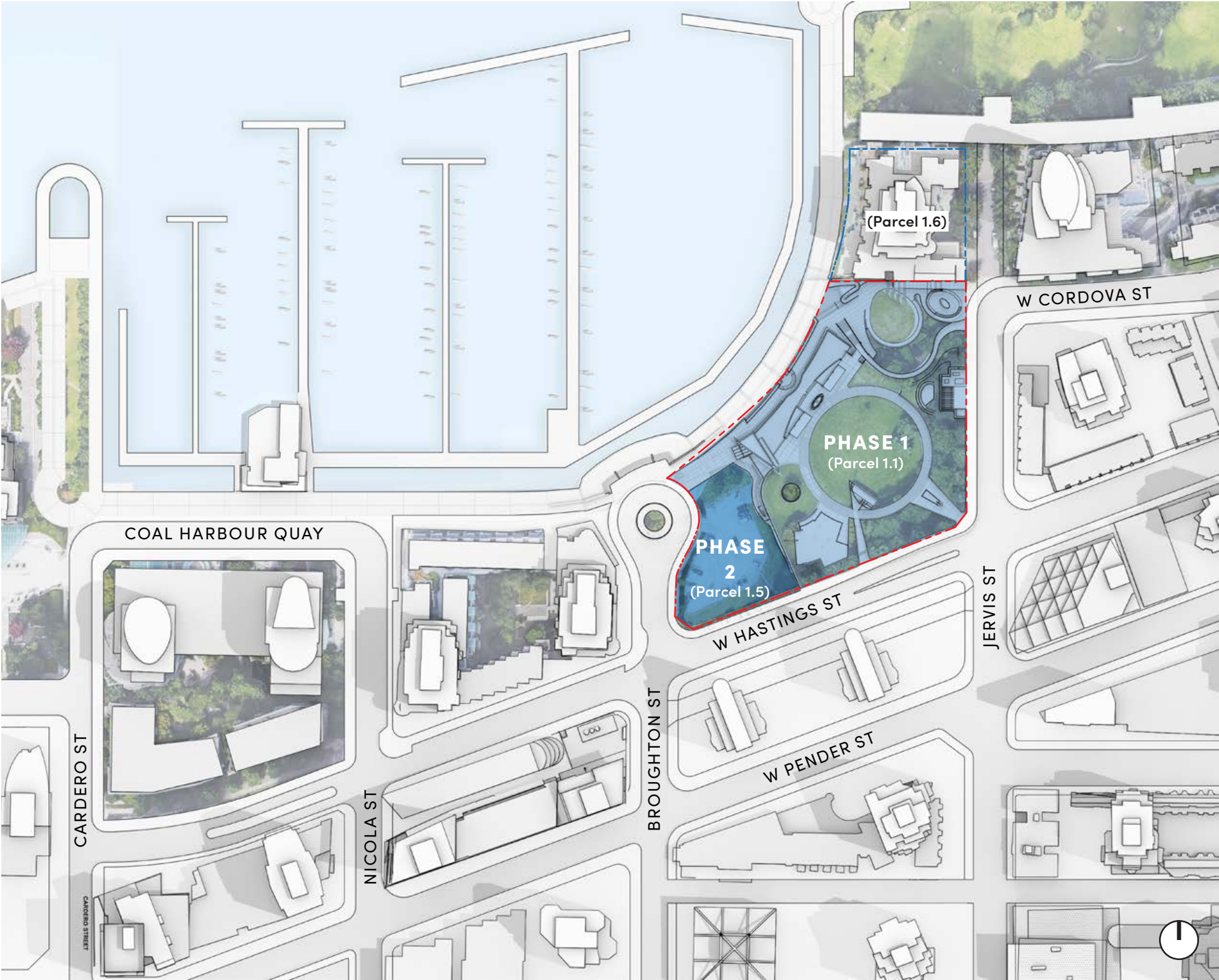
The Coal Harbour Official Development Plan, **Phase 1**, provides a framework for the creation of a mixed-use neighbourhood that focuses on residential and public waterfront access, creating inviting and diverse neighbourhoods, and encouraging design that responds to the unique setting.

The subject of this application, **Phase 2**, will provide the new Elementary School, Childcare and Social Housing components as originally envisaged. The new building shares the masterplan objectives and has been designed as an independent structure that interconnects with the existing Community Centre and Park to provide a 'unified whole'. No extensive re-design of Coal Harbour Park is planned through this process; changes are limited to those needed to integrate with Phase 2 successfully. Parking for Phase 2 was provided as part of Phase 1 and no new parking is proposed.



Existing Coal Harbour Community Centre
(Phase 1, Parcel 1.1)

Photograph:
Derek Lepper, 2001



Building Program & Statistics

Project Data

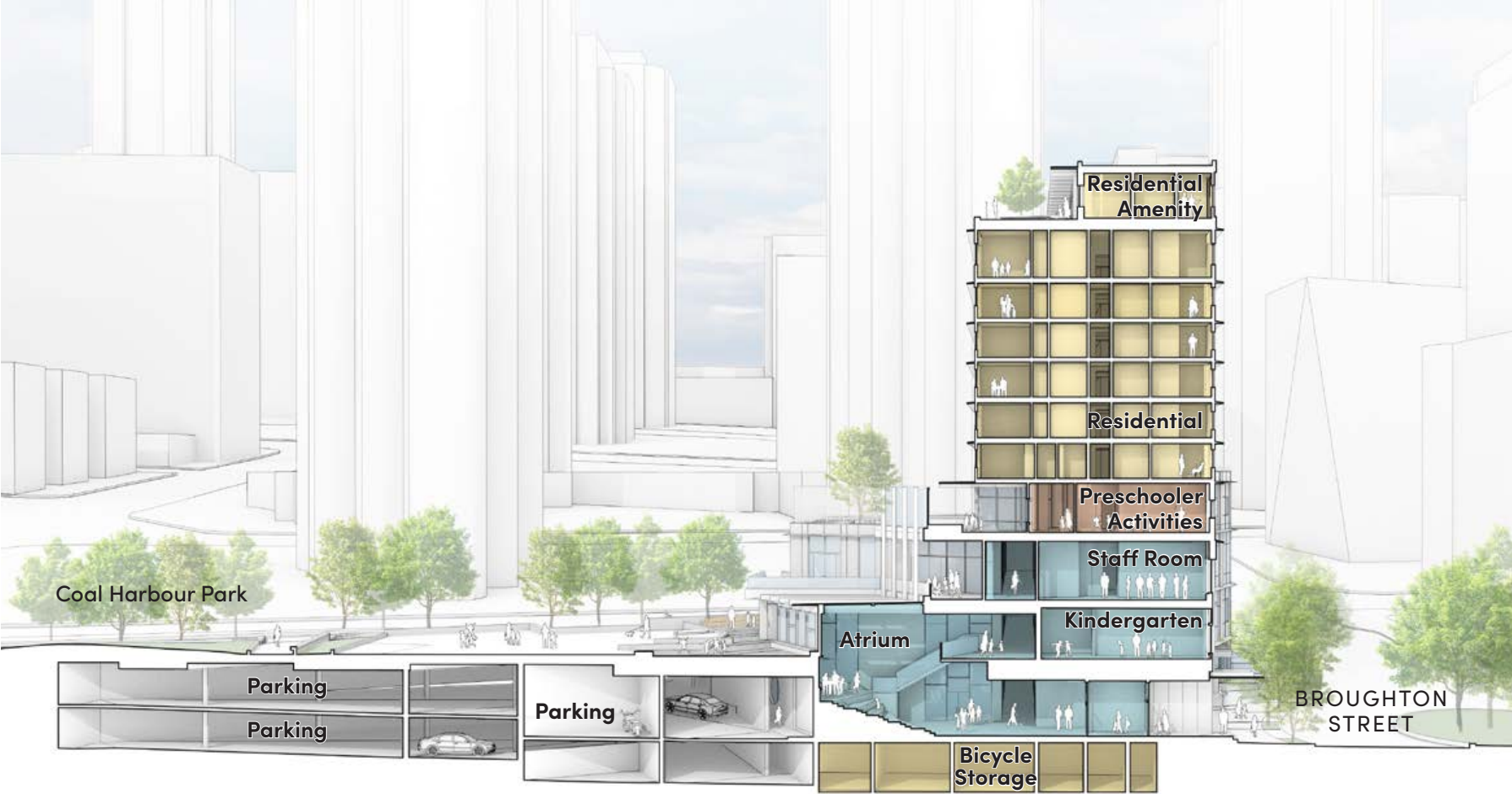
	PHASE 1 Existing Community Centre (DE4021159)	PHASE 2 Proposed Building	PHASE 1 & 2 Combined
Site Area	11,990 m ²	11,981.8 m ²	11,981.8 m ²
Floor Space Ratio (FSR)	0.17	0.89	1.06
Floor Space Ratio Area	1,995.9 m ²	10,645.8 m ²	12,641.7 m ²
Building Height	8 m	38.86	38.86

Proposed Building – Area Summary

	GROSS AREA	FSR EXEMPTIONS	FSR AREA
School	3,988.6 m ²		3,988.6 m ²
Childcare	904.9 m ²	15.6 m ²	889.3 m ²
Social Housing	6,048 m ²	575.3 m ²	5,472.7 m ²
Common / Shared	316 m ²	20.7 m ²	295.3 m ²
Total	11,257.5 m ²	611.6 m ²	10,645.8 m ²

Social Housing – Suite Summary

	STUDIO	1-BED	2-BED	3-BED
Standard Units	6	17	23	11
Accessible Units	1	1	1	
% of Total Units	12%	30%	40%	18%
Total Units	60 units (58% family units)			
Total People	159 people accommodated			



East-West Section

Project Description

The proposed development includes a unique program mix of Elementary School, Childcare Facility and Social Housing, providing community amenities as originally envisioned in the Coal Harbour Master Plan.

The proposed development will complete Phase 2 of the Coal Harbour Master Plan approved by COV Council in 1998. Together with the Phase 1 Coal Harbour Community Centre, the project will provide key community amenities to the Marina Neighbourhood.

The first three levels at the podium of the project will provide a 340-student, 14-classroom Elementary School with associated Gymnasium, Library and Multi-Purpose Room. The school's main entrance is at Level 1, providing access from Broughton Street and the seawall. A second access at Level 2 connects the school directly to Coal Harbour Park on the roof of the existing Community Centre, which will function as the school's play area while remaining accessible to the public as part of Coal Harbour Park.

A 65-space childcare facility with four licensed programs serving children ages 0–3 and 3–5 is provided at Level 4 and will utilize the roof of the school to provide an outdoor play area. Access to the childcare facility is provided via elevator with access from Coal Harbour Park and the parkade level.

Six levels of Social Housing will be provided from Levels 5 to 10, with a focus on larger units for families with children. At least 30% of the Social Housing units will be occupied by households with incomes below the BC Housing's Housing Income Limits (HILs). A rooftop amenity area and large landscaped roof deck is proposed for social interaction and to take full advantage of the unique location with views of the park, water and mountains.

Public Benefits

- 340-student Elementary School
- 65-space Childcare Facility
- 60 Social Housing Units
- Before & After School Care Program
- Animation of Seawall & Streetscapes
- Extension of Public Park
- Leadership in Sustainable Development (Passive House & LEED)



View of Coal Harbour Phase 2 looking South

Design Narrative

The architectural expression of the building makes reference to the harbour and the memory of the shoreline, expressed by the ship-like form of the residential building metaphorically docked at shore.

The architectural expression of the building was first established in the 1998 Pre-Development Permit as a way to reference the layered history of the shoreline and maritime history of the site, and to contrast the new mixed-use building with the surrounding towers. The ship-like form of the building is oriented in line with Broughton Street to maintain views to the water from neighbouring buildings and to provide visual access to the seawall and marina. The building opens up with more glass facing the seawall to the north and at entries to the school, park and rooftop outdoor areas.

The new building makes reference to the existing Community Centre by its use of exposed concrete cladding panels, detailing, and memory of the round windows from the existing building to create an overall expression that is both unique yet complementary to the overall project.

The building's massing creates a distinct separation between base and tower, allowing a separate expression between the school at the base and the residential above.



View from Coal Harbour Park looking West

Design Rationale

The project is seeking a text amendment to the CD-1(365) Jervis Street By-Law. The CD-1 (365) 301 Jervis Street By-Law came into effect in 1996 and was last amended in 2003. In response to the changes in policy, site conditions and building requirements, the project is seeking a text amendment to the CD-1(365) Jervis Street By-Law to modify the following:

- **Maximum Number of Dwelling Units:** A proposed increase to the number of Social Housing Units from 40 to 60 units.
- **Maximum Floor Area:** A proposed increase to the Residential Use floor area from 4,170 m² to 5,472.7 m²
- **Maximum Height:** A proposed increase to the building height from 30 m to 38.86 m

The requested text amendments to the CD-1(365) Jervis Street By-Law will address the following key inter-related factors:

- The provision of additional **Social Housing** will support the financial viability of the project. This impacts the unit numbers, floor area and height.
- The project will be designed to the **highest sustainability standards** include Passive House and LEED Gold Certification. Achieving these targets adds floor area and height to the building.
- The method for calculating **Building Height** has changed and the new methodology results in a lower Base Plane elevation and higher Building Height compared to the originally approved Pre-DP.
- **The height of the building and elevation of Level 1** has been modified in response to flood plain and sea level changes, increasing the height of Level 1 from 4.5 m to 4.8 m.
- The previous Pre-DP included **building services** and program areas below the flood plain level. All essential building services and program areas, including the gym, are now required to be above the flood plain level, and require an increase to the building height to accommodate.



View from Coal Harbour Park looking West

Proposed Building Height

The height of our proposed building has been compared to the original form of development included in the Pre-Development Permit approved by COV Council in 1998.

