PCI
DEVELOPMENTS

MURRAY STREET

Perkins&Will

REZONING & OCP AMENDMENT

May 17, 2021

Perkins&Will

Project team

CLIENT / DEVELOPER	PCI Developments
ARCHITECT	Perkins&Will
LANDSCAPE ARCHITECT	PFS Studio
STRUCTURAL ENGINEER	Glotman Simpson Consulting Engineers
MECHANICAL ENGINEER	Integral Group
ELECTRICAL ENGINEER	Smith + Andersen
CIVIL ENGINEER	Binnie Civil Engineering Consultants
TRAFFIC CONSULTANT	Bunt & Associates Engineering Ltd.
ENVELOPE / ENERGY MODELING	Entuitive
SUSTAINABILITY	Mantle Developments
CODE CONSULTANT	GHL Consultants Ltd
ACOUSTIC CONSULTANT	BKL Consultants Ltd.
SURVEYOR	Butler Sundvick
GEOTECHNICAL ENGINEER	GeoPacific Consultants Ltd.
ARBORIST	Diamond Head Consulting

Contents

01 PROJECT SUMMARY

1.01	Rezoning Letter	6
1.02	Project Statistics - Project Info, FAR & Unit Mix	8
1.03	Project Statistics - Parking	9

02 URBAN CONTEXT & SITE ANALYSIS

2.01	Regional Context	12
2.02	Urban Context	13
2.03	Land Use	14
2.04	Existing Businesses	15
2.05	Green Spaces & Bike Network	16
2.06	Transportation	17
2.07	Views	18
2.08	Regional Diagrammatic Section	19
2.09	Ecological Context	20
2.10	Topography	21
2.11	Neighbourhood Photos	22 - 23
2.12	Orthophoto	24
2.13	Site Opportunities and Constraints	25

03 REZONING RATIONALE

3.01	Overview of Policies	28 - 29
3.02	Existing Zoning	30
3.03	Existing Site Conditions & Existing Zoning	31
3.04	Building Footprint Constraints	32
3.05	Potential Development Scenarios	33
3.06	Adjacency to Rail Line	34

04 DESIGN RATIONALE

4.01	Guiding Principles	38 - 39
4.02	Guiding Principle: Active Streetfront	40 - 41
4.03	Guiding Principle: Efficient Planning	42 - 43
4.04	Guiding Principle: Provide Livable Homes	44 - 49
4.05	Guiding Principle: Riparian Area	50 - 51
4.06	Massing Response Summary	52 - 53
4.07	3D Views	54 - 57

05 SUSTAINABILITY

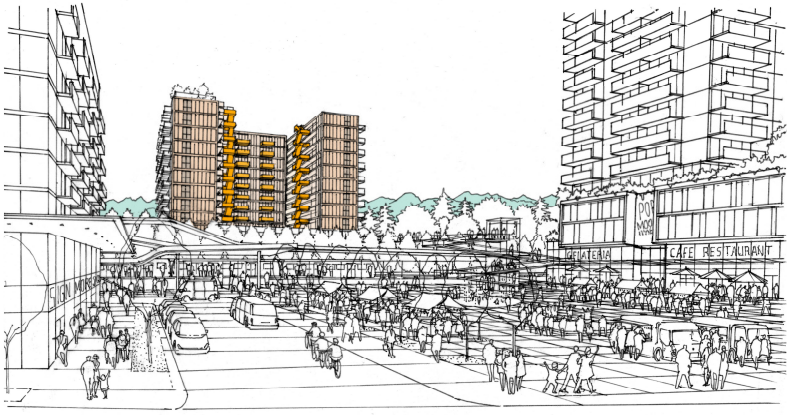
5.01	Overview	60 - 61
5.02	Embodied Carbon	62

06 ARCHITECTURAL DRAWINGS

Context Plan	RZ-010
Setbacks Plan	RZ-013
Site Plan - Grade	RZ-016
Site Plan - Roof	RZ-017
Shadow Study	RZ-030
Overall Parking Plan - Level P3	RZ-100
Overall Parking Plan - Level P2	RZ-101
Overall Parking Plan - Level P1	RZ-102
Floor Plan - Level 01	RZ-103
Floor Plan - Level 02	RZ-104
Floor Plan - Level 03	RZ-105
Floor Plan - Level 04 - 12 typ.	RZ-107
Floor Plan - Amenity Roof Plan	RZ-108
Building Elevations - North	RZ-300
Building Elevations - South	RZ-301
Building Elevations - East & West	RZ-302
Building Elevations - East & West Courtyard Wings	RZ-305
Building Elevations - East & West Courtyard Centre	RZ-306
Building Sections	RZ-350

APPENDICES

1.1 Architectural drawings
1.2 FAR drawings
2.1 Site profile
3.1 Traffic report and plans
4.1 Site survey
5.1 Arborist report
6.1 Civil drawings
7.1 Landscape drawings
8.1 Sustainability report card
8.2 Mantle Developments Embodied Carbon Report
8.3 Building Energy Performance Design Guidelines Checklist
8.4 Proposed Waste Management Strategy



Sketch - View from Future Public Plaza at Moody Centre Station, View to Mountains Beyond

Section 01
PROJECT SUMMARY

Contents

1.01 Rezoning Letter
1.02 Project Statistics - Project Info, FAR Summary & Unit Mix
1.03 Project Statistics - Parking

Section 01 | Project Summary

1.01 Rezoning Letter

We are pleased to submit this Rezoning Application and OCP Amendment Application for 2933, 3001, & 3005 Murray Street. This application has been developed within the policy context of the City of Port Moody. Relevant policies include the 2017 City of Port Moody Official Community Plan, the City of Port Moody Zoning Bylaw, The Port Moody Climate Action Plan, the City of Port Moody's Interim Affordable Housing Policy, and the City of Port Moody's Community Amenity Contribution and Density Bonus Policy.

Located on Murray Street, directly adjacent to Moody Centre Station, across the street from Rocky Point Park and one block from Brewery Row, the site is currently zoned as Light Industrial. The project has the opportunity to help establish a new community by proposing smart growth, providing housing density, public amenities, and mixed employment space that promote and enhance a pedestrian-oriented urban landscape.

The proposed development includes a 12-storey mass timber mixed-use building with rental residential, mixed employment, and an artist studio, as well as several public amenities including a riparian area along with the daylighting of Dallas Creek and a building design that anticipates a future pedestrian overpass, creating a link across the rail lines from downtown Port Moody to Murray Street and the waterfront.

