1008 W. 41st Ave. & 5763 Oak St., VANCOUVER, BC

UDP

Presentation

5763 OAK&41st

wesgroup | ARCADIS eta landscape architecture

Submitted to City of Vancouver
By Arcadis Architects (Canada) Inc. **[formerly IBI Group Architects (Canada) Inc.]**
on Behalf of Wesgroup September, 2023

Site Photos and Existing Street Scape

Oak Street and West 41st Avenue

West 42nd Avenue and Lane

Lane

Oak Street and West 42nd Avenue

West 41st Avenue

West 41st Avenue

OAK STREET: WEST VIEW, W 41ST AVE TO W 42ND AVE

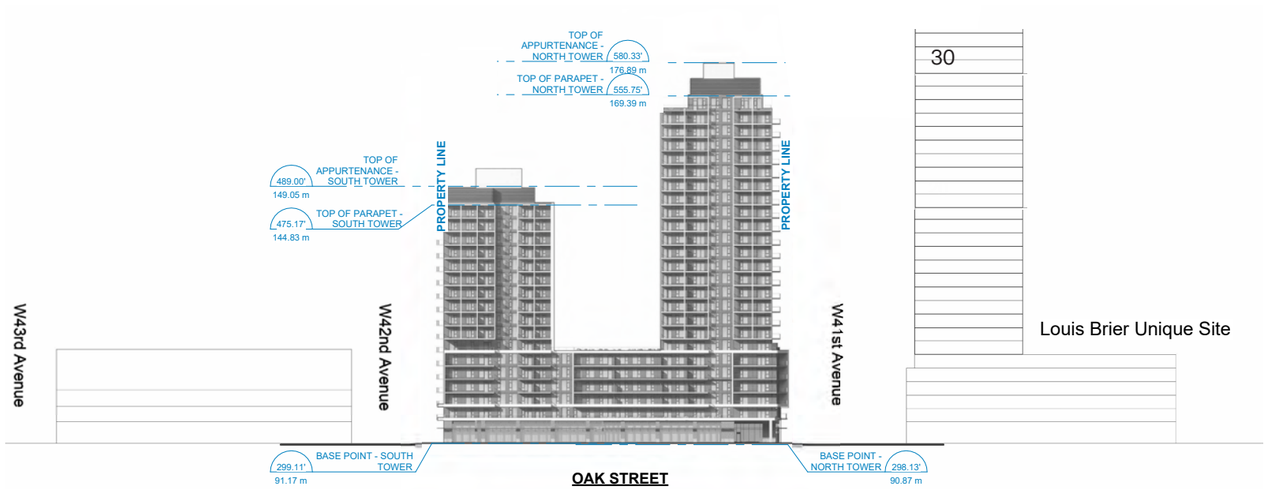
W 41ST AVENUE: SOUTH VIEW, OAK STREET TO LANE