The original Pre-DP and CD-1 permitted a building height of 30 m above the building grade on Broughton Street. As part of the Pre-DP, the building grade on Broughton Street was established as a level geodetic base plane elevation of 5.765 m. The top of building was measured to the top of the residential parapet, excluding rooftop mechanical, and established as a

geodetic elevation of 35.765 m, for a building height of 30 m. The outline of the original Pre-DP massing is shown in red below.

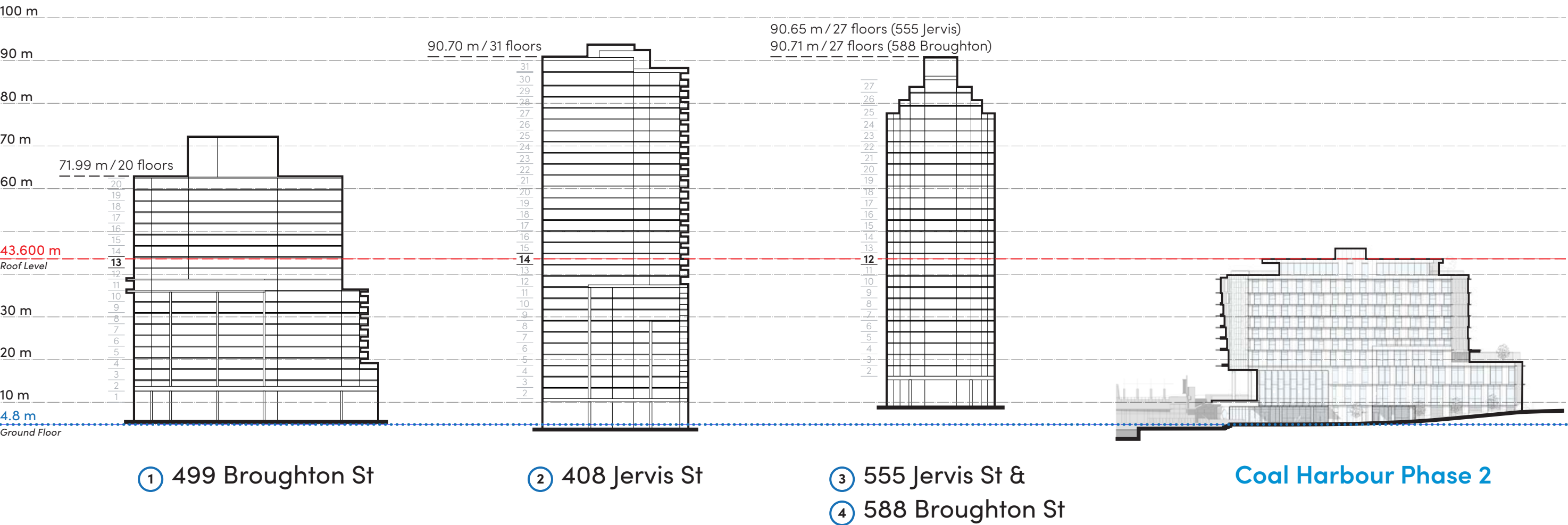
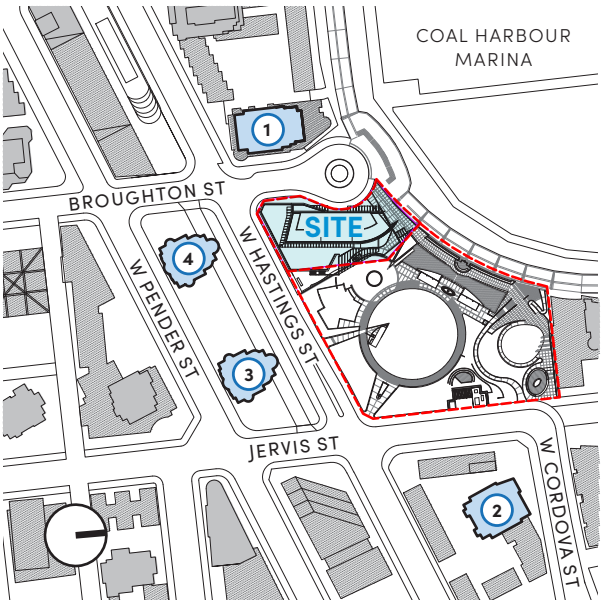
Our proposed form of development now calculates the building height from a sloping base plane with the building height measured from the most restrictive point along that plane. At the most restrictive point, the building grade is at a geodetic elevation of 4.740 m, and the highest parapet of the amenity and rooftop mechanical enclosure at a geodetic elevation of 43.600 m, which produces a proposed building height of 38.860 m.

While the proposed building height as defined by the zoning has increased by 8.860 m in comparison to the original CD-1, the actual physical height of the building at the residential parapet has increased by 4.090 m. A design rationale for the increased building height has been included as part of the DP application and includes a request for additional height in response to a number of factors including raised flood plain level, relocation of building services above the flood plain, increased assemblies to meet Passive House requirements, one additional floor of Social Housing, and inclusion of rooftop amenity.



Building Height Comparison

The floor numbers shown on the diagram below reflect the floor numbers on the survey drawing. The surveyor wasn't able to enter the buildings; therefore, the actual floor numbers within the buildings may be different if some floor numbers have been omitted. For example, levels 13 or 14 were commonly omitted in older buildings.



Landscape Design

The landscape design for Coal Harbour Phase 2 is generated from the industrial and ecological history of the site and its context.

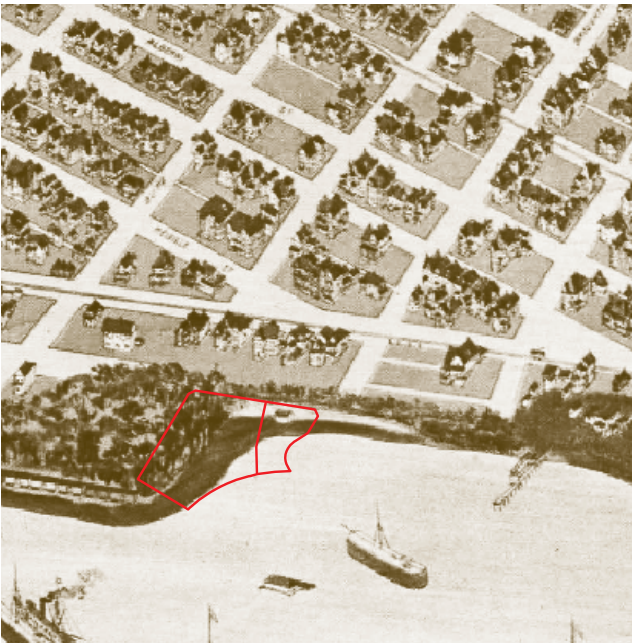
Foreshore and Coastal Hemlock ecologies are intertwined with the material and formal expressions of Coal Harbour's historical urban grid, and rail and lumber industries.



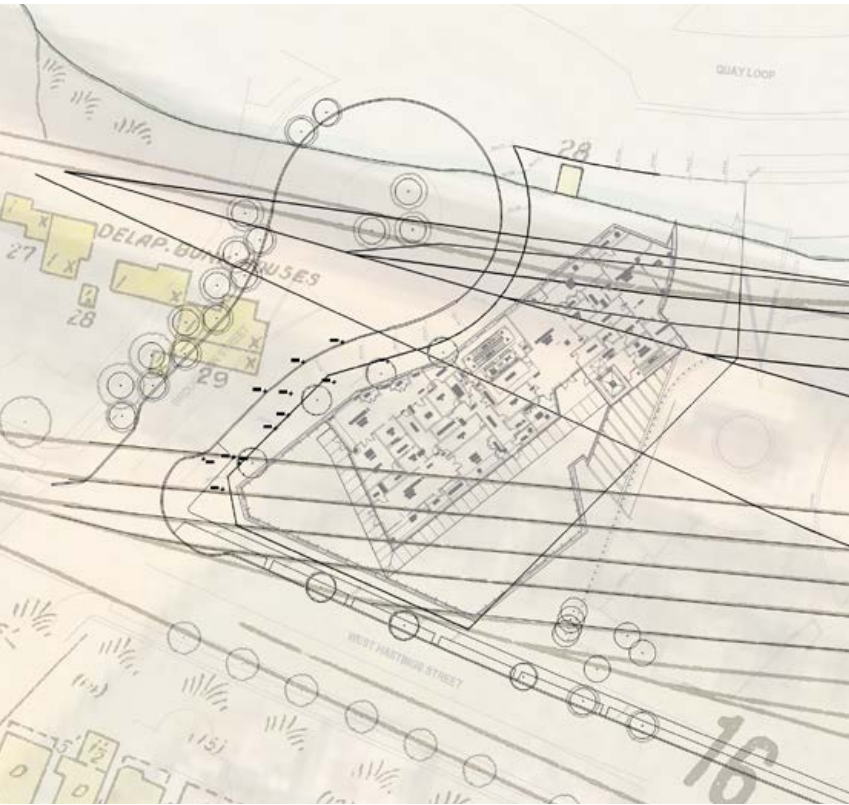
1886 – Vancouver Fire Map



1887 – Plotting for CPR Land grant



1898



PFS Sketch – Composite Image



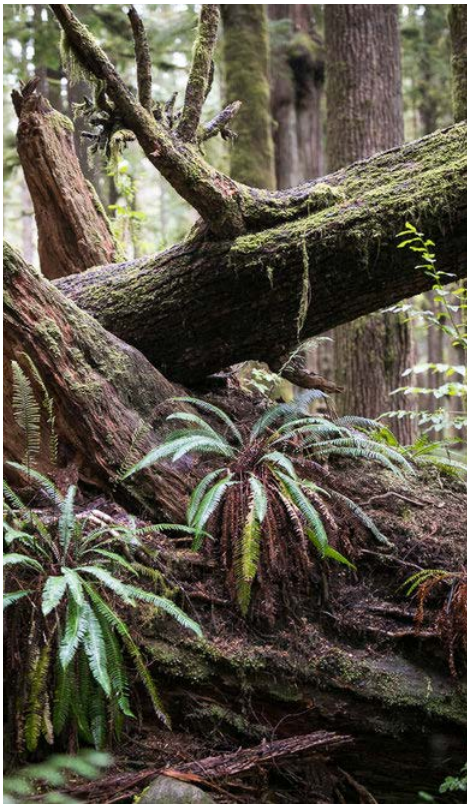
Log Rafts



1965 – End of Tracks, Coal Harbour



Foreshore



Nurse Log



Hemlock Forest

Landscape Design – Precedent Images

The unifying design themes are the original location of the rail lines that crossed the site; the historical shoreline at the northeast edge of the site; and the native plants that once flourished along the original shoreline.

The rail lines are expressed in their true location and are either a scored, shell-aggregate concrete to the inside steel rails, or a wooden boardwalk that passes through planted areas and play spaces.

The historical shoreline is represented at the Daycare level as undulating seat walls and planters that are filled with coastal grasses, shrubs and edible berries.