REZONING INTENT:

Adhering to the intent of the Official Community Plan, this mixed-use development includes a 12-storey building with a ground floor mixed-employment space, intended to suit the character of Murray Street. The 2nd floor level includes indoor amenity space for residents, residential units, and residential storage. The 3rd floor level - the top of the podium - includes an outdoor courtyard space and indoor amenity space for residents, as well as garden flats. The residential floors feature a majority of units as dual-aspect homes, providing exceptional access to daylight and views. 207 rental homes are provided, including 10% below market rental and 40% adaptable rental homes.

At the ground floor, a service lane provides access to underground parking, loading, and waste / recycling areas, ensuring that Murray Street is optimized as a vibrant streetscape. Two loading bays will be provided for the mixed employment space and residential units, 318 long term bicycle parking spaces, 10 short term bicycle parking spaces, and 149 parking stalls are included.

The development proposes an increase in allowable height to 12 stories in order to maintain an FSR of 3.01, which would be achievable with a 6 story building across the entire site area. In order to allow for the daylit creek, adjacent riparian area, and future pedestrian bridge area, this development stacks the density on one half of the site.

SUSTAINABILITY MEASURES:

The proposal intends to focus on being a leader in terms of reduction of embodied carbon. The proposed building has a mass timber primary structural system, and the design team will continue to analyze and develop strategies to further reduce the embodied carbon levels. The proposal also demonstrates ecological initiative by including a new daylighted section of Dallas Creek - which will be Salmon-Safe Certified - and adjacent riparian area.

The proposal intends to meet and exceed the current BC Energy Code requirements indicated for rezoning submissions by the City of Port Moody by meeting the requirements for Step 3, with a low carbon energy system.

With its ideal location next to the West Coast Express and Skytrain, the proposal will encourage alternative transportation methods, lowering greenhouse gas emissions.

BENEFITS:

Community benefits include a new daylighted section of Dallas creek, rehabilitated riparian area, and an artists' studio support the goals of The Community Vision for Moody Centre (2017). The project also offers a development that provides smart growth, supporting regional and local targets for transit oriented development. Adding necessary rental housing adjacent to a transit station, while enhancing the urban streetscape of Murray St and provided mixed employment space, the project promotes a sustainable neighbourhood for the future of Port Moody.

Section 01 | Project Summary

1.02 Project Statistics, FAR Summary & Unit Mix

PROJECT INFORMATION

PROJECT NAME	PCI MURRAY STREET
CIVIC ADDRESS	2933, 3001, 3065 Murray Street, Port Moody, BC
LEGAL DESCRIPTION	Parcel 1 District Lot 224 Plan BCP59862 Lot B1 District Lots 190 and 201 Plan 59472
CURRENT ZONING	M1 (Light Industrial)
PROPOSED ZONING	CD
COMMUNITY PLAN	City of Port Moody Official Community Plan, 2017
PRIMARY APPLICABLE CODES:	City of Port Moody Bylaw, 2018 British Columbia Building Code 2018

SITE DIMENSIONS	183.79E m (2'75'40") x 50.299m (165')
SITE AREA (GROSS)	45,057 sf (1.034 acres)
SITE AREA (NET)	23,165 sf (0.532 acres)
FLOOR AREA RATIO - GROSS SITE	3.01 (proposed)
SITE COVERAGE	44.92% (proposed)

SETBACKS

	MIN REQUIRED	PROVIDED
EAST	0 m	33 m (108') (30m for Ripanian area, with 3m Metro Vancouver maintenance access)
WEST	0 m (19' - 8") (3 m (9' - 10") from underground sewer main)	5 m (19' - 8") (3 m (9' - 10") from underground sewer main)
NORTH	0 m 1.2 m at underground parking (Bylaw Section 6.5)	0 m from North property line 1.2 m at underground parking (Bylaw Section 6.5)
SOUTH	0 m (Bylaw Section 12.5.5.1)	5 m from South property line, at West side (at new underground sewer main location)

	MAX ALLOWED	PROVIDED
BUILDING STOREYS	6	12
MAX BUILDING HEIGHT	N/A	39 m (128')

FAR SUMMARY

GROSS SITE AREA = 4,186 m² 45,057 SF NET SITE AREA = 2,152 m² 23,165 SF

FLOOR AREA RATIO			
PROVIDED RATIO		PROVIDED AREA	
RESIDENTIAL **	2.91 (Gross site)	ARTIST'S STUDIO	1017.53 SF	94.53 m²
MIXED EMPLOYMENT	0.19 (Gross site)	MIXED EMPLOYMENT	8453.16 SF	785.01 m²
ARTIST'S STUDIO	0.02 (Gross site)	RESIDENTIAL	139530.65 SF	12963.90 m²
TOTAL	**3.01 (Gross site)**	TOTAL BELOW MARKET RENTAL EXCLUSION *	149,001.81 SF -10,810 SF	13844.49 m² -1,166 m²
		TOTAL FAR AREA:	**136,211 SF**	**12,654 m²**

* NOTE: 10% BELOW MARKET RENTAL UNITS
** NOTE: RESIDENTIAL FAR WITH EXCLUDES BELOW MARKET RENTAL AREA

RESIDENTIAL RENTAL - UNIT MIX

UNIT TYPE	COUNT	% PROVIDED
1 BED	159	62.87%
2 BED	48	23.19%
3 BED	3	1.60%
STUDIO	16	9.7%
BLDGS. TOTAL	227	100%

NOTE: 10% below market rental units

Section 01 | Project Summary

1.03 Vehicle and Bike Parking

This proposal supports transit oriented development and encourages alternative transportation methods.

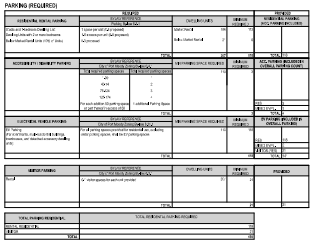
Long term bike storage - including 318 bike parking spaces as well as supporting facilities including a bike repair station and wash station - are provided.

Other strategies to encourage transit and alternative transportation use will be explored by the team as the proposal moves into future stages.

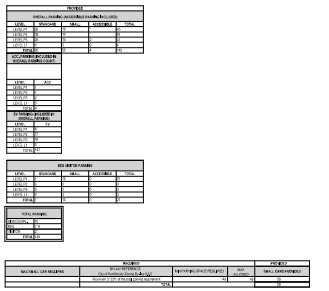
A detailed report and summary is provided in the report by Bunt & Associates Engineers.