W 42ND AVENUE: NORTH VIEW, OAK STREET TO LANE

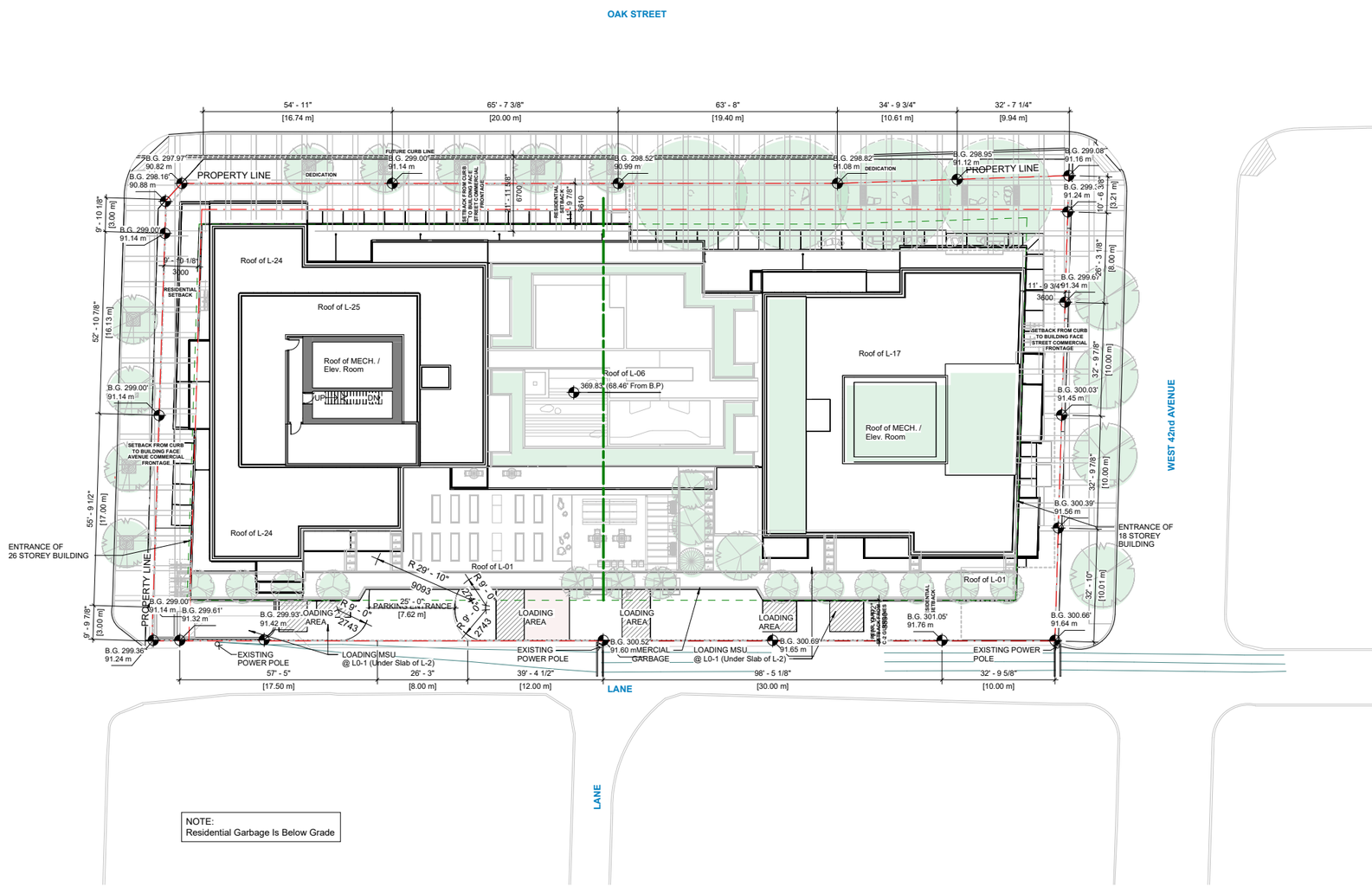
Future Site Plan

1- Sir William Osler Elementary School
2- Annie B. Jamieson Elementary School
3- Eric Hamber Secondary School
4- Jewish Community Center Daycare
5- Oakridge Kindergarten

Streetscape Elevations & Context Massing



Site Plan

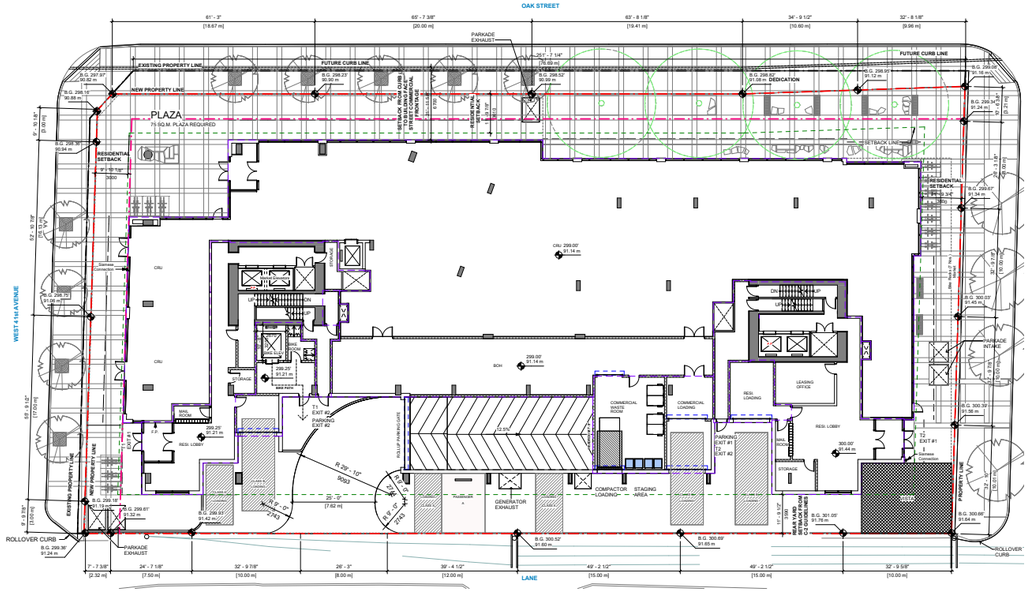


NOTE:
Residential Garbage Is Below Grade

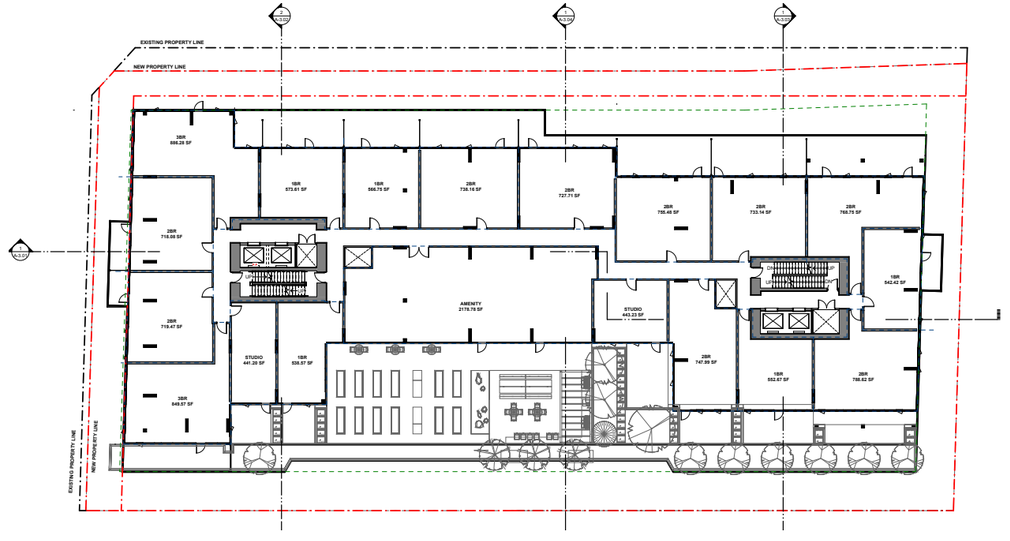
1 A-1.00 SITE PLAN
SCALE: 1/16" = 1'-0"