Horsetail Stormwater Planters



Fern Massings



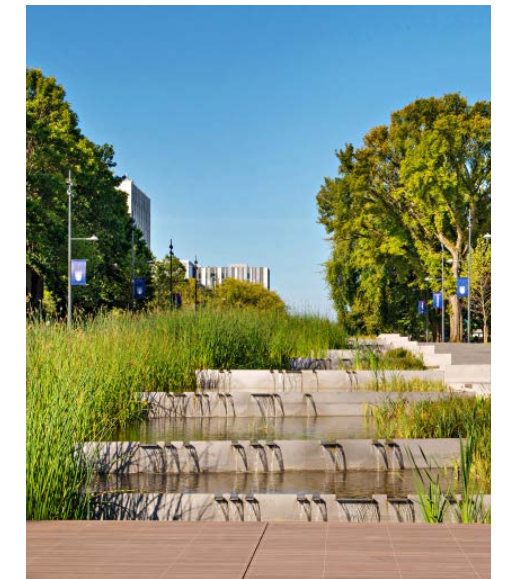
Hemlock Tree



Native Berries



Coastal Grasses



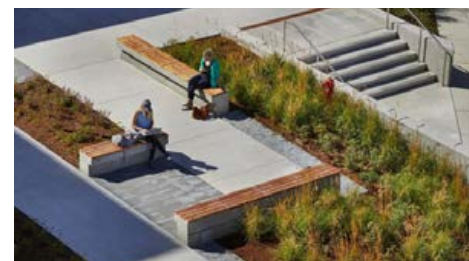
Terrace Rain Garden



Cedar Herringbone



Rail Line Remnant



Seating Bench with Wood Top



Starfish Seating



Nurse Log / Play Element

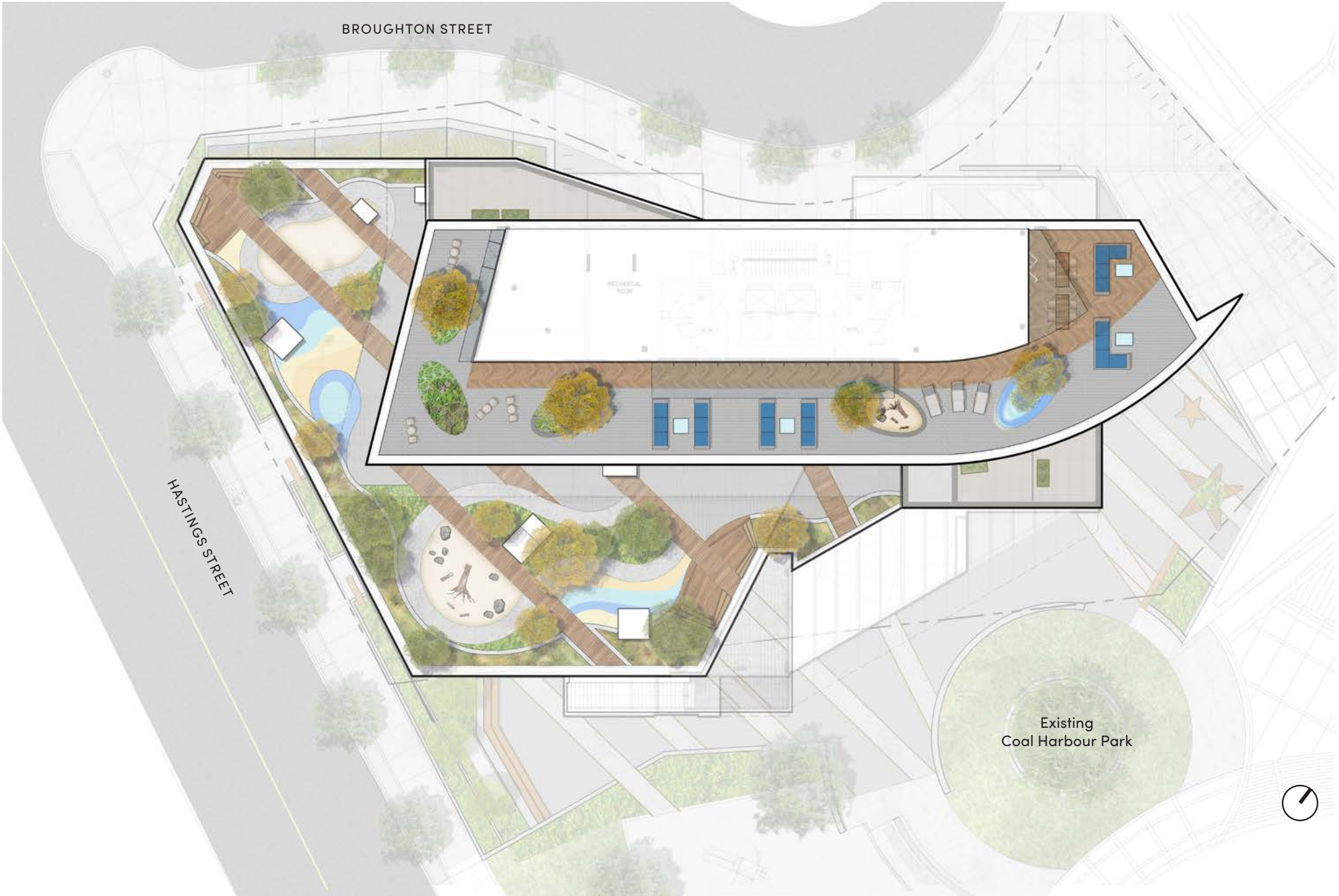


Trike Loop



Rubber Play Mound

Landscape Plan



Passive House & LEED

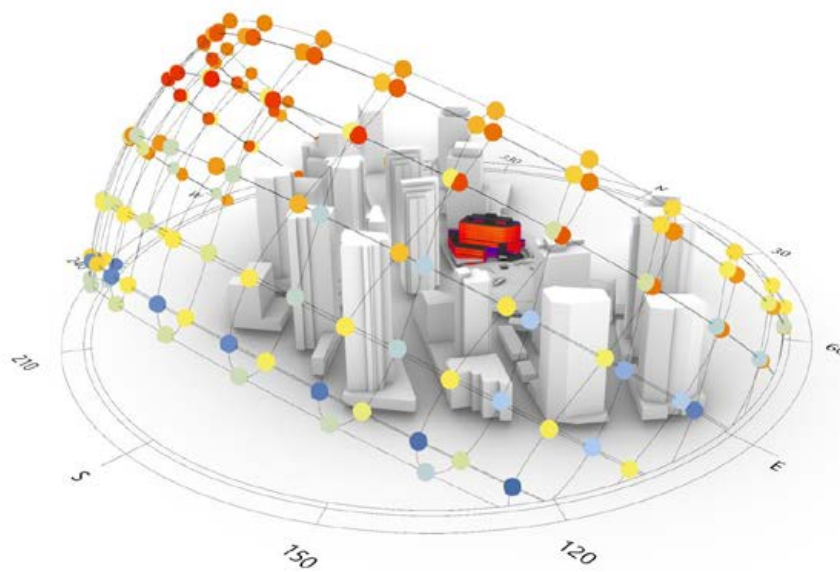
The project is targeting ambitious sustainability goals and will be the first mixed-use project of its kind to achieve Passive House Certification in BC.

The City of Vancouver's leadership in urban sustainability are exemplified by this project's Passive House and LEED targets. This project will meet the requirements of the City of Vancouver's 'Zero Emissions Building Catalyst Policy' and has been designed for certification under the Passive House standard. The project has also been designed to meet LEED requirements and will be certified to LEED Gold standard.



1. Performance - Passive House

Passive House is an internationally recognized building standard that targets energy efficiency, comfort and affordability. For the project to be certified Passive House, it must be planned, optimized and verified with the Passive House Planning Package (PHPP) to meet space heating energy demand, renewable primary energy demand, airtightness and thermal comfort.



Daylight Modelling Analysis



2. Window Systems

High performance triple glazed window systems that meet Passive House certification requirements will be used for this project. The project will include punched openings, window-wall and curtain-wall systems. In general the window frames will be well insulated and fitted with triple glazed low-e glazed units filled with argon or krypton to prevent heat transfer, and targeting a U-value of 0.80 W/(m²K) or less.



3. Thermal Insulation

All opaque elements of the building are highly insulated to meet Passive House standards and include wall and roof assemblies designed to meet the following performance values (approximately effective R-Values noted): Below-grade walls (R60); Insulated pre-cast concrete panels (R35); Roof Deck and Green Roofs (R60); and, Insulated soffits (R26).



4. Thermal Bridging

Minimizing thermal bridging is critical to maintaining envelope performance and achieving Passive House certification. Critical details at all building interfaces (edges, corners, connections and penetrations) will be coordinated with RDH Building Science, A2M Passive House Consultants and HPA to ensure that the design achieves the PH standard.



5. Airtightness Testing

Airtightness for the project will be designed and tested to meet Passive House standards of max. 0.6 ACH50. The airtightness of the entire building, paired with compartmentalization verification, will be addressed in design and construction to guarantee envelope performance and limit the possibility of indoor air contamination and trespass. This will improve the quality of indoor air, reduce thermal heating demand and improve the thermal comfort of indoor spaces.



6. Ventilation Heat Recovery

The project will utilize Energy Recovery Ventilator (ERV) units for each of the building programs and to meet Passive House Standards (minimum 75% of the heat from the exhaust air is transferred to the fresh air).



7. Low Carbon Heating & Hot Water Systems

The development will not use any fossil fuel for the heating, cooling and domestic hot water systems and there is no natural gas connection. Each of the three programs are unique and will have dedicated low carbon heating and hot water systems. Domestic hot water systems for the Social Housing have also been designed to recover heat from the building electrical transformers simultaneously cooling the electrical room and using the waste heat for the large domestic hot water demand.



8. Indoor Air Quality Testing

To ensure the quality of the indoor environment prior to occupancy, testing will be conducted for formaldehyde, particulates, ozone, total volatile organic compounds and carbon monoxide. Results will be shared with the City of Vancouver upon application for Occupancy Permit. Testing airborne pollutant levels will confirm that source control strategies have been effectively implemented, and demonstrate spaces are suitable for occupancy.



9. Verified Direct Ventilation

Outdoor air ventilation will be provided to all occupiable indoor spaces including bedrooms, living rooms and dens, and design will adhere to ASHRAE 62.1 to reduce occupant exposure to indoor pollutants by ventilating with appropriate flows of outdoor air.



10. Low-Emitting Materials

To further improve indoor air quality within the building, healthier material ingredient options for interior finishes and coatings will be selected to limit the quantities of harmful volatile organic compounds (VOCs) which would be off-gassed after installation.



11. Enhanced Commissioning

In addition to high performance system design, the project energy systems will be commissioned, ensuring the ongoing performance of the entire development. Through integrated activities intended to ensure project targets are met and building systems perform as intended, enhanced commissioning will verify performance expectations and identify areas for further improvement.

Sustainability Features

- 1 Extensive Green Roofs & Landscape Roof Decks
- 2 High Performance Triple Glazed Window Wall
- 3 High Performance Triple Glazed Curtain Wall
- 4 50/50 Window/Wall Ratio
- 5 Increased Thermal Performance for Roof Areas
- 6 Airtightness Testing to Envelope
- 7 Juliet Balconies to Minimize Thermal Bridging
- 8 Horizontal Fins to Provide Solar Shading
- 9 Canopies for Shelter & Shading
- 10 Natural Daylighting
- 11 Dedicated High Efficiency ERV's for Each Program
- 12 Stormwater Management
- 13 Low Flow Fixtures
- 14 Low VOC Materials
- 15 Energy Efficient Lighting & Controls
- 16 Energy Star Appliances



Aerial View looking North

Design Features

The City of Vancouver's commitment and leadership in urban sustainability are exemplified by this project's ambitious Passive House and LEED targets. The proposed development is designed to meet the requirements of the 'Zero Emissions Building Catalyst Policy' as a certified Passive House project and is guided by the *Zero Emissions Building Catalyst Bulletin*.

- 1 Unique Site Location**
Located directly on the waterfront with access to the seawall and immediately adjacent to Coal Harbour Park.
- 2 Suite Design**
All suites are designed to meet the current housing standards and are provided with Juliet type balconies in the main Living space.
- 3 Amenity Roof Deck**
Guided by the *Zero Emissions Building Catalyst Bulletin*, a rooftop amenity space is provided with access to a generous (c. 419 m²) outdoor roof deck, designed by PFS Landscape Architects, to provide a mix of shared programming and taking full advantage of the site's location and views.
- 4 Accessible Suites Roof Decks**
All accessible suites have been located on Level 5 and are provided with generous private roof decks.
- 5 Marina Neighbourhood Guidelines**
Section 3.5.4 encourages the provision of roof decks, including consideration of how these are viewed from above. As the project is considerably lower than the existing surrounding buildings, importance has been placed on the design of the roofscape and screening of mechanical equipment at this level.
- 6 Building Form**
The building form and orientation was developed to maximize views of the harbour from neighbouring buildings.



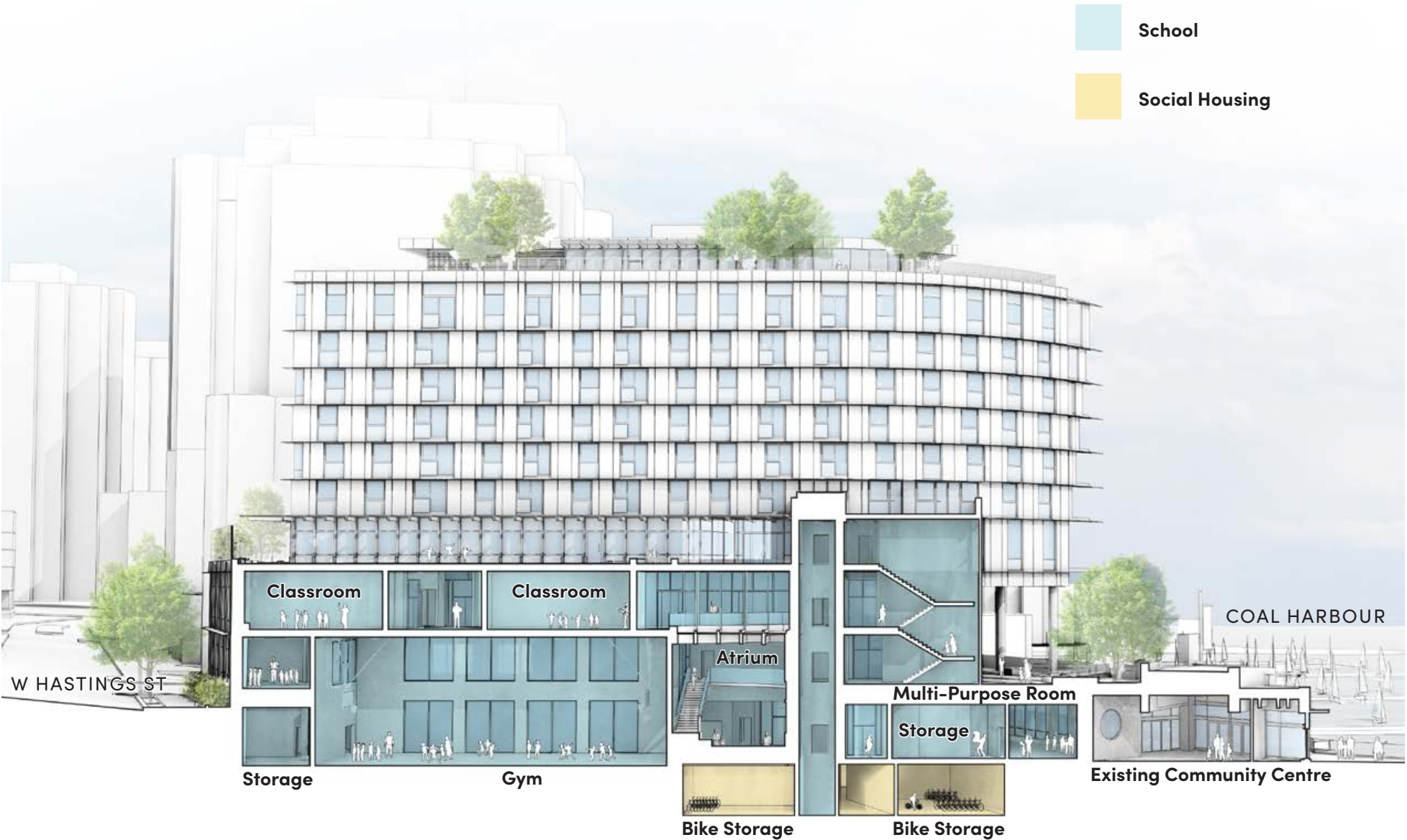
Aerial View looking North

School Program

The school has been designed in collaboration with the Vancouver School Board (VSB) and is unique due to the complex site conditions, mixed-use integration, and ambitious sustainability goals.

The school occupies the lower 3 levels of the new building and will accommodate 300 Elementary School students and 40 Kindergarten students, with associated Gymnasium, Library, Multi-Purpose Room and Administration spaces.