RESIDENTIAL RENTAL PARKING

PARKING (REQUIRED)

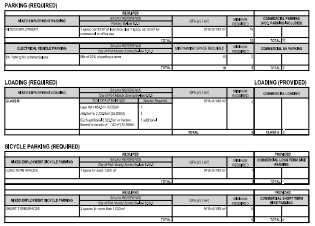


RESIDENTIAL + MIXED EMPLOYMENT PARKING SUMMARY



MIXED EMPLOYMENT PARKING

PARKING (REQUIRED)



LOADING (REQUIRED) / LOADING (PROVIDED)

BICYCLE PARKING (REQUIRED)

RESIDENTIAL BIKE PARKING

BICYCLE PARKING (REQUIRED)

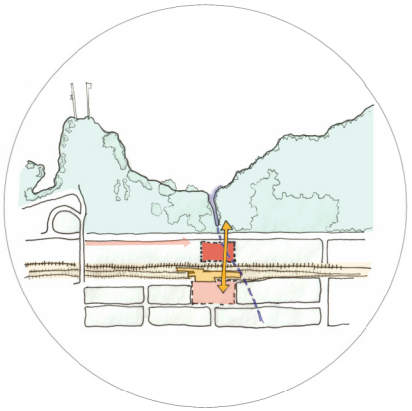


Diagram - Urban & Site Context

Section 02
URBAN CONTEXT & SITE ANALYSIS

Contents

2.01 Regional Context
2.02 Urban Context
2.03 Land Use
2.04 Existing Businesses
2.05 Green Spaces & Bike Network
2.06 Transportation
2.07 Views
2.08 Regional Diagrammatic Section
2.09 Ecological Context
2.10 Topography
2.11 Neighbourhood Photos
2.12 Orthophoto
2.13 Site Opportunities & Constraints

Section 02 | Urban Context & Site Analysis

2.01 Regional Context

The proposed project site is located on the South bank of Burrard Inlet, in the City of Port Moody. The site is directly adjacent to one of two transit stations in Port Moody - Moody Centre Station - providing connections to Metro Vancouver.

Site Location Plan, with Transit Stations

Section 02 | Urban Context & Site Analysis

2.02 Urban Context

Located just north of Moody Centre transit station and the rail lines, the proposed development has an opportunity to act as a gateway and link between Moody Centre and the vibrant public spaces and waterfront of Rocky Point Park and Murray Street.

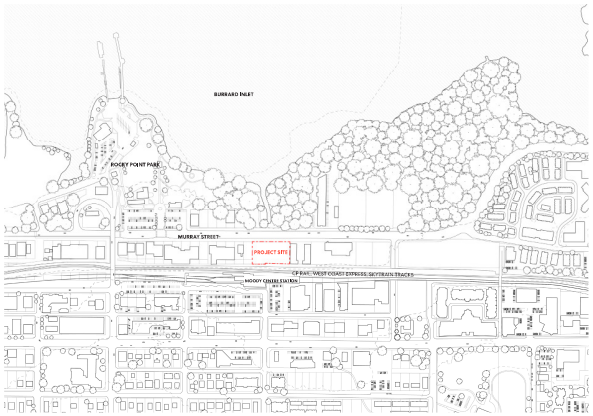


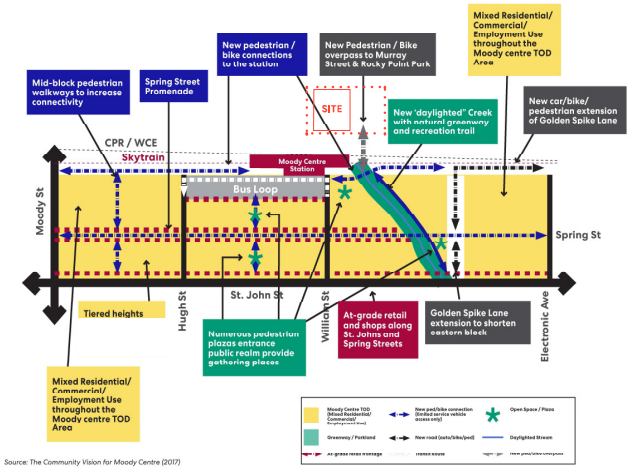
Figure 4.2.1 Site Plan of Existing Context

Section 02 | Urban Context & Site Analysis

2.03 Land Use

New developments along Murray Street and in the proposed Moody Centre transit oriented development area have the potential to transform Port Moody's downtown into a walkable district that prioritize the public realm and are enhanced by the addition of housing, amenities, and commercial spaces.

The development at Murray Street will align with the future pedestrian overpass connection to Murray Street and will propose a building that enhances the view from the future public plaza at Moody Centre Station while maintaining views to the mountains beyond.



Source: The Community Vision for Moody Centre (2017)

Section 02 | Urban Context & Site Analysis

2.04 Existing Businesses

Currently, the neighbourhood has a variety of commercial, retail, and light industrial spaces. Murray Street has an industrial heritage, and is home to many light industrial businesses. One block West of the proposed project site, Murray Street has evolved with a vibrant streetfront created by an influx of breweries. Brewery Row - along with providing popular commercial space - is also activated with food trucks frequently parked along the street. Rocky Point Ice Cream Shop also adds to the active public space along Brewery Row.

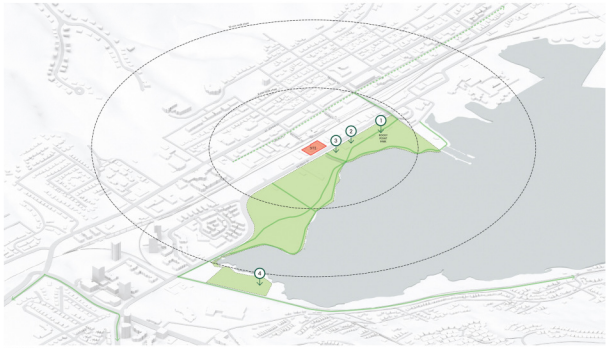
Legend

Section 02 | Urban Context & Site Analysis

2.05 Green Spaces & Bike Network

Murray Street currently experiences a high volume of vehicular traffic, with motorists using Murray Street as a connection between Guildford Way and the Barnet Highway. Recent upgrades to Murray Street include a new protected bike lane and upgrades to the sidewalk along the North side of Murray Street.

Pedestrian and bike trails run through Rocky Point Park and along the waterfront, providing access to various highly popular public outdoor amenities in Port Moody, as well as recreation opportunities.