True North Project North

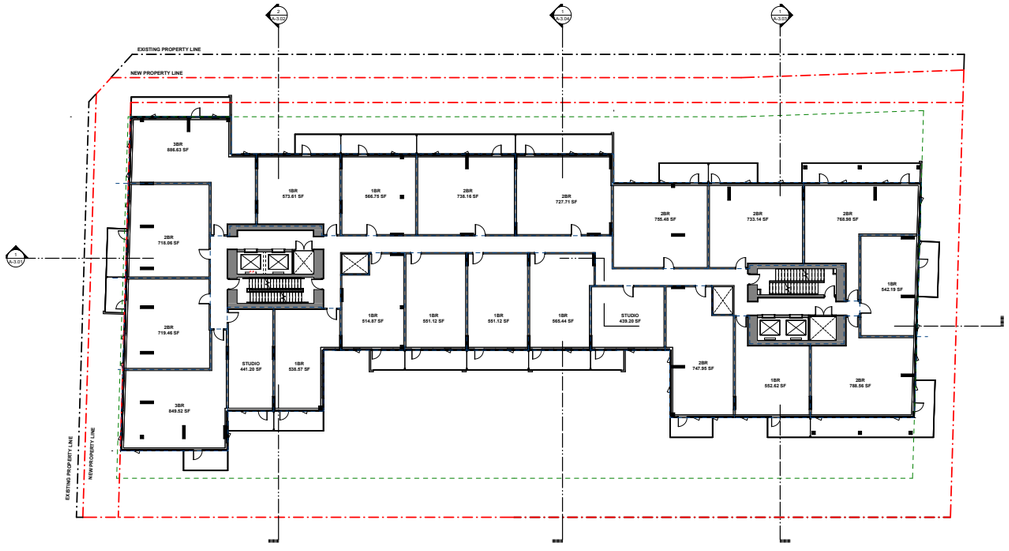
Typical Level Plans



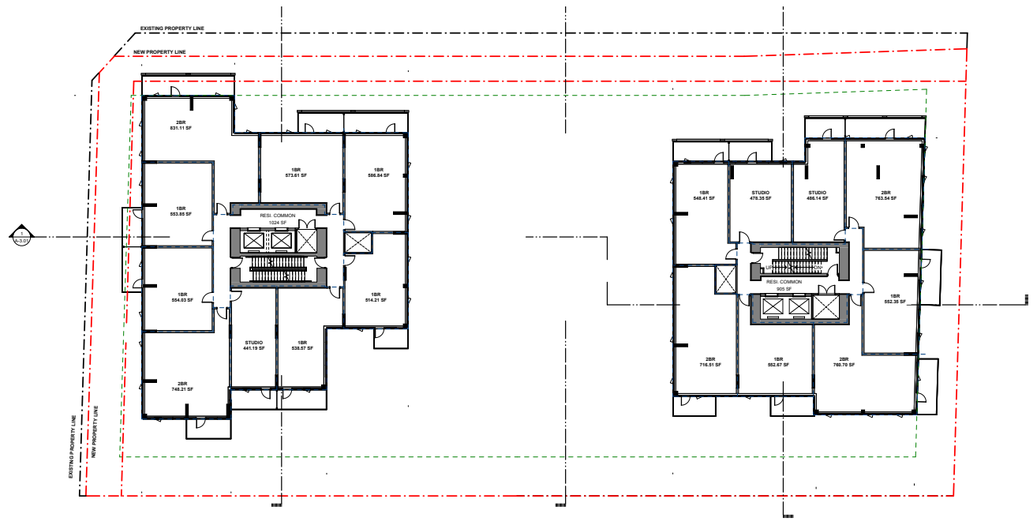
OVERALL L1 PLAN



OVERALL L02 PLAN

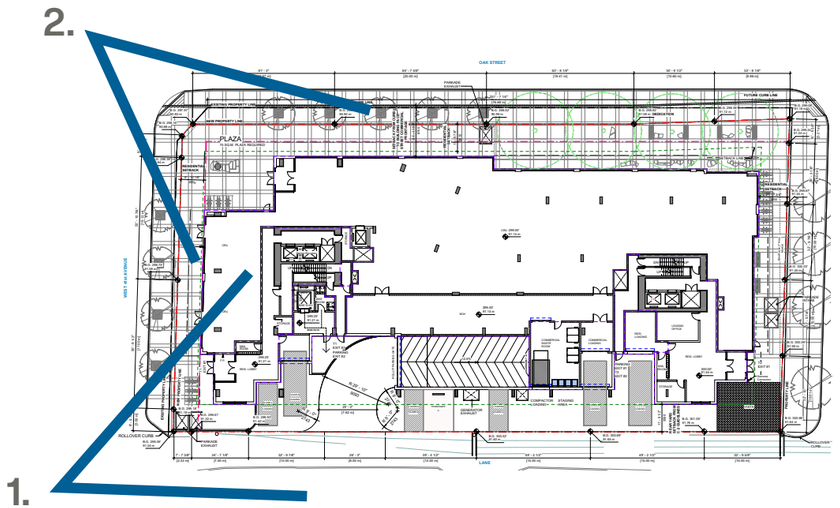


OVERALL L08-17 PLAN



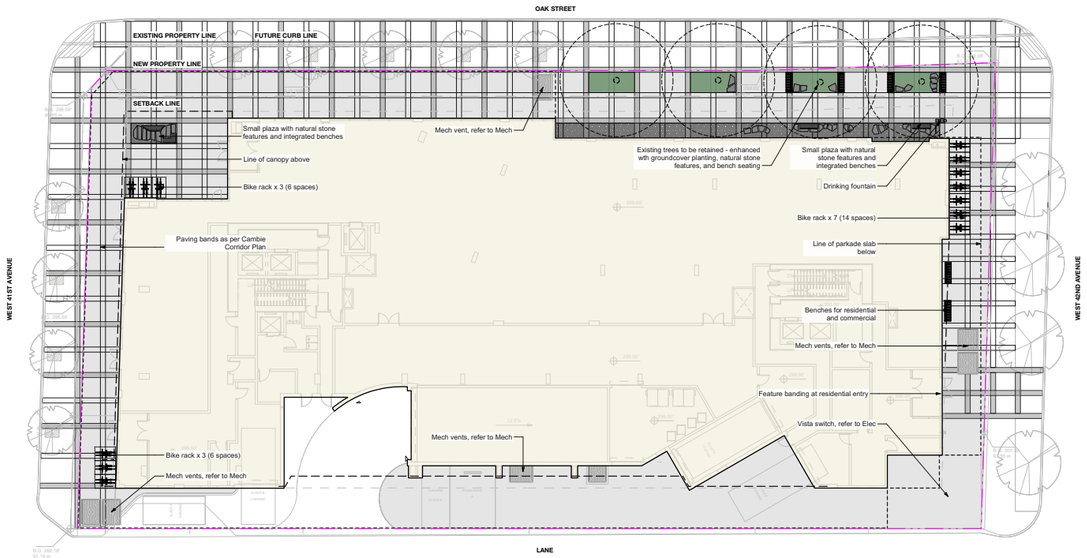
Ground Level View

1. View at 41st Street towards SouthEast

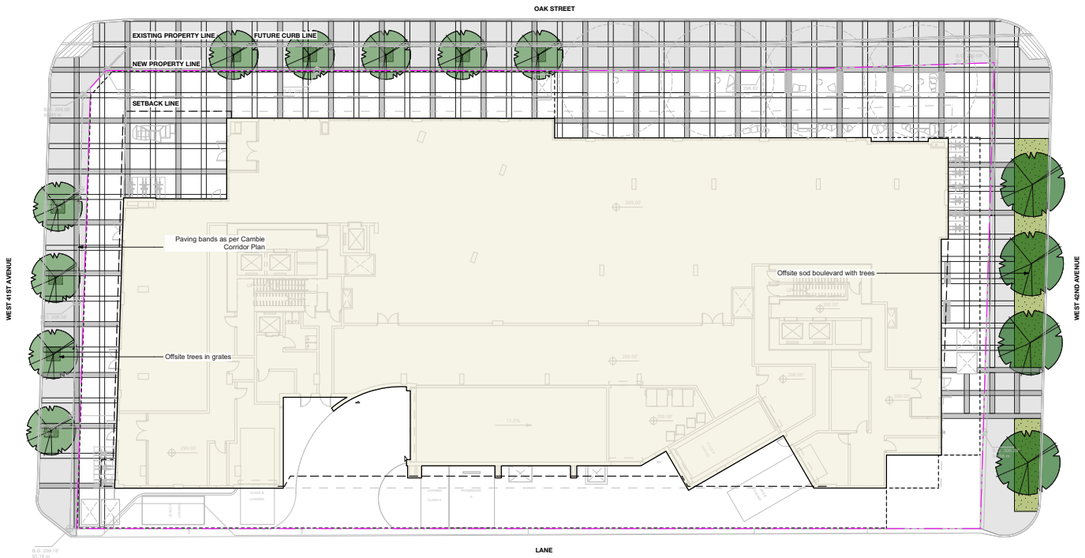


2. View at 41st Street towards SouthWest

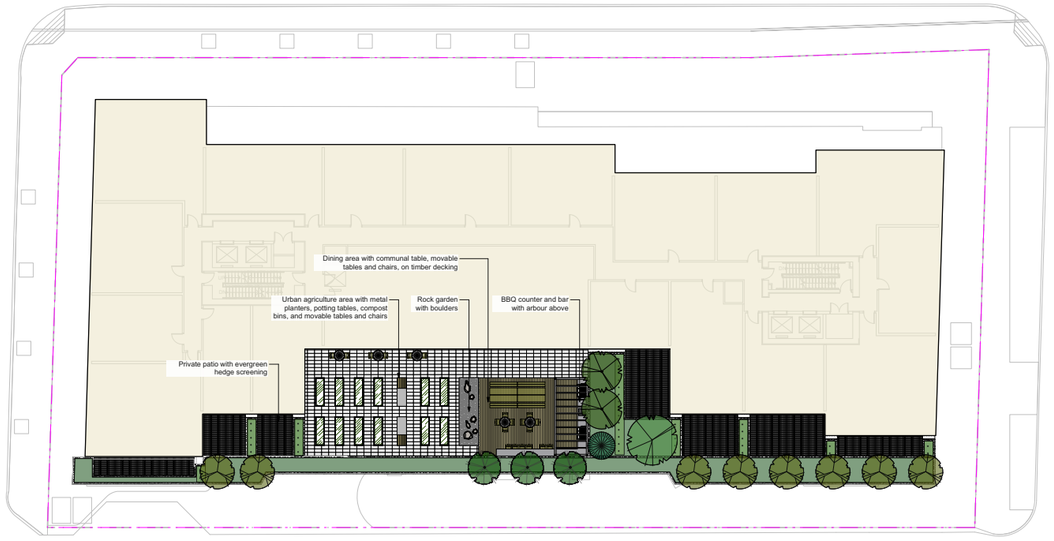
Landscape Design - Plans



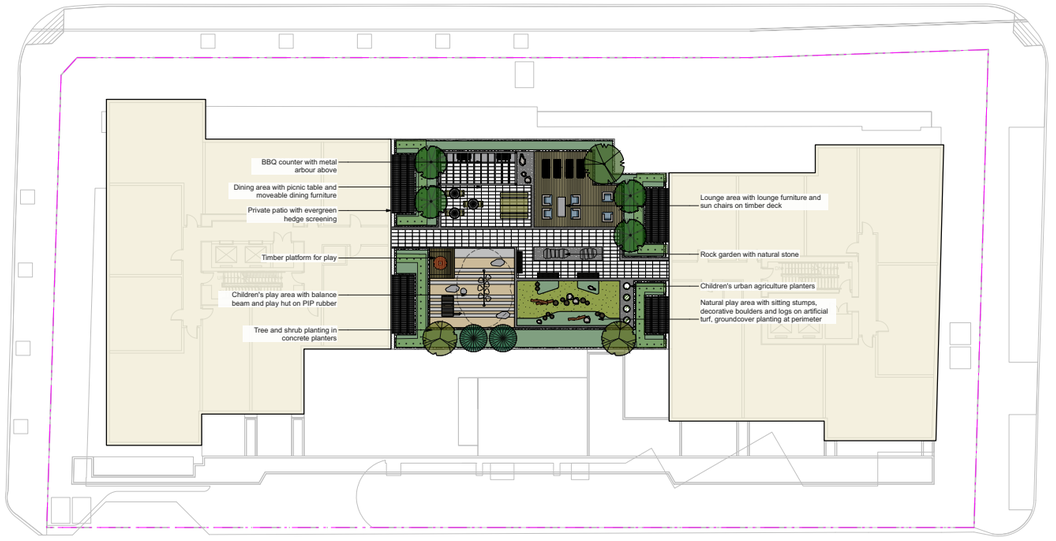
OVERALL L01 PLAN



OVERALL L07 PLAN



OVERALL L02 PLAN



OVERALL L07 PLAN

Material Board

AL.01	Metal (Grey)	1
AL.02	Metal (White)	2
WD.01	Wood Like Soffit	3
SP.01	Window Wall Spandrel (Dark)	4
G.01	Window Wall Glazing	5
B.01	Brick (Dark)	6

Shadow Studies

Vernal Equinox - March 22nd

10am

12pm

2pm

Summer Solstice - June 22nd

10am

12pm

2pm

Spring Equinox - Sep 22nd

10am

12pm

2pm

Sustainability Measures

Executive Summary

The sustainability measures proposed for this project include:

- Near Zero Emissions Building based on performance limits including: high efficiency cladding/envelope, optimized window wall ratios, enhanced solar shading, high efficiency heat recovery ventilators in units, electric heating and combined electric and gas boilers
- Air Tightness Testing
- Enhanced Commissioning
- Energy System Sub Metering and Reporting
- Calculating Embodied Emissions
- Integrated Rainwater Management and Green Infrastructure

Resiliency Overview

Given Vancouver's local context, natural hazards such as earthquakes, floods, wildfire pollution, and severe weather events are a possibility. This rezoning application has considered these potential risks and hazards and has included features in the building design to ensure the safety of its future occupants.

Structurally, the project has been designed to the latest VBBL Standards, which have stringent seismic requirements providing protection in the case of earthquakes. Located at a high point in local topography, the flood risk is relatively low. However, in the case of extreme weather events, a rainwater management plan has been enacted to slow the release of any water landing on the site. As climate change intensifies, the risk of wildfire and associated reduced air quality increases. The project will incorporate heat recovery ventilation systems with filters providing clean fresh air exchange for internal areas. The building will be equipped with sprinklers and fire alarms throughout, as well as multiple egress systems to provide ample exit paths in the case of a fire event. Illustrated signage will be posted with maps on all floors indicating fire resources and access to egress. In the case of power failure, an emergency generator will be provided and powered by a stored amount of diesel fuel, which can be resupplied in the event of longer failure. The emergency generator will be used to power emergency lighting and systems in the building. Each unit will be provided with a storage area either in-suite or in the parkade, which can be used to store emergency supplies.