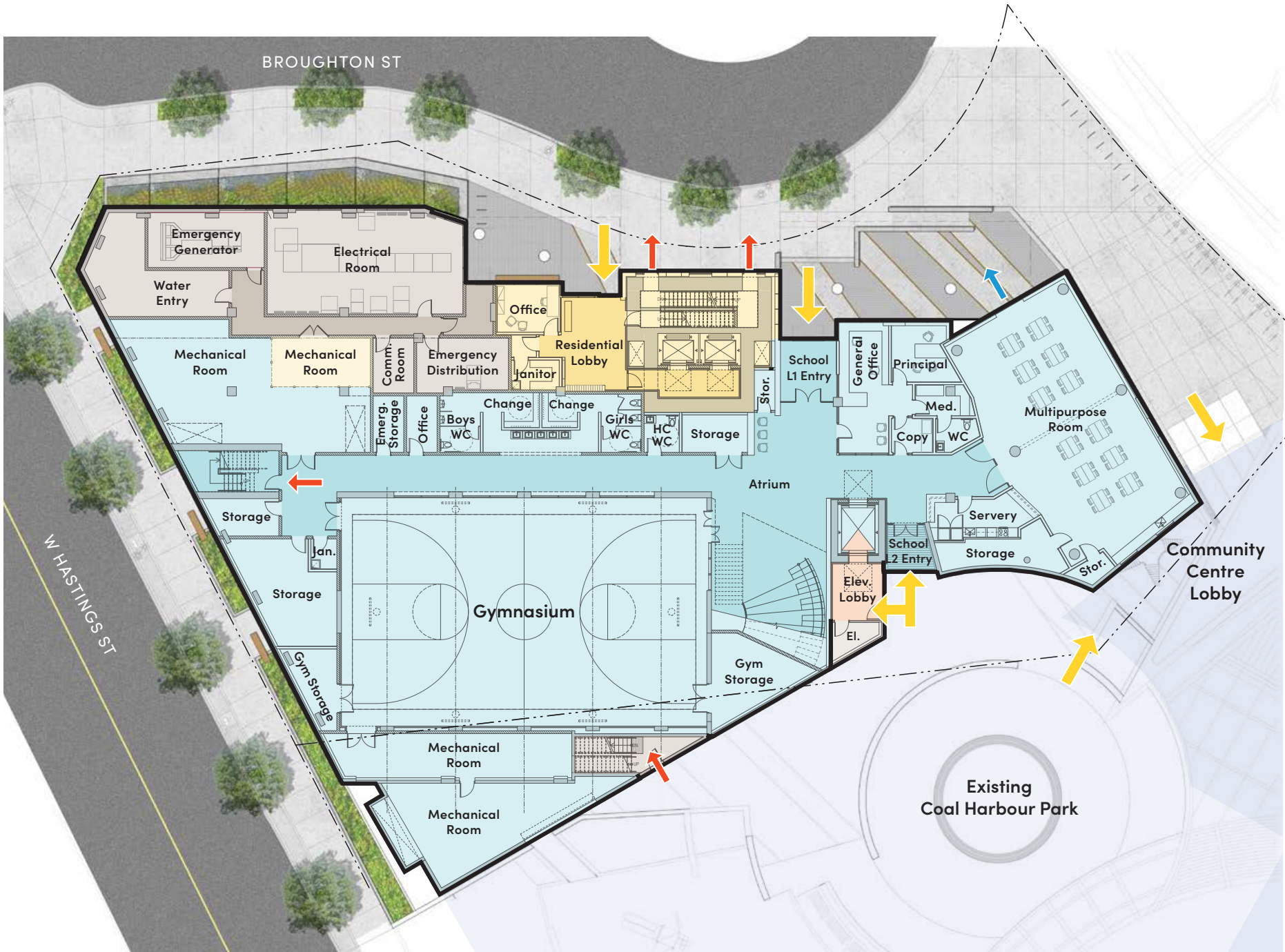
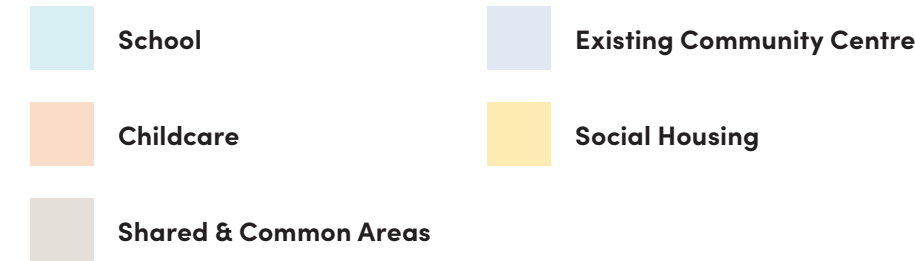
The school’s main entrance is provided at Level 1 from Broughton Street and the seawall, with a second access at Level 2 connecting the school directly to Coal Harbour Park on the roof of the existing Community Centre, which will function as the school’s play area while remaining accessible to the public as part of Coal Harbour Park.



North-South Section

School Program – Level 1

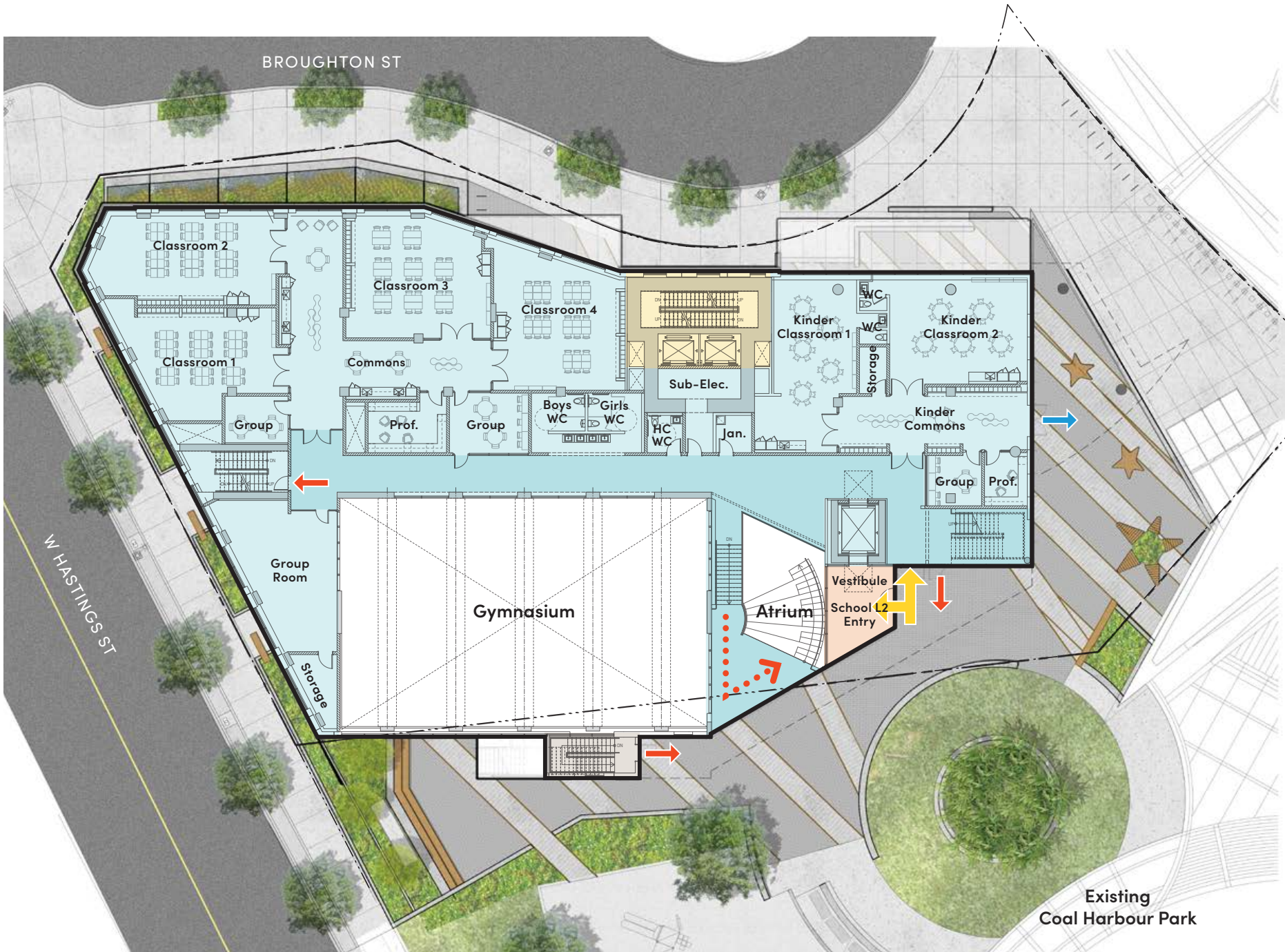
- **Main entrance:** Located off Broughton Street, a level area provides a small gathering space. Set at an elevation of 4.8 m (300 mm above the Community Centre) in response to future floodplain levels.
- **Central Atrium:** Welcomes building occupants on arrival to the school, creating a focal point and organizing fulcrum for the school program. The atrium brings light into the heart of the school and creates a visual link to Coal Harbour Park.
- **Gymnasium:** Has been placed in the southeast corner of the site to make efficient use of the sloping site conditions for this large volume space. Designed as a porous, centrally viewed program space, the walls of the gym are visually open to the surrounding program and park, with natural light provided via high level glazing and through the adjacent atrium space.
- **Multipurpose Room:** Located to take full advantage of the unique views to the harbour and beyond. The location also allows the space to be utilized for other functions and programs outside of school hours.
- **Social Housing Entrance:** Located off Broughton Street, visually separated and distinct from the school.
- **Building Services:** Located at level 1 to be above the flood plain and at the southwest corner of the building where they are partially below the steeply sloped grade.
- **Existing Community Centre Entrance:** Existing location maintained; The architectural expression along the entry path reinforces the interconnection between both buildings.
- **Existing Parkade:** Originally designed to include the parking for this building. New independent access points are provided for each of the new programs.



Level 1 – School Floor Plan

School Program – Level 2

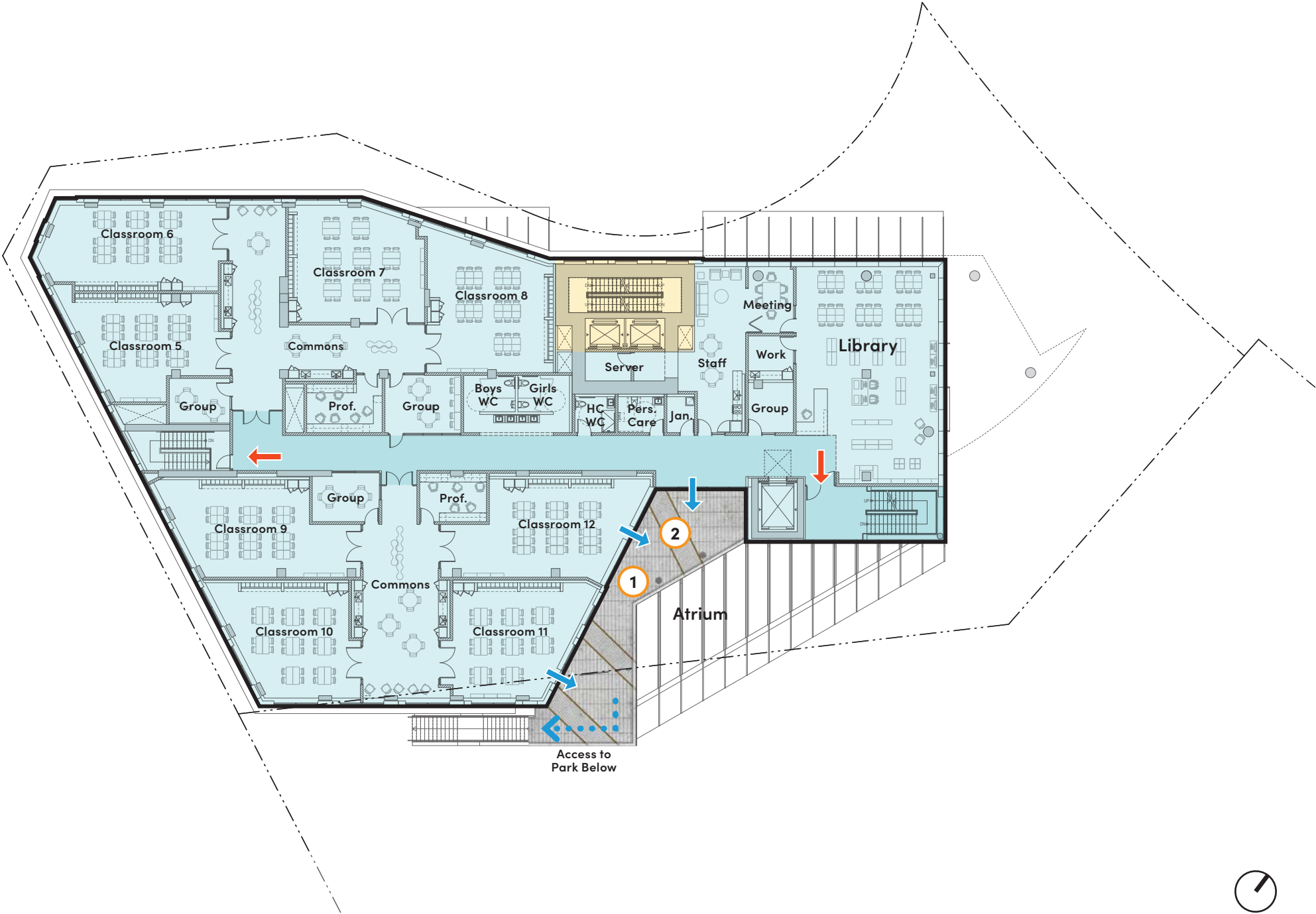
- **Coal Harbour Park:** Coal Harbour Park on the roof of the existing Community Centre and parkade will be the playground for the new school during operating hours. Level 2 of the new building has been aligned with the existing park to provide direct access from the school program areas and allow the park to extend over the new building to create an additional outdoor play area.
- **Kindergarten:** The program will serve 40 children and is located at level 2 to provide direct access to the new extended park play area.
- **Central Atrium:** Creates a focal point with views to the Coal Harbour Park, gym and level 1 below.
- **Classrooms:** Organized into pods, with each pod consisting of 4 Classrooms arranged around a Commons with separate Professional, Group and Learning rooms.
- **Childcare Entry:** A separate entry vestibule is provided for access to the Childcare elevator for direct access between Level 4 and Coal Harbour Park.