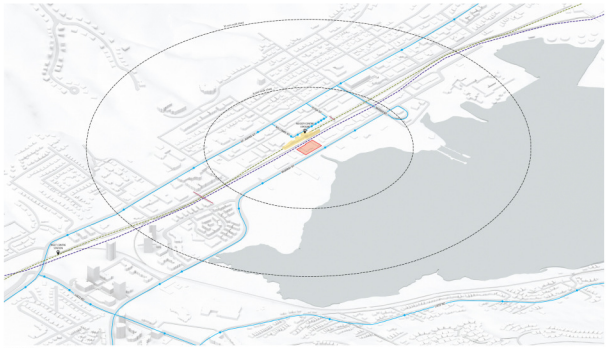
Legend

- Dedicated Bike Lanes
- Bike Friendly Lanes
- 1 Water Park
- 2 Sk8 Park
- 3 Dog off-leash Park
- 4 Noon Creek Hatchery

Section 02 | Urban Context & Site Analysis

2.06 Transportation

The proposed project site is ideally located for connection to public transportation. Moody Centre Station is located directly south of the project site with access to the Translink Evergreen Line and West Coast Express. There are also numerous bus lines that run along Murray Street and John Street.



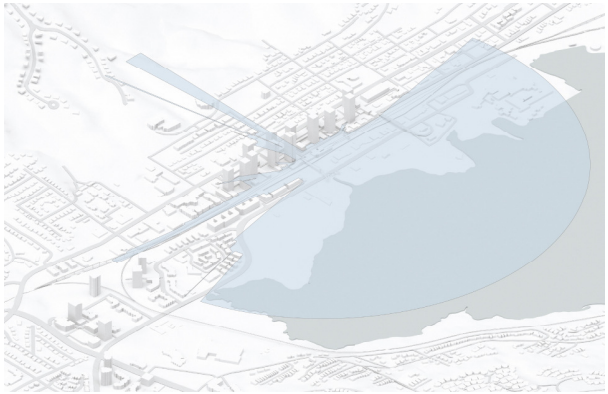
Legend

- West Coast Express
- Evergreen Line
- Bus Line
- Bus Stop

Section 02 | Urban Context & Site Analysis

2.07 Views

To the north of the proposed site, the building will have access to sweeping views of Burrard Inlet and the mountains beyond, with Rocky Point Park in the foreground.

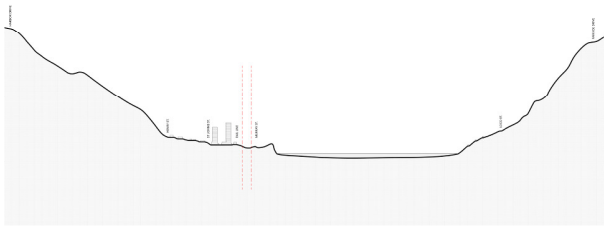


View Diagram, with future TOD development
View from 30' h.

Section 02 | Urban Context & Site Analysis

2.08 Regional Diagrammatic Section

At a regional scale, Port Moody is bowl shaped; with mountains at the north and south sloping down towards Burrard Inlet at the centre. The project site is located close to Burrard Inlet, with the opportunity for optimal views to the water as well as the mountains beyond.

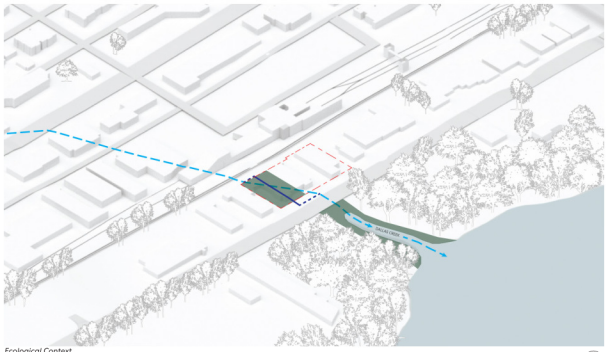


Diagrammatic Section: North - South, Port Moody Area

Section 02 | Urban Context & Site Analysis

2.09 Ecological Context

Dallas Creek currently runs in an underground culvert under the site, daylighting at the North side of Murray Street and connecting to Burrard Inlet. The project proposes to daylight a section of the fish-bearing creek on the site and provide a new riparian zone around the new exposed creek. The daylighting of the creek will meet Salmon-Safe Certification standards.



Ecological Context

Legend

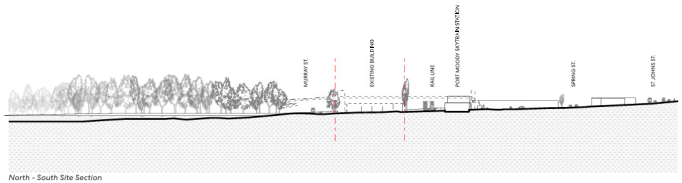
- Existing Creek Path (underground)
- New Creek Path (underground)
- New Creek Path (Daylit)
- Riparian Zone

Section 02 | Urban Context & Site Analysis

2.10 Topography

The site has a 1.5m grade change from the South side at the rail line, lower down to Murray Street at the North side.

The site is relatively flat in the East / West directions.



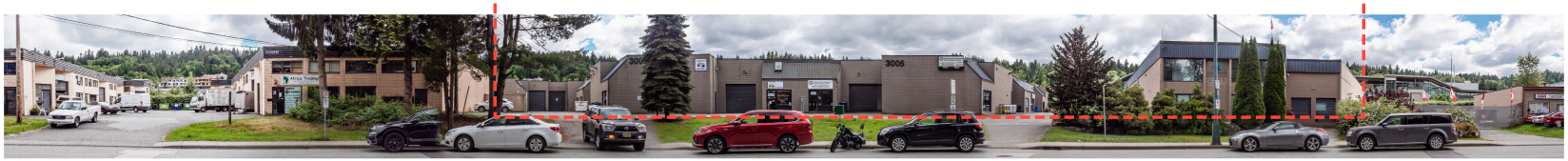
North - South Site Section

Section 02 | Urban Context & Site Analysis

2.11 Neighbourhood Photos

The neighbourhood currently consists primarily of one and two storey light industrial buildings. One block to the West of the site, breweries and food trucks line the street. Rocky Point Park and Dallas Creek, where it connects to Burrard Inlet, are directly across the street from the site at the North side of Murray Street.