As per VBBL requirements, the project's envelope design will mitigate the impacts of heat due to higher average temperatures through an enhanced envelope design with attention to thermal performance and air tightness. An envelope engineer and energy modeller have been retained to advise and test the building to confirm the appropriate parameters are applied. Fenestration has been reduced to 50% or less, with balconies sized to allow full use during hotter weather for all occupants. Operable windows have been provided in all rooms to provide natural ventilation; as well as Heat Recovery Ventilation units (HRV), which provide air exchange mechanically.

An accessible roof deck on top of the podium provides additional outdoor space and is located adjacent to indoor amenities with access to washrooms and water resources. The outdoor amenity areas will be landscaped and include shade trees to further provide respite on warmer days. Green roofs will be provided on the non-accessible roof surfaces along with low albedo and planters to help reduce urban heat island effect. At grade, new street trees will be planted along with the retention of the existing 4 mature trees located at the southeast corner of the site. Two new public plaza areas will be added at grade for the enjoyment of the surrounding community. Low maintenance and drought resistant planting will be considered throughout landscaped areas of the project.

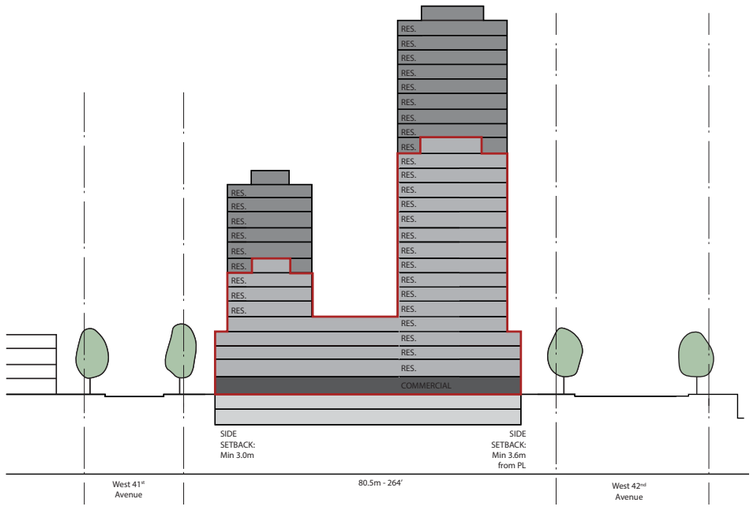
Due to the project's location, is it not prone to flooding or at risk of sea level rise. The project is located several blocks from the highest point in Vancouver and does not have any natural waterways near the building. Emergency and other essential systems are situated below grade and drainage is provided around the building and in the parkade, along with a French drain at the bottom of the first ramp. To reduce impact to the City's drainage system in the event of extreme weather, the project will be provided with greenery on roofs and on the ground plane, along with a cistern tank appropriately sized to slow the water being released off site. A jelly fish system will be provided to remove sediment and chemicals from this water to reduce impacts on City infrastructure.

This proposal's energy compliance, commissioning and reporting of embodied carbon and energy submetering adheres to the requirements of Green Zoning and VBBL and complies with the overall required metrics and performance. Throughout the design process, the project's consultant team will provide detailed attention to life safety and regional impacts to provide a design that will improve resiliency for both the project's occupants, and the City as a whole.

Proposed Divergence from Cambie Corridor Plan

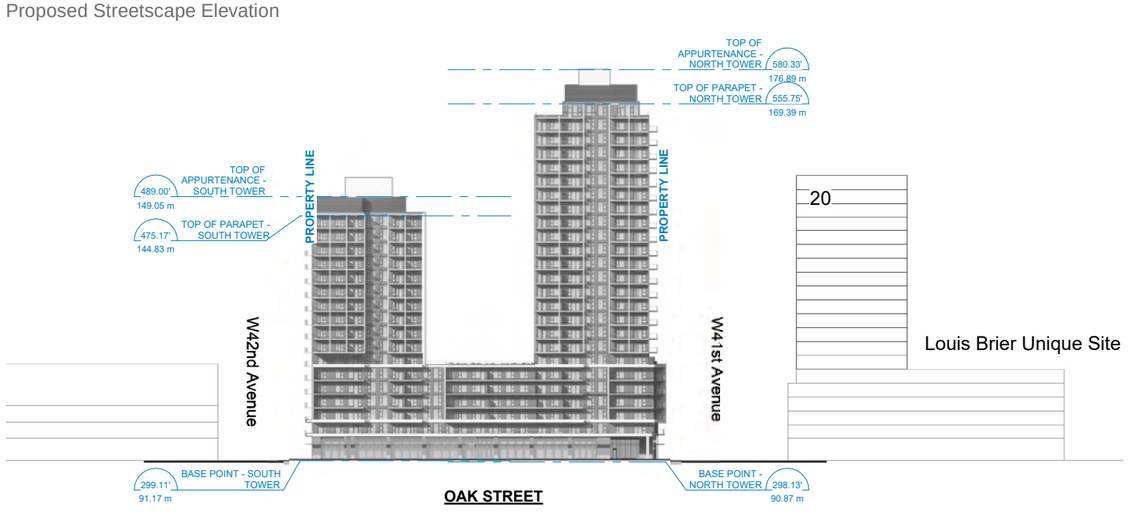
	Cambie Corridor				Proposed		
	Strata + Social Housing Senario		Rental Scenario		Rental		
	Unit	% of Floor Area	Unit	% of Floor Area	Unit	% of Floor Area	
Storeys	16 Storeys and 8 Storeys		16 Storeys and 8 Storeys		25 Storeys and 17 Storeys		% Increase of Units
Market Rental	-	-	180	80%	285	80%	58%
Below Market Rental	-	-	42	20%	72	20%	71%
Strata-Titled	81	70%	-	-	-	-	
Social Housing	178	30%	-	-	-	-	