Level 2 – School Floor Plan

School Program – Level 3

- **Classrooms:** Two classroom pods (8 classrooms total) are provided at Level 3 to accommodate up to 200 students.
- **Library:** Located at the north end of the building near the main circulation stairs and elevator. The Library takes advantage of the large north facing glazed area for views to the seawall, Coal Harbour Marina, Stanley Park, and the north shore and mountains beyond.
- **Outdoor Terrace:** Provided to allow a direct connection to Coal Harbour Park and accommodate student flow to the playground at Level 2, an outdoor terrace is provided at this level with an external stair leading to the playground below.
- **Staff Rooms:** Provided at Level 3 in close proximity to the majority of classrooms and as a counter balance to staff and administrative functions located below at Level 1. Adjacency to the library allows for shared functions, including meeting and copy rooms.



Level 3 – School Floor Plan

Childcare Program – Level 4

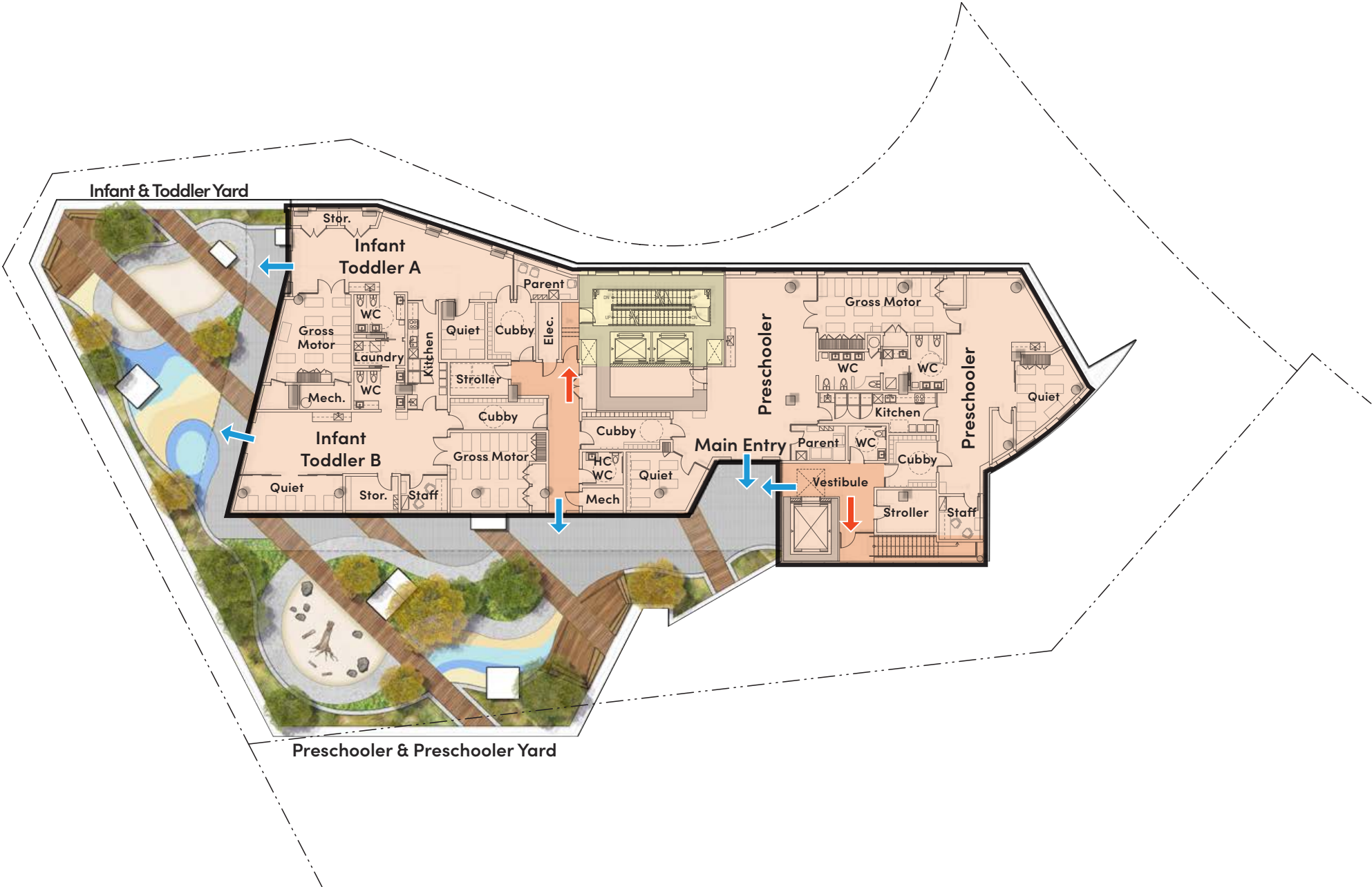
The Childcare centre will provide a new fully licensed 65-space facility, with four licensed programs serving children ages 0–3 and 3–5 as follows:

- Infant-Toddler A: 12 spaces (ages 0–36 months)
- Infant-Toddler B: 12 spaces (ages 0–36 months)
- Preschooler-25: 25 spaces (ages 3–5)
- Preschool-16: 16 spaces (ages 3–5)

The Childcare facility is located at Level 4, between the school and residential programs. The Childcare program includes indoor activity and support spaces and takes advantage of the roof of the school to provide required outdoor play areas. Access to the childcare is provided via an elevator directly from Coal Harbour Park and the parkade level.

The Childcare facilities have been designed in collaboration with the City of Vancouver Arts, Culture and Community Services Department, and is guided by the BC Childcare Licensing Regulation, the City of Vancouver Childcare Design Guidelines (1993) and the Childcare Technical Guidelines (2019).

Spaces have been organized to allow shared services between two Infant-Toddler programs as well as between two Preschooler programs.



School

Existing Community Centre

Childcare

Social Housing

Shared & Common Areas

Level 4 – Childcare Floor Plan

Housing Program – Level 5

Six levels of Social Housing will be provided from Levels 5 to 10, with a focus on larger units for families with children.

At least 30% of all Social Housing units will be occupied by households with incomes below the BC Housing housing income limits (HILs). This City-owned Social Housing will be operated by a non-profit housing operator selected by the City of Vancouver.

Level 5

The first level of Social Housing takes advantage of roof area above portions of the Childcare program to provide roof decks to the 3 fully accessible suites. The accessible suites represent 5% of all housing units in a range of suite types including one Studio, one 1-bedroom and one 2-bedroom apartment. The 7 other suites at Level 5 are similar to the typical suites at Levels 6 to 10 above.

- 1 Concrete Unit Pavers
- 2 Movable Accessible Planters

School

Childcare

Shared & Common Areas

Existing Community Centre

Social Housing



Level 5 – Accessible Housing Level Floor Plan

Housing Program – Levels 6 to 10

Typical residential floors provide 10 units per floor in a range of suite types ranging from Studio to 3-bed.

58% of all units in the project are 2-bed or larger and suitable for families with children.

The affordable rental housing will provide accommodation for approximately 159 individuals.

Housing Mix

LEVEL	STUDIO	1-BED	2-BED	3-BED	TOTAL
10	1	3	4	2	10
9	1	3	4	2	10
8	1	3	4	2	10
8	1	3	4	2	10
7	1	3	4	2	10
6	1	3	4	2	10
5	1	2	3	1	7
5 (HC)	1	1	1	0	3
Total	7	18	24	11	60
	25 (42%)		35 Family (58%)		
People	7	36	72	44	159



Levels 6 to 10 – Typical Affordable Housing Level Floor Plan

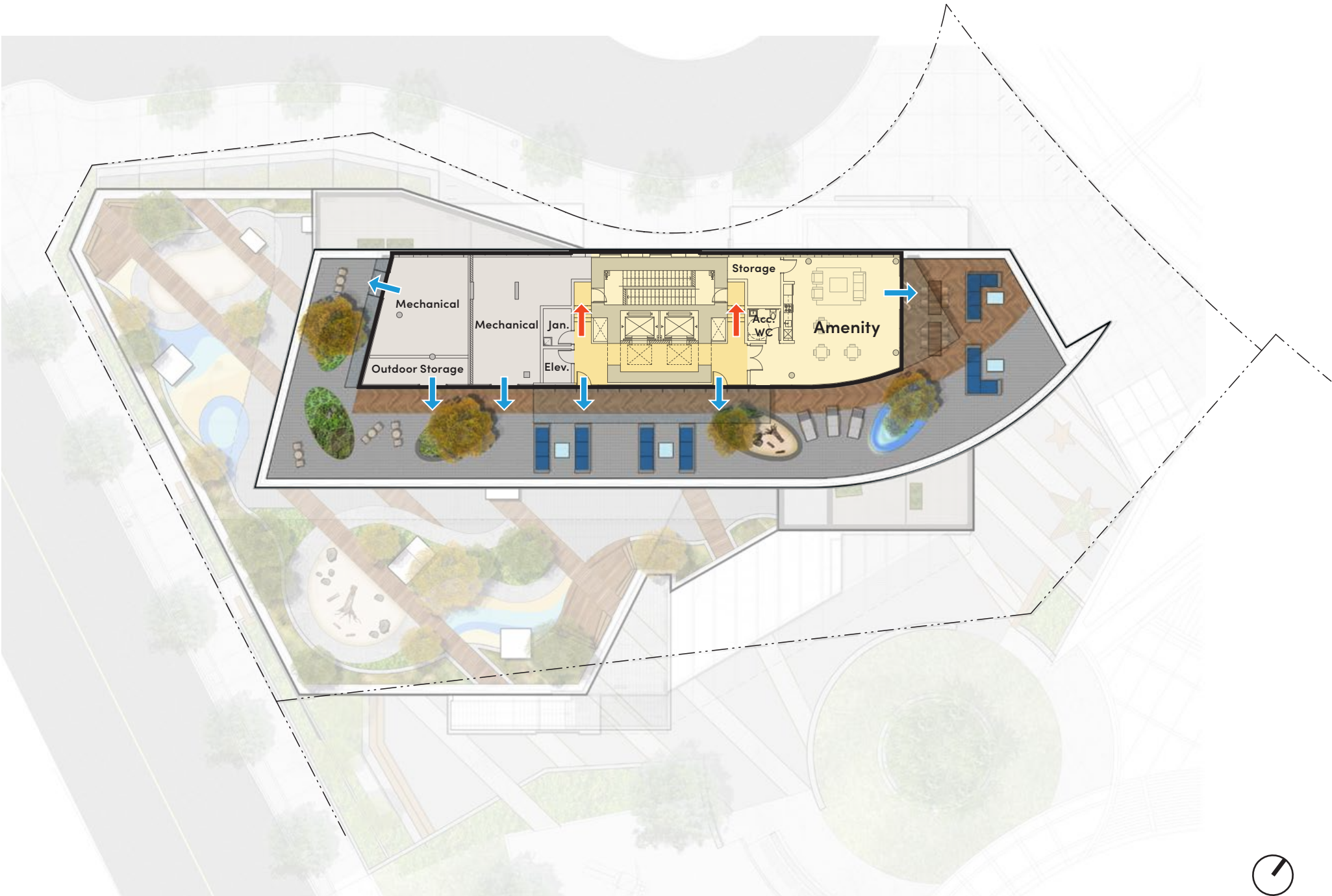
Housing Program – Amenity Level

A rooftop amenity area and large landscaped roof deck is proposed for social interaction and to take full advantage of the unique location.

The indoor amenity room has been located at the north end of the building, allowing views to Coal Harbour Park, the seawall, marina, Stanley Park, as well as the north shore and mountains beyond.

The multipurpose indoor amenity space will allow larger social gatherings and a space for families to host birthday parties and other activities.

For even larger events, the multi-purpose rooms, gymnasiums and other amenities at the school and Coal Harbour Community Centre can be rented, allowing a range of nearby indoor amenities.