Key plan



A. Looking towards South on Murray Street

View B: Showing Adjacent Bike Path and Transit Stops

View C: Indicating Creek Edge and its Relationship to Burrard Inlet

View D: Looking towards Burrard Inlet and Rocky Point Park Pier

View E: Showing Rocky Point Ice Cream and Rocky Point Park

View F: Approaching the Site from the East

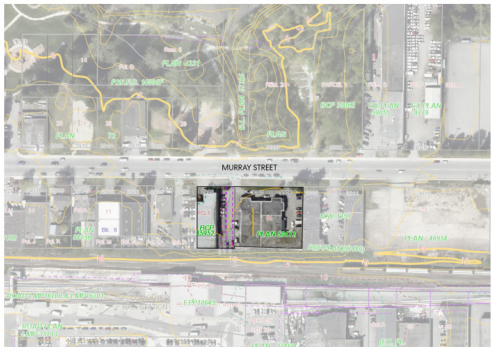
View G: Showing Crossing at Murray Street to Rocky Point Park

Section 02 | Urban Context & Site Analysis

2.12 Orthophoto

The orthophoto illustrates the existing site conditions as previously described.

A summary of the primary site conditions and contraints are presented on the following page.



Orthophoto

Section 02 | Urban Context & Site Analysis

2.13 Site Opportunities and Constraints

The analysis of the existing site and urban context provides a basis for the design proposal. The following summary categorizes the site opportunities and constraints as follows:

Community Connection

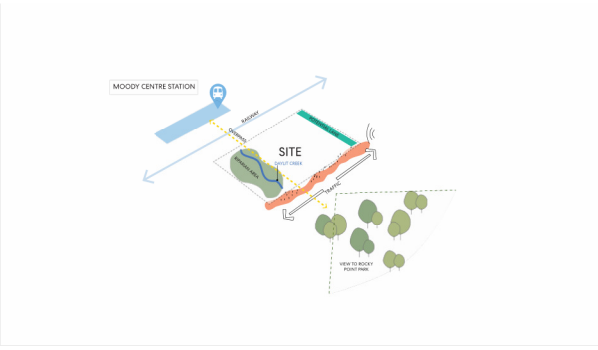
With Moody Centre Station and the future TOD area located to the south of the site, and limited pedestrian links to public outdoor amenity spaces across Murray Street, the site provides an opportunity to create a pedestrian-focused connection. across the site.

Urban Realm

With Brewery Row to the west, there is an opportunity to extend an active streetfront along Murray St with this development. Because of the required setback for the underground sewer line at the West side of the site, there is an opportunity to create a service and vehicle access lane, allowing for the Murray St frontage to be entirely occupiable, active space.

Views and Acoustics

The views from the project site offer an opportunity for highly livable homes that celebrate the natural surroundings of the Port Moody area. The railway at the south of the site requires that the architectural interventions be carefully considered, to ensure the comfort and livability of the homes and shared spaces.



Site Opportunities and Constraints Diagram, View Looking South West

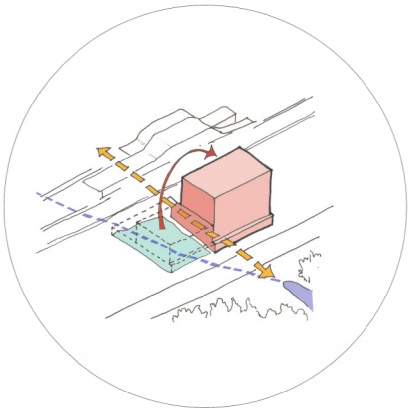


Diagram - Rezoning Rationale

Section 03
REZONING RATIONALE

Contents

3.01 Overview of Policies
3.02 Existing Zoning
3.03 Site Conditions & Proposed Dedications
3.04 Building Footprint Constraints
3.05 Potential Development Scenarios
3.06 Adjacency to Rail Line

Section 03 | Rezoning Rationale

3.01 Overview of Policies

The project proposal has been developed within the policy context of the City of Port Moody, and the following policies:

The City of Port Moody Official Community Plan

Anticipates a vibrant mixed-use Moody Centre and Murray Street Boulevard area.

Proposal Response:

The proposal aims to meet the intent of the OCP by creating a vibrant mixed-use development that will enhance Murray Street and create a pedestrian connection to Moody Centre Station.

Because of the reduced buildable site area - as a result of the additional community amentities as well as the proposed sustainable construction methods provided by the development - additional height is proposed to provide required density for a viable development.

The City of Port Moody's Interim Affordable Housing Policy

Seeks to contribute to an economically diverse and inclusive City Centre.

Proposal Response:

The proposal intends to contribute to an economically diverse and inclusive City Centre by providing necessary rental homes, including 10% below market rental. The development will provide much needed density that encourages the use of transit, while offering significant community amentities in the form of the daylighting of Dallas Creek with riparian area.

The City of Port Moody Zoning Bylaw No. 2937, March 10, 2020

Regulates development in Port Moody.

Overall Proposal Response:

The proposal will meet the intent of the Bylaw. This proposal suggests that a new CD zone be created for this development.

Proposed parking ratios:

With the close proximity of Port Moody Station, as well as the desire to encourage car-share and sustainable transportation, this proposal suggests the following parking ratios:

Market Rental Residential: .6 stalls / home

Below Market Rental Residential: .3 stalls / home

Residential Visitor: 0.1 stalls / home

Adaptable Housing:

The proposal will provide 40% adaptable homes, and will comply with 5.2.1 Adaptable Housing Requirement, per the Bylaw.

Riparian Area:

As discussed with the City of Port Moody, the proposal suggests a 13m setback on either side of the daylight creek, with a 4m waterway (30m total setback from East property line). A 3m wide maintainance corridor is provided at the west side of the riparian area. The proposal will meet ths intent of 5.4 Streamside Protection, per the Bylaw.

The City of Port Moody's Community Amenity Contribution and Density Bonus Policy

Leverages new development to enable the creation of community amenities

Proposal Response:

The proposal proposes a density greater than 2.5 FAR, as defined by section 7.1 in the Port Moody Bylaw. Community amenities in the form of the daylighting of Dallas Creek and adjacent riparian area, as well as an artists' studio space at the ground level are included as a part of the proposal. The proposal suggests that providing these community amenities meets the intent of this policy.

The Port Moody Climate Action Plan

Focuses on managing growth to reduce emissions through managing development patterns and improving the energy performance of buildings.

Proposal Response:

The proposal will meet the intent of this policy by providing a building that meets Step 3 of the BC Energy Code with a low carbon system.