Proposed from the combine corridor plan through increased density



	Previous Rezoning Application (Aligned with CCP)	Proposed
HEIGHT:		
North	179.46ft(54.70m)	257.62ft (78.52m)
South	98.54ft(30.04m)	176.05ft (53.66m)
DENSITY:		
FSR	4.95 FSR	7.31 FSR
Housing	Market Condo + Social Housing	100% secured rental including 20% City-Wide below market affordability
# of Units	183	357
PARKING AND LOADING:		
Residential	175	158
Vistor	7	18
Commercial	58	48
Passenger Class A	2	3
Loading Class A	0	2
Loading Class B	1	3
Bike	492	696

Proposed Streetscape Elevation

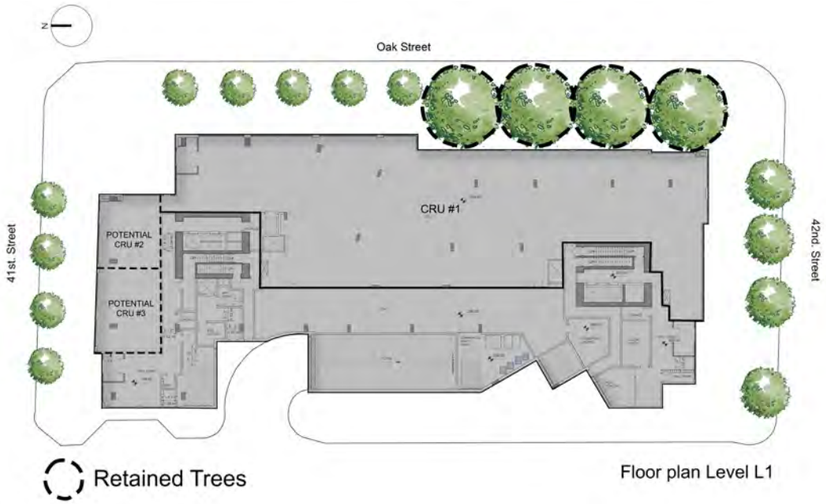


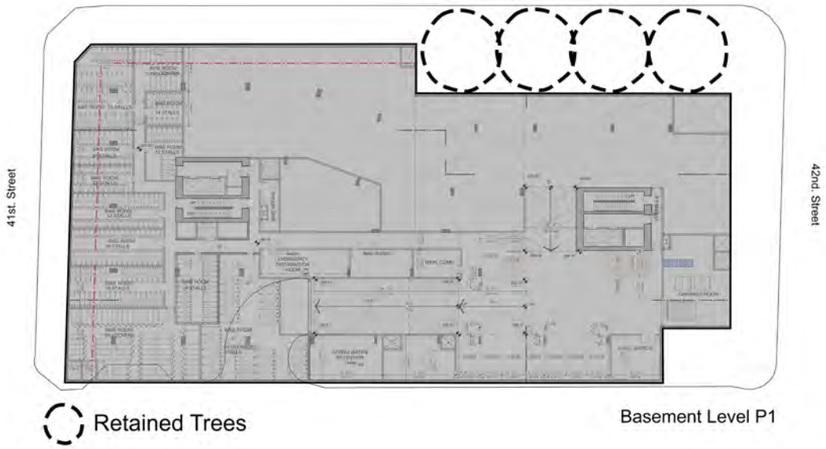
Tree Retention

Renders showing enhanced public realm with retaining trees

Armstrong Maple trees to be retained

Proposed massing form preserving trees





The project's massing and form have been carefully developed to accommodate the preservation of four Armstrong Maple trees that are currently planted along the Oak Street sidewalk. These trees were recognized for their significant contribution to the character of the area and their potential to enhance the sustainability and public realm of the project. With a strong focus on activating the public realm and streetscape in front of the main Commercial Retail Unit (CRU), the project seeks to capitalize on the presence of these trees by incorporating a thoughtful selection of fixtures and furniture. This design approach aims to create a secure and inviting social space that benefits from the protection provided by the canopy of the existing Armstrong Maple trees. By utilizing these trees as a focal point, protected trees not only enhances the sustainability of the development but also fosters an engaging public realm and streetscape experience. The careful placement of fixtures and furniture beneath the canopy of the Armstrong Maple trees creates a safe and comfortable social space, inviting people to gather and interact. This design strategy ensures that the project leverages the unique character and natural beauty of these trees to contribute to a vibrant and inviting public realm.

Response to Previous UDP Comments

UDP Comment

1. Design Development to strengthen the tower expression at 41st [Avenue] and Oak [Street].

Response

Contrasting the bold and horizontally framed expression of the podium, the towers adopt a slender vertical gridded design. This grid composition serves to frame the prominent Oak Street frontage, while also softening the perceived height and mass of the towers.