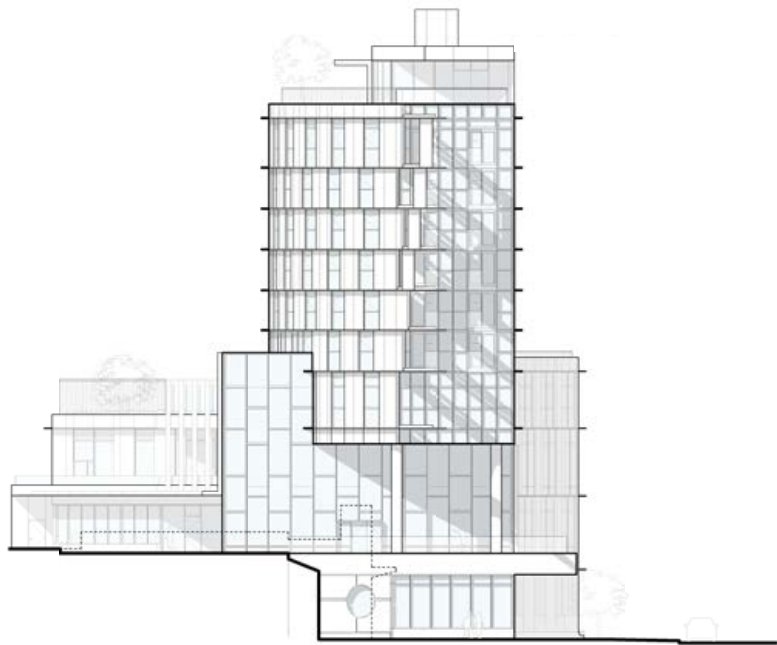
- School

Existing Community Centre
- Childcare

Social Housing
- Shared & Common Areas

Level 11 – Amenity Roof Level Floor Plan

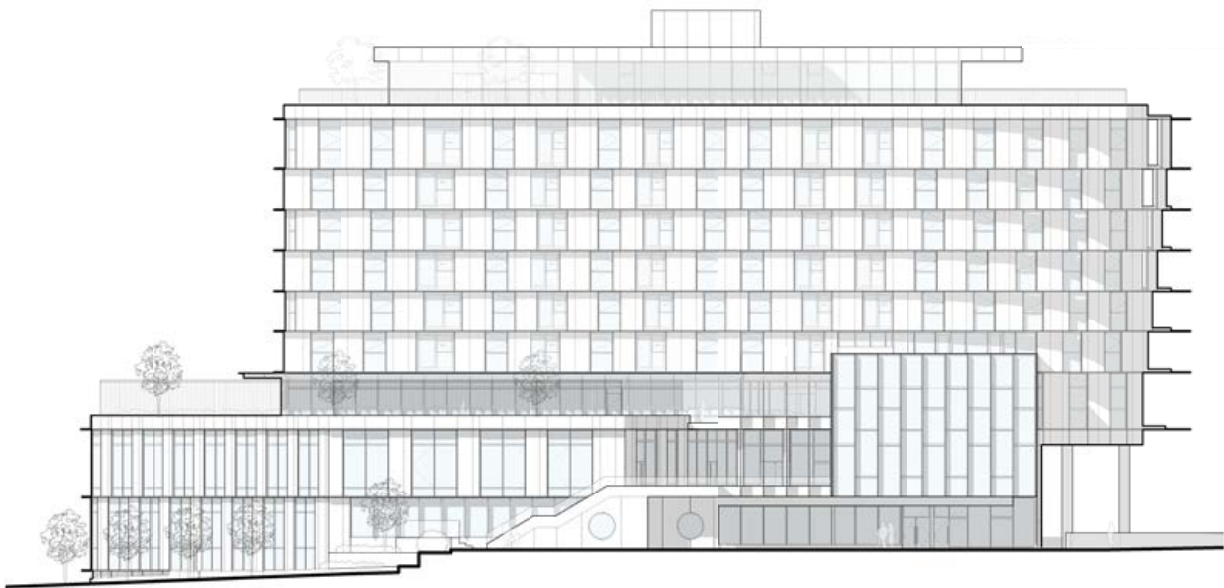
Elevations



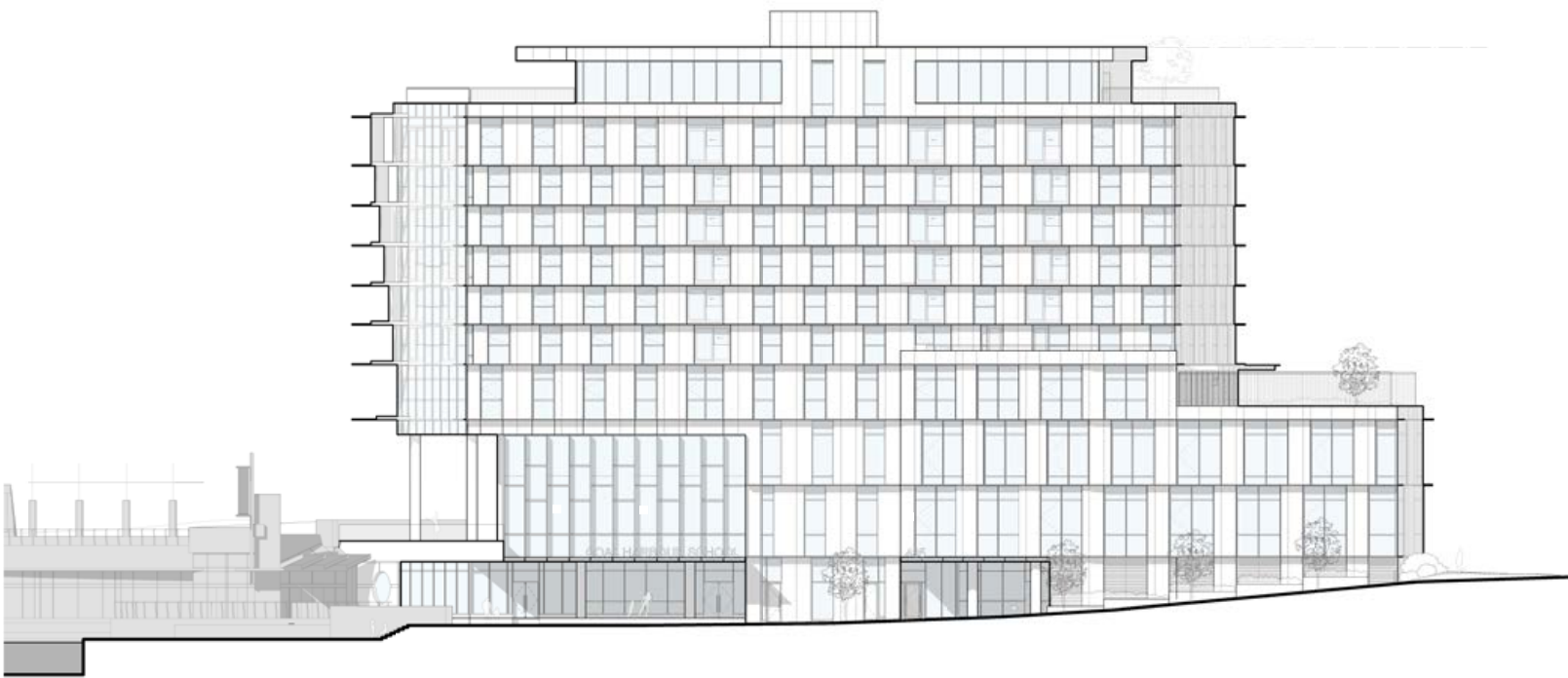
North Elevation



South Elevation



East Elevation



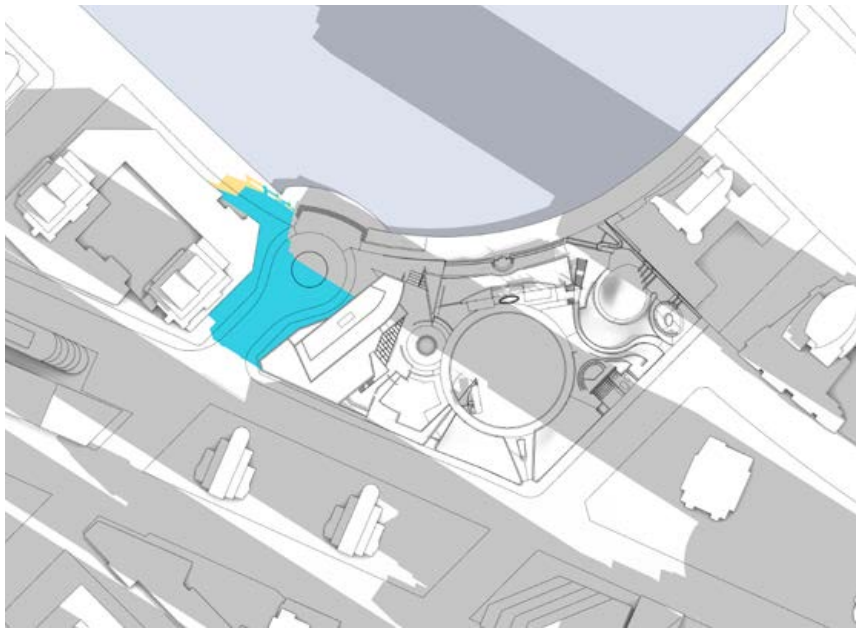
West Elevation

Shadow Studies

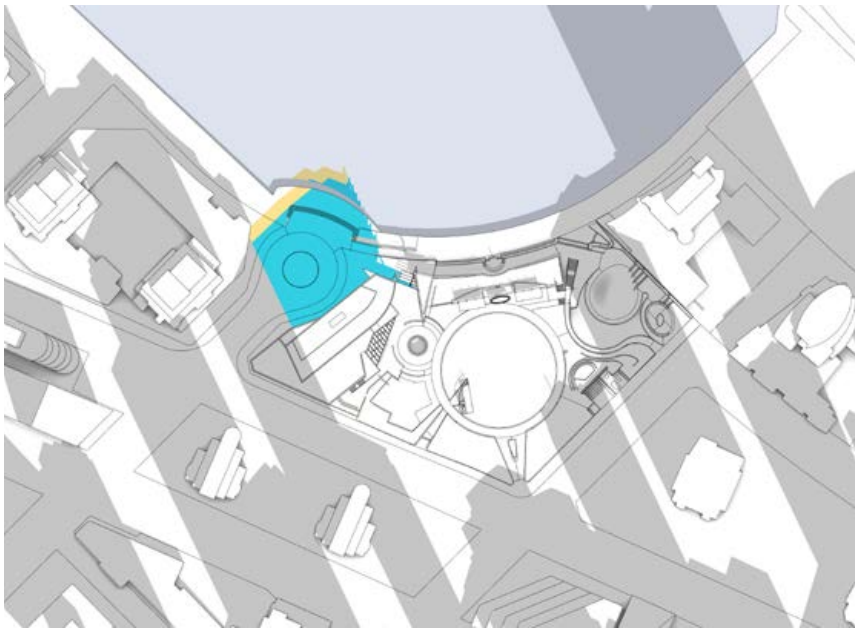
Spring equinox – March 19

During the Spring equinox the project will provide some additional shadowing as shown on the complete studies.

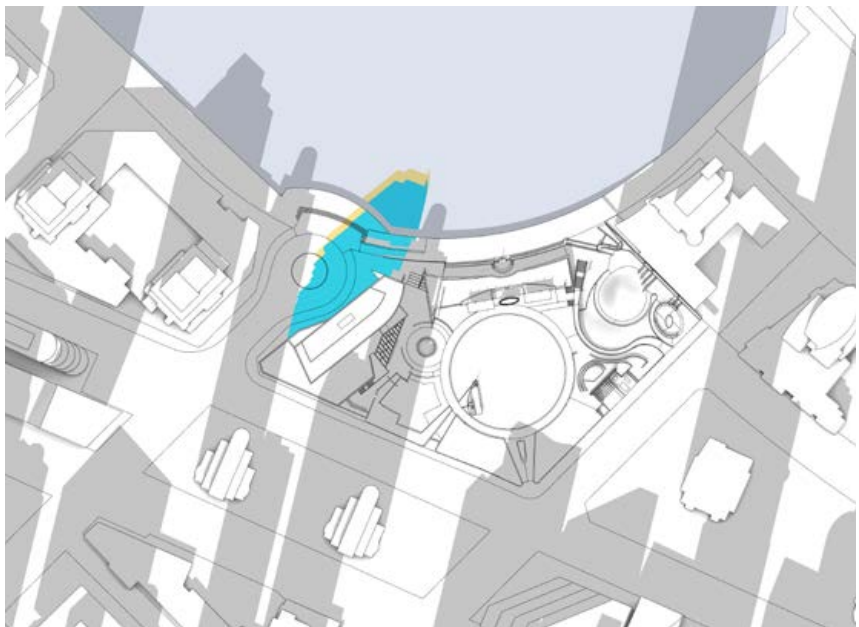
The majority of the shadows are cast on the public realm and minimal additional impact to the Coal Harbour Park.



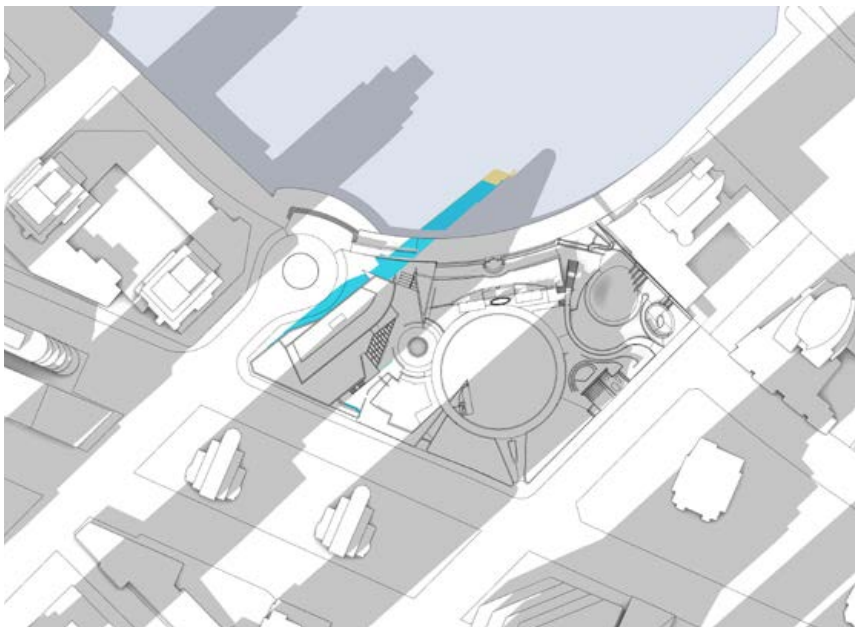
10:00 AM



12:00 PM



2:00 PM



4:00 PM

- Existing Ground Plane Shadows
- Ground Plane Shadows – CD-1 Height Limit
- Incremental Ground Plane Shadows – Proposed Building