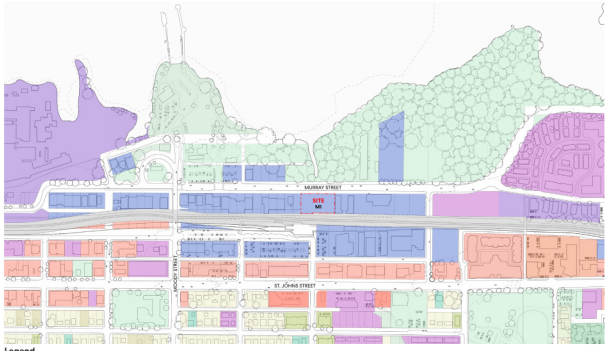
The proposal also intends to demonstrate leadership in reduction of embodied carbon, and has completed a preliminary Life Cycle Analysis to demonstrate the benefits of using mass timber as a primary structural material.

For details, see Section 05: Sustainability and attached Sustainability Report Card.

Section 03 | Rezoning Rationale

3.02 Existing Zoning

The project site is currently zoned as M1 Light Industrial. The proposal is looking to change the zoning to CD, providing a mixed-use building with rental residential homes and mixed-employment space.



Legend

- M1 LIGHT INDUSTRIAL
- M2 INDUSTRIAL
- PUBLIC SERVICE
- COMMERCIAL
- SINGLE-FAMILY RESIDENTIAL
- CANADA PACIFIC RAILWAY

Section 03 | Rezoning Rationale

3.03 Site Conditions & Proposed Dedications

Lot Dimensions:

85.288 m (279'-10") x 50.299 m (165')

Site Area Gross:

45,057 SF (1.034 Acres)

Site Area Net:

23,165 SF (0.532 Acres)

Existing Zoning:

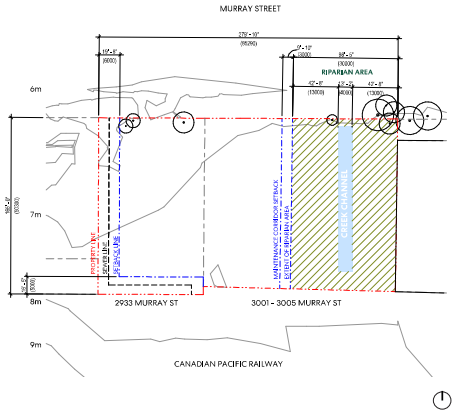
M1 (Light Industrial)

Community Plan:

City of Port Moody Official Community Plan, 2017

Setbacks:

- East: 30m for Riparian area, 33m at ground floor (riparian maintenance corridor)
- West: 6m at ground floor (3m from proposed underground sewer main location)
- North: 0m above ground, 1.2m required at underground parking
- South: 5m at ground floor at West side only (2.5m from proposed underground sewer main location)



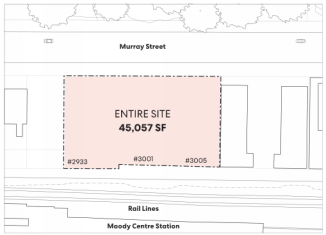
Section 03 | Rezoning Rationale

3.04 Building Footprint Constraints

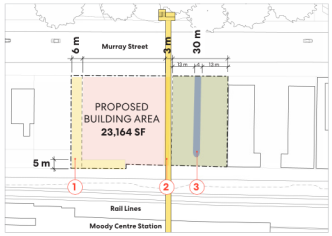
Setbacks & Riparian Area

The proposal daylights a section of Dallas Creek at the east side of the site and provide a new riparian area. Based on previous discussions with the City of Port Moody, the proposal includes a 30m area for the creek and riparian area setbacks, as indicated on "Building Footprint" diagram. To allow for a future pedestrian overpass, as well a maintenance corridor for Metro Vancouver, a 3m setback is provided in addition to the riparian area setback.

With the proposed development, an existing Metro Vancouver underground sewer pipe will be relocated to the West side of the site. In doing so, an SRW is created at the west and south-west sides of the proposed development.



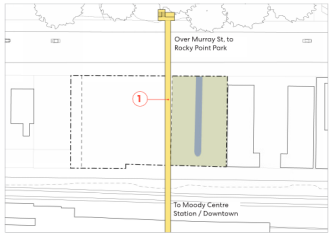
Site Area



Building Footprint Limitations

Legend:

1. Sewer line & SRW
2. Metro Vancouver maintenance corridor
3. Riparian Area (4m channel, 13m setback each side - same as Spring St)



Future Overpass

Future Overpass Legend:

1. 3m wide pedestrian overpass above maintenance corridor

*Note - A 5m wide overpass for cyclists in addition to pedestrians requires the overpass to project 2m over the riparian area

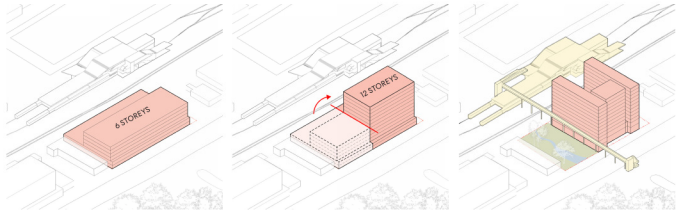
Section 03 | Rezoning Rationale

3.05 Potential Development Scenarios

Density & Community Amenities

The development proposal contributes substantial public amenities to Murray Street and the greater community. If the development were to follow the current Official Community Plan requirements, in order to ensure a viable development, the 6-storey building would cover the entire site area. This proposal increases density at the west side of the site to allow for both the addition of the pedestrian overpass and riparian area, as well as a viable development.

With the close proximity of Moody Centre Station, this site is highly suited to increased density, to provide rental housing and mixed employment space that complements and supports transit oriented development.



6 STOREYS
FULL SITE DEVELOPMENT

12 STOREYS
PROVIDING RIPARIAN AREA

ALLOWANCE FOR FUTURE PEDESTRIAN BRIDGE

Section 03 | Rezoning Rationale

3.06 Adjacency to Rail Line

Translink Adjacent and Integrated Development (AID) Project Consent Process, Guide for Project Owners

Establishes a method of facilitating development adjacent to Translink's infrastructure, to manage and protect its property rights during development.

Guidelines for New Development in Proximity to Railway Operations, May 2013

Provides guidelines for municipalities in reviewing and determining general planning policies when developing on lands in proximity to railway facilities.

Proposal Response:

The proposal shall meet the acoustic requirements set out by the Guidelines, in order to ensure highly livable homes for residents.