The towers feature a streamlined aesthetic created by the vertical metal grid applications on the Oak Street frontage and the linear balcony organization on all building faces. The gridded elements provide the towers with a clear identity, resulting in a tidy but noteworthy landmark architectural design.

The materiality of the delicate modern white metal grid is contrasted by the grey-toned glazing, spandrel elements and dark mullions. The material colours are neutral and timeless but have been thoughtfully applied to add punchiness to specific areas of the project.

2020 UDP

2023 UDP

UDP Comment

2. Design Development to podium expression and its relationship to the tower.

Response

The architectural expression has been unified throughout the project. The vertical and horizonal frame form included in the initial concept has been reimagined and strengthened to provide a consolidated façade expression. Each building face features complimentary aspects of vertical and horizontal articulation.

The design has evolved to include metal panel aperture throughout the scheme, creating visual continuity between the podium and towers.

The podium expression features three distinct metal panel box elements that continuously frame Oak Street in a protruding and staggered manner, culminating at the prominent intersection on Oak Street & 41st Avenue. The laneway elevation also includes a central box element on the podium level, connecting it with the theme on the Oak Street frontage.

Strategic subtractions to the mid-sections of the buildings are utilized throughout the project and serve to setback the towers above, providing relief to the massing and generating visual interest. A rich, dark-coloured brick is introduced at-grade to help anchor the podium and provide texture at the pedestrian level.

1: INTIAL 2020 UDP MASSING

3A: PODIUM FORM SUBTRACTIONS

4: NEW 2023 MASSING

2: ADDED HEIGHT & DENSITY TO INITIAL MASSING

3B: TOWER FORM SUBTRACTIONS

5: NEW ARCHITECTURAL EXPRESSION

Response to Previous UDP Comments

UDP Comment

3. Design Development to public realm and storefronts for opportunities to animate and increase the porosity; consider a small corner café use facing the 42nd Ave and [the] Oak sidewalk plaza.

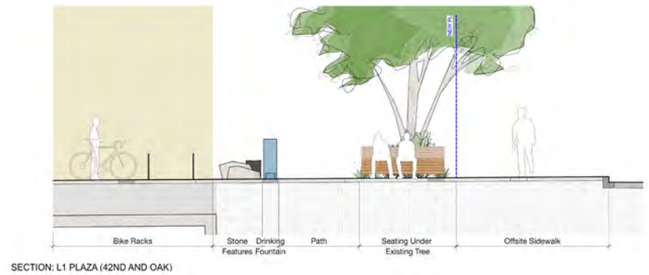
Response

The public realm has been enhanced considerably and the project better accommodates the at-grade human scale of the project. The size of the corner plaza at Oak Street & 41st Avenue has increased, creating more opportunity for an active streetscape experience. The area offers ample room for interesting seating and other furnishings, varying materiality, thoughtful hardscape and landscape, and potentially public art.

There remains to be an openness to varied retail use and programming, along with a commitment to fostering a sense of community and providing nodes for gathering on the street level.

A bold gridded sidewalk pattern has been included, with repeating attractive modern benches along Oak Street. These seating areas will benefit from the canopies provided by the 4 mature street trees that have been retained along the Oak Street frontage.

Retail canopies provide weather protection and the opportunity for retail identification and enhanced architectural expression on the street level. The use of lighting on canopies, soffits, and building faces will assist with placemaking at-grade, while also enhancing CPTED. Retail storefronts will feature expansive glazing to allow for interaction between the interior of the building and the streetscape.

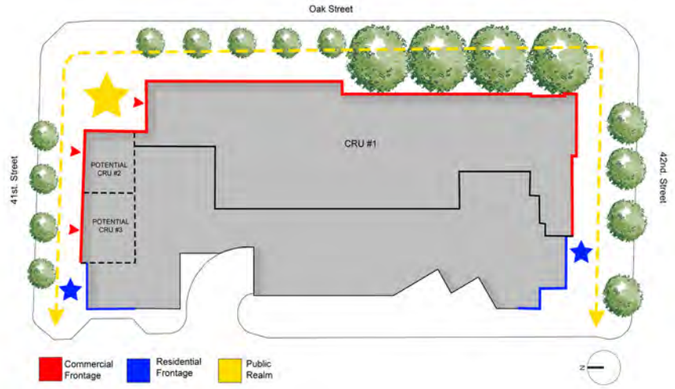


SECTION: L1 PLAZA (42ND AND OAK)

Public realm render looking along Oak Street

Render looking at the public plaza at Oak & 41st intersection

Public realm render looking at the corner of 41st Avenue & Rear Lane



UDP Comment

4. Design Development to animate, activate and green the lane frontage, and improve the relationship to the single family residential to west. Review the parking ramp location to align with lane to the west (behind the RS1 zoned properties).

Response

While the laneway design has been revised to feature an architectural expression more consistent with the other building faces, it offers a slightly more muted appearance with careful consideration of the nearby single-family homes.

The podium level includes one central metal box frame and features a significant setback on the 2nd level where one of the two amenity roofs is located. This serves to break-up the massing on the laneway and punctuate the design.

Glazing wraps the northwest residential lobby, activating the laneway and increasing the CPTED on that plane by increasing the 'eyes on the street' and illumination in the area.

Ample plantings on the Level 2 green roof amenity soften the relationship at the laneway, as does the addition of horizontal wall plantings fronting the laneway, where care has been taken to increase soil depth for this greenery.