Note: DST has been allowed for in studies

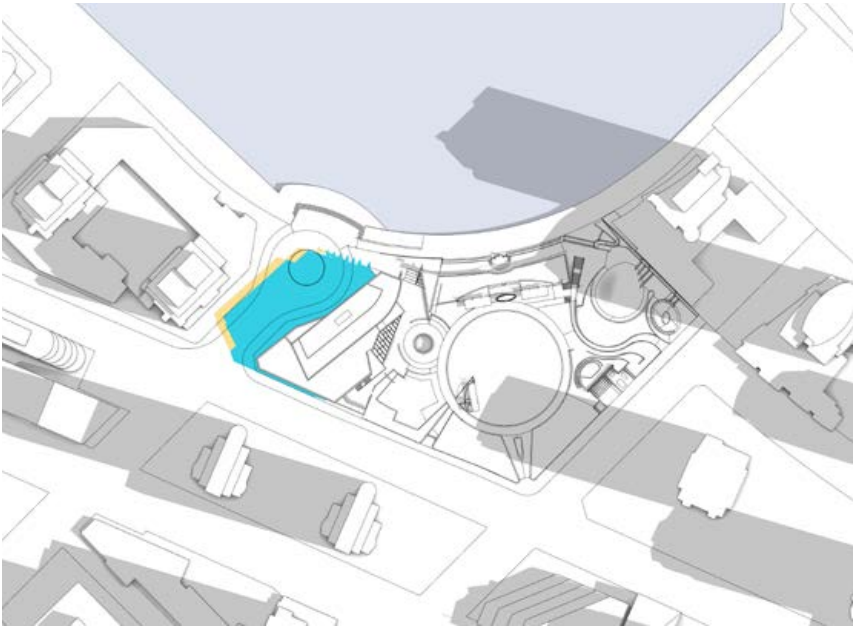
Shadow Studies

Summer solstice – June 21

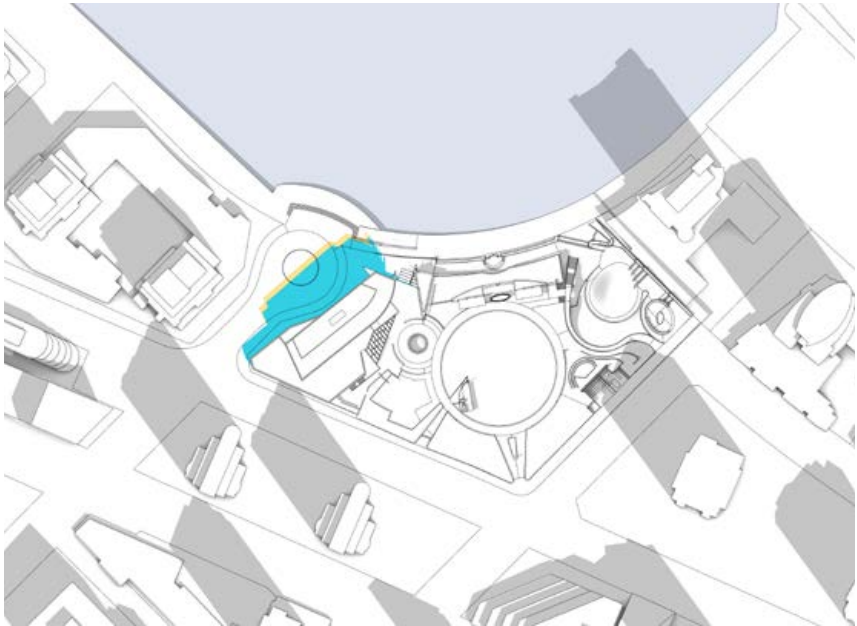
Detailed shadow studies have been completed to understand the impact of the project on the surrounding context, to minimize shadows and to preserve access to daylight.

The majority of shadows cast are on Broughton Street and the public realm and are attributed mainly to the massing of social housing portion of the building.

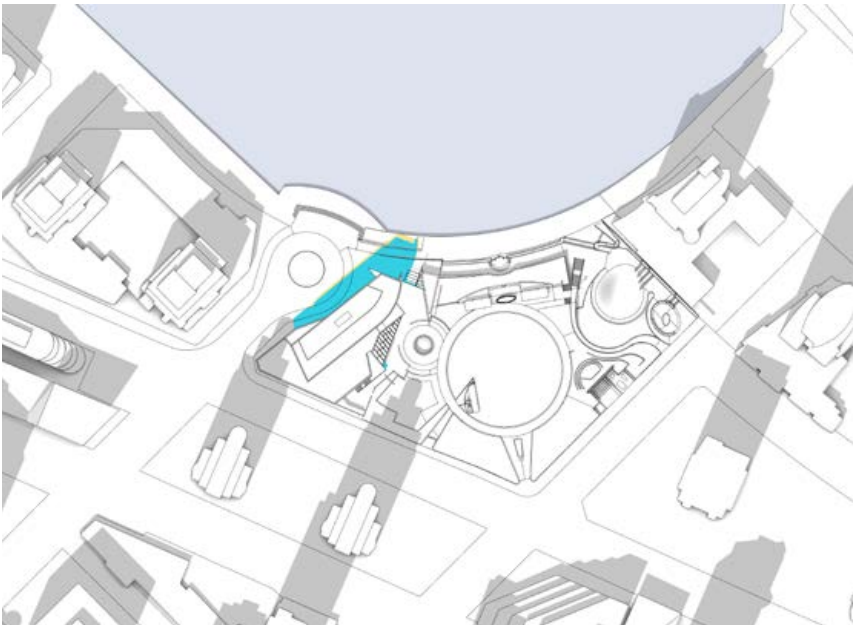
Particular attention has been given to the placement of the housing massing to minimize any shadowing on the adjacent Coal Harbour Park and the new childcare play area.



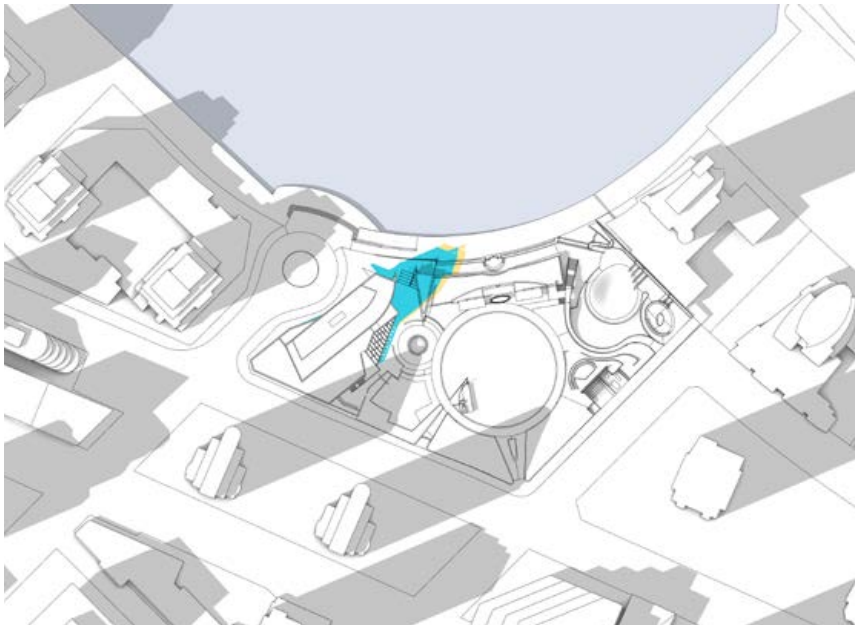
10:00 AM



12:00 PM



2:00 PM



4:00 PM

- Existing Ground Plane Shadows
- Ground Plane Shadows – CD-1 Height Limit
- Incremental Ground Plane Shadows – Proposed Building

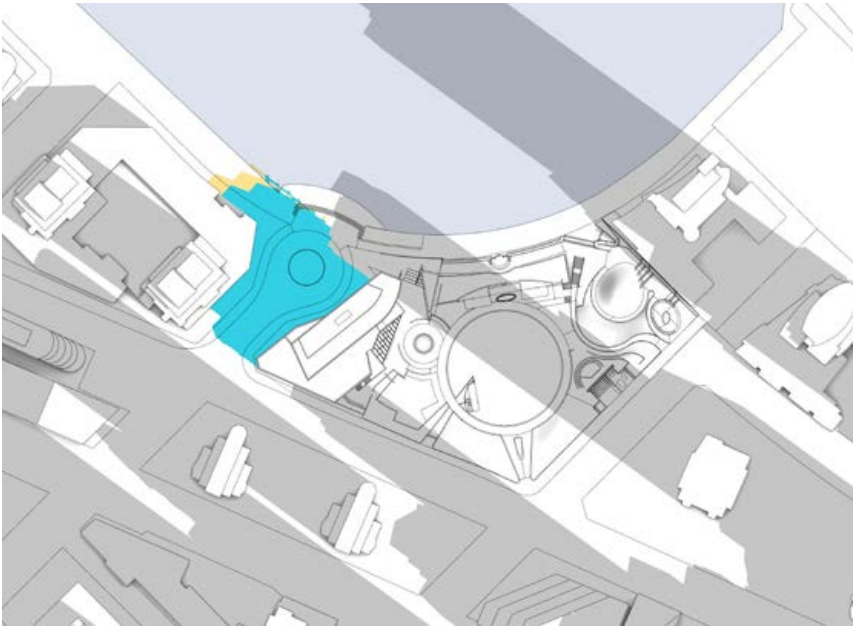
Note: DST has been allowed for in studies

Shadow Studies

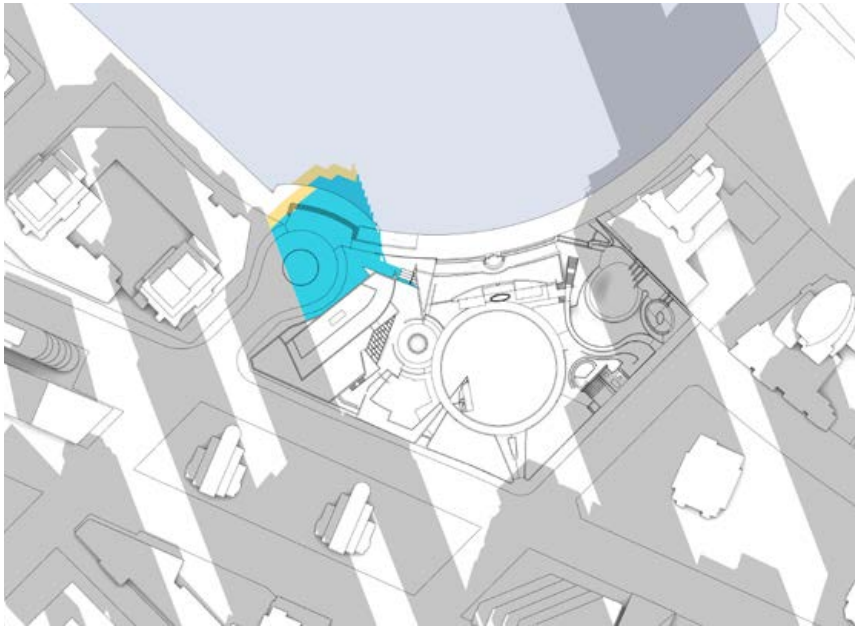
Autumn equinox – September 22

During the Autumn equinox the project will provide some additional shadowing as shown on the complete studies.

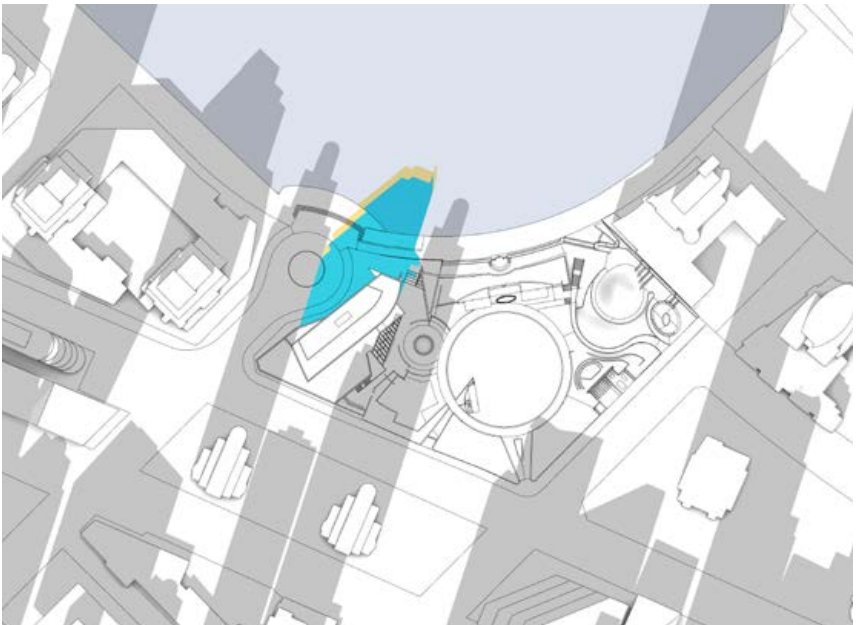
The majority of the shadows are cast on the public realm and minimal additional impact to the Coal Harbour Park.