In developing the architectural proposal, the design team worked with an acoustic consultant to develop strategies to mitigate the potential acoustic concerns from the rail line.

The building massing and floor plan layouts ensure that living spaces and bedrooms primarily face the east and west directions, away from the direction of the rail lines. Windows at the southern-most face of the building are minimized. The centre mass is located towards the north side of the side, maximizing the distance between the rail lines and the building.

At the 3rd floor courtyard level, a sound wall is provided to minimize rail noise at the exterior amenity space at this level.

The exterior wall assembly and window selection will be developed with the recommendations of the acoustic consultant, in order to meet the performance requirements set out by the Guidelines.

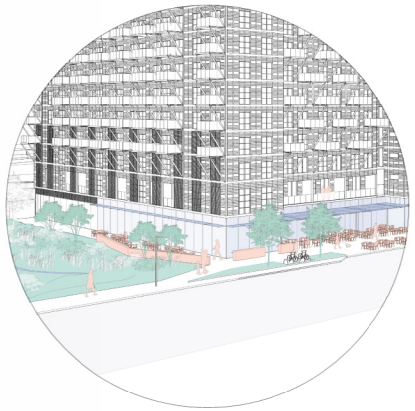


Diagram - Design Rationale

Section 04
DESIGN RATIONALE

Contents

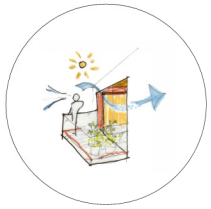
4.01 Guiding Principles
4.02 Guiding Principle: Active Streetfront
4.03 Guiding Principle: Efficient Planning
4.04 Guiding Principle: Provide Liveable Homes
4.05 Guiding Principle: Thoughtful Relationship to Riparian Area
4.06 Massing Response Summary
4.07 3D Views

Section 04 | Design Rationale

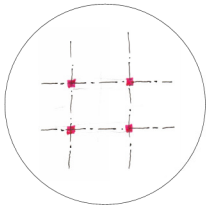
4.01 Guiding Principles

The Proposal will use the following primary Guiding Principles to guide the design development of the proposal: .

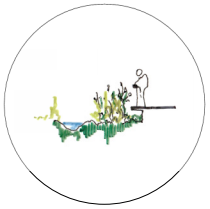
01 **Active Streetfront**



02 **Provide Livable Homes**



03 **Efficient Planning to Optimize for Mass Timber Construction**



04 **Thoughtful Relationship to Riparian Area**

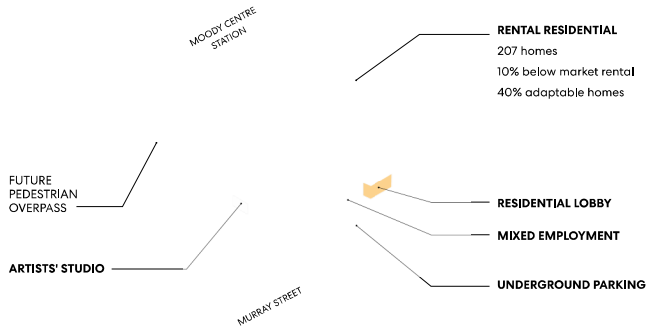
Section 04 | Design Rationale

4.02 Active Streetfront

Program

The development proposal consists of rental residential at the upper floors (including 10% below market rental) and mixed employment space at the ground floors as well as an artists' studio.

By wrapping the Murray St and Riparian frontages of the building with active program - mixed employment and the artists' studio - the proposal aims to activate the streetfront.



Section 04 | Design Rationale

4.02 Active Streetfront

Ground Floor

The ground floor level will be highly transparent, with glass storefront wrapping both the Murray St and Riparian frontages. Entries to interior spaces, as well as the permanent seating space at the centre of the building, will be sheltered from rain with a glass canopy.

View from Murray Street

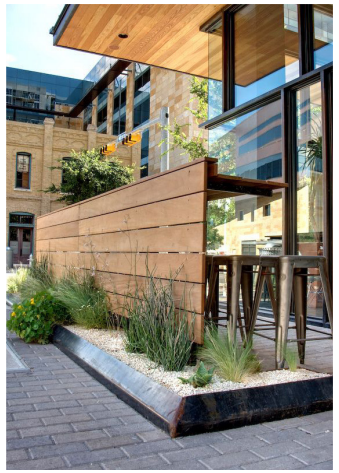
Section 04 | Design Rationale

4.02 Active Streetfront

Streetscape

The Murray Street frontage is redeveloped according to current guidelines and consistent with other nearby developments. A widened pedestrian zone runs across the full frontage, with transitions to adjacent sidewalk alignments both east and west. Retail and residential entries facing Murray Street flank a central recessed outdoor terrace to provide a generous and flexible outdoor seating area with strong relationships to the street and views across to Rocky Point Park.

The proposal suggests several upgrades to the streetscape, including new hardscape and landscape, flexible seating, short term bike racks, and a canopy for weather protection at the Murray St and Riparian area sides of the proposed building.



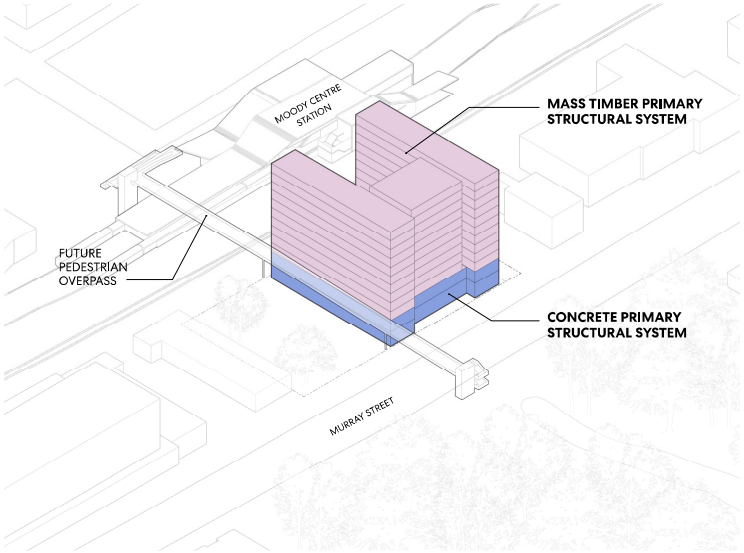
Streetscape Precedent Images

Section 04 | Design Rationale

4.03 Efficient Planning

Structural System

The primary structural system for levels 3 - 12 will be mass timber. Given the courtyard space at the 3rd floor level, level 1 - 2 will be concrete construction, acting as a podium for the mass timber structure above.