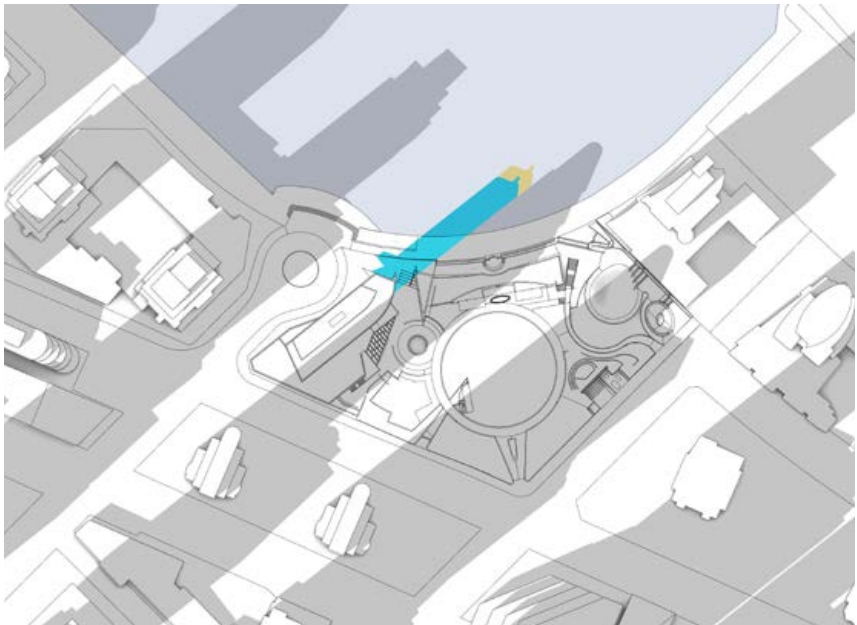
10:00 AM



12:00 PM



2:00 PM



4:00 PM

- Existing Ground Plane Shadows
- Ground Plane Shadows – CD-1 Height Limit
- Incremental Ground Plane Shadows – Proposed Building

Note: DST has been allowed for in studies

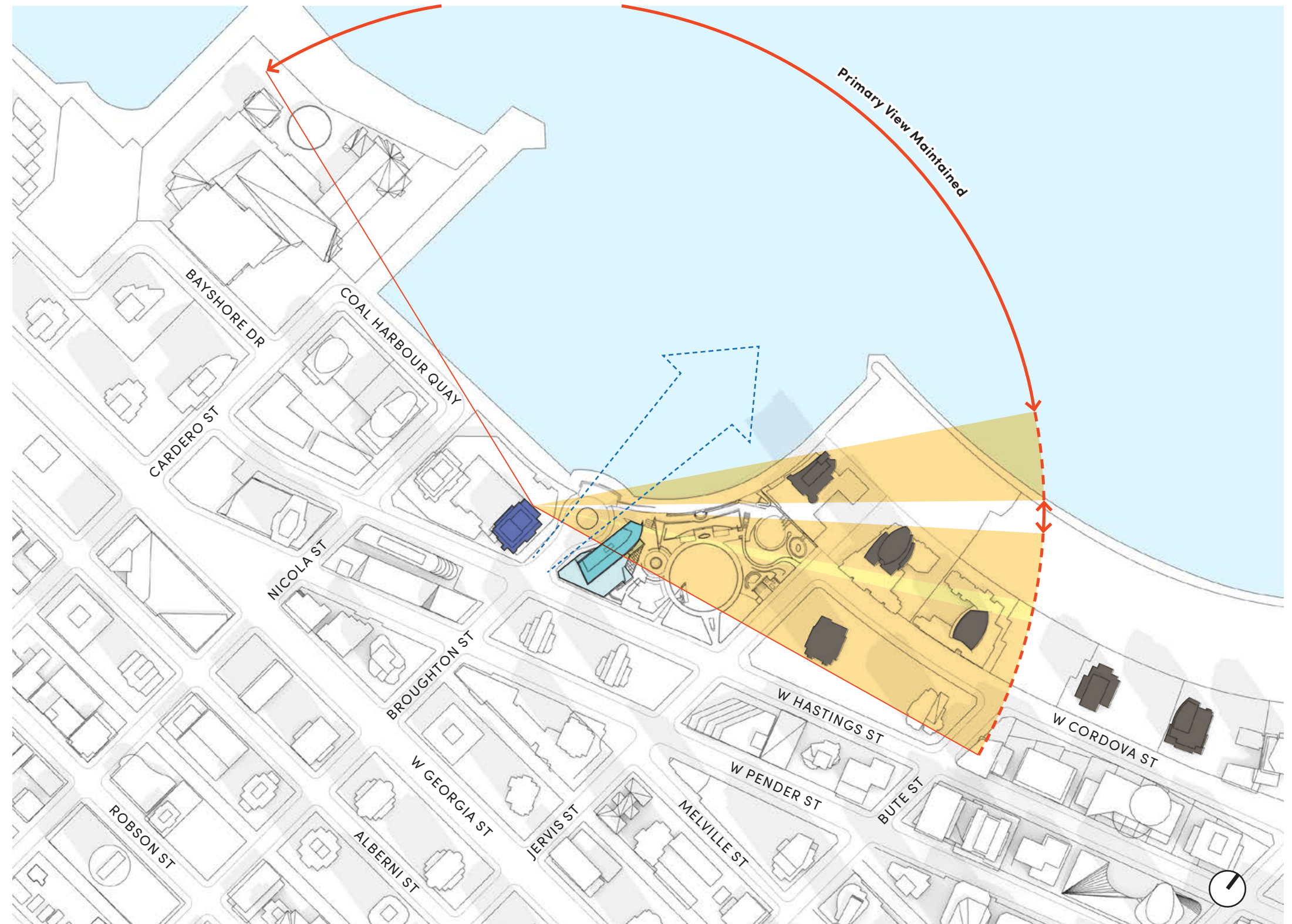
View Studies

499 Broughton Street

View Height: 8th storey
Incremental View Impact: 2.1°

Note: New building does not impact views above 43.6 m (geodetic elevation).

- Affected Building**
- Proposed Building (Tower)**
- Proposed Building (Podium)**
- Existing Building**
- Existing View Blockage**
- Incremental View Blockage**
(Below 43.6 m only)
- 150° View Shed**
- 5° Street End View**











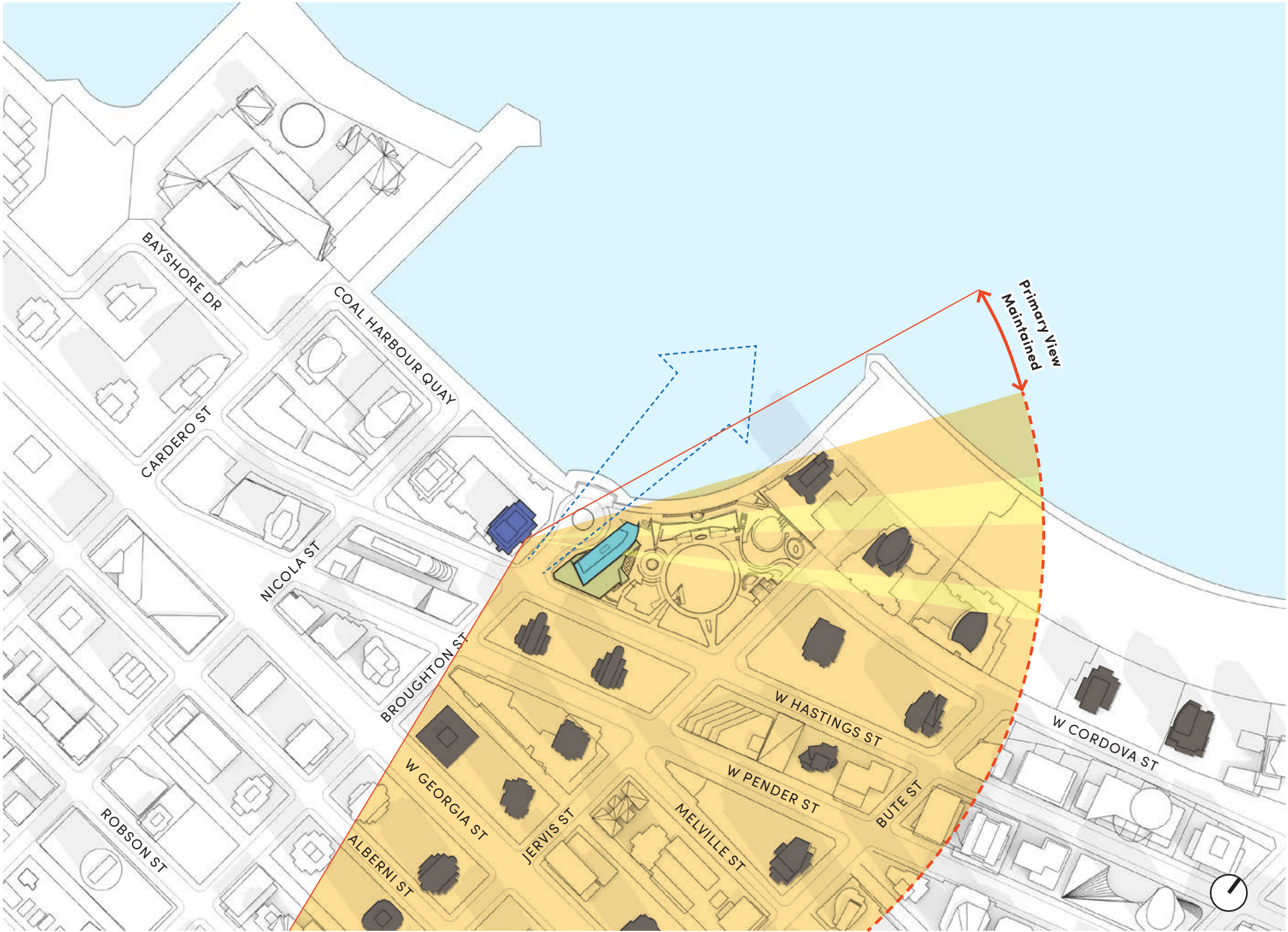
View Studies

499 Broughton Street

View Height: 8th storey
Incremental View Impact: 8.4°

Note: New building does not impact views above 43.6 m (geodetic elevation).

-  **Affected Building**
-  **Proposed Building (Tower)**
-  **Proposed Building (Podium)**
-  **Existing Building**
-  **Existing View Blockage**
-  **Incremental View Blockage (Below 43.6 m only)**
-  **150° View Shed**
-  **5° Street End View**











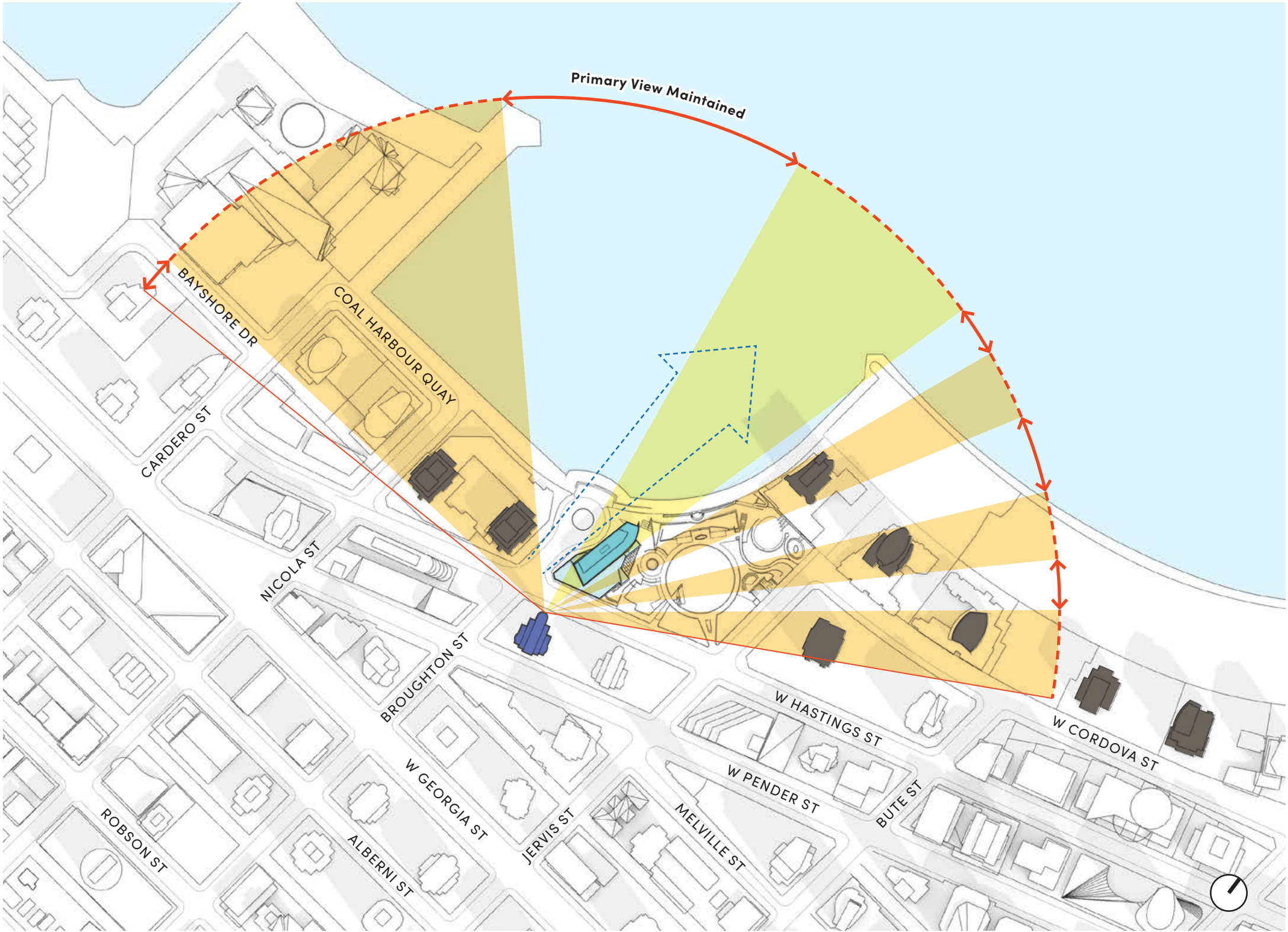
View Studies

588 Broughton Street

View Height: 8th storey
Incremental View Impact: 24.6°

Note: New building does not impact views above 43.6 m (geodetic elevation).

-  **Affected Building**
-  **Proposed Building (Tower)**
-  **Proposed Building (Podium)**
-  **Existing Building**
-  **Existing View Blockage**
-  **Incremental View Blockage (Below 43.6 m only)**
-  **150° View Shed**
-  **5° Street End View**











View Studies

555 Jervis Street

View Height: 8th storey
Incremental View Impact: 40°

Note: New building does not impact views above 43.6 m (geodetic elevation).

-  **Affected Building**
-  **Proposed Building (Tower)**
-  **Proposed Building (Podium)**
-  **Existing Building**
-  **Existing View Blockage**
-  **Incremental View Blockage (Below 43.6 m only)**
-  **150° View Shed**
-  **5° Street End View**