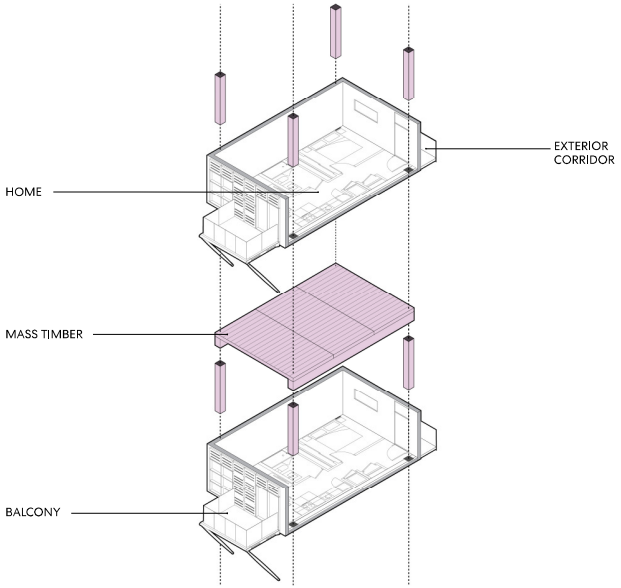


Section 04 | Design Rationale

4.03 Efficient Planning

Mass timber - Modules

In order to ensure maximum efficiency for mass timber construction, the structural module and floor plan has been designed to be optimized for mass timber.



Section 04 | Design Rationale

4.04 Provide Liveable Homes

Building Form

The building form at the residential levels consists of two 'wings' aligned north / south and a centre mass. The wings of the building have single-loaded through units, meaning they have access to light and air on both sides of the home. The centre mass is double loaded, with homes facing either to the view at the north, or to the communal courtyard at the south. The shared corridor will be designed with exterior doors on hold open devices, and ventilation at the corridor side, allowing for fresh air and natural ventilation for these homes as well.

The homes are designed to maximize:

- Natural ventilation / fresh air access
- View equality for all homes
- Access to daylight
- Usable exterior space

Diagram - Natural Ventilation at Levels 03 - 12

Section 04 | Design Rationale

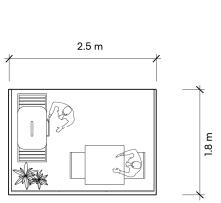
4.04 Provide Liveable Homes

Access to Outdoor Space

In addition to close proximity to public outdoor spaces at Rocky Point Park and shared outdoor spaces at the 3rd floor courtyard and 12th floor rooftop, large private balconies are provided for the majority of homes.

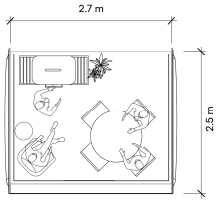
The balcony size is larger than that typically provided in a conventional rental building, allowing for a significant addition of area to each home and providing flexible, private outdoor space for residents.

Balconies at East & West Facades



4.5 m²

Minimum Balcony Size Requirement City of Vancouver



6.75 m²

Proposed Murray St Average Balcony Size

Section 04 | Design Rationale

4.04 Provide Liveable Homes

Resident Courtyard

The south-facing courtyard at the podium at level three provides a large outdoor room with a blend of surface types to accommodate the broadest diversity of uses with a space focused on casual use and social interaction throughout the day and evening. Paved patio space with seating rafts extends directly out from amenity spaces with a portion of weather protection to maximise seasonal use. A children's play space is positioned at the centre with a surround of low feature plantings, and a framing pathway with seating. A final layer of low planters with mounded planting and open canopied trees frames the whole of the courtyard as a single space, and provides necessary buffer from units at this level and a degree of spatial buffer from above.

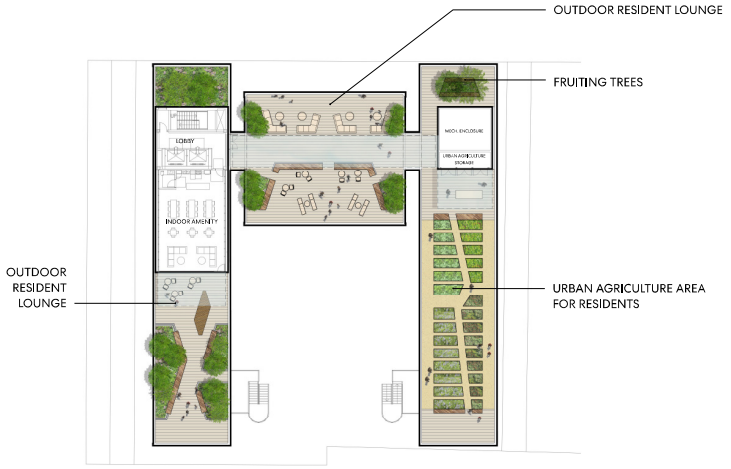
3RD FLOOR COURTYARD LANDSCAPE PLAN

Section 04 | Design Rationale

4.04 Provide Liveable Homes

Rooftops

The three rooftop terraces complete the ensemble of amenity spaces. The west bar provides covered outdoor space extending from the lounge space inside, with a planter flanked pathway with seating edges leading to a south facing overlook. The east bar is dedicated to urban agriculture with a garden amenity shed attached to the mechanical penthouse and weather protected potting table to support a generous provision of raised garden plots along the south end. Fruiting trees are suggested for the north end of the east bar. The central rooftop provides a two-sided outdoor lounge defined by raised planters and a central pergola along the centre. The south terrace is comprised of a perimeter bench with flexible furnishing within, and the north terrace provides groupings of outdoor lounge furniture and potentially firepits, looking out to unsurpassed views to the Inlet. The central rooftop can be reconfigured to suit all manner of events or arrangements.



ROOFTOP LANDSCAPE PLAN

Section 04 | Design Rationale

4.04 Provide Liveable Homes

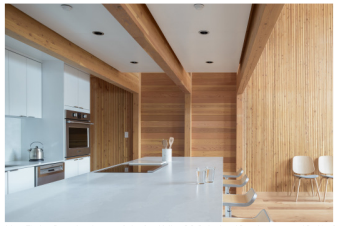
Mass Timber

As the only structural building material that is created by the sun, wood is a unique material that brings us nearer to a building culture that works with natural systems. Wood offers a renewable, low carbon, highly durable, and naturally beautiful building material that has fewer environmental consequences of any other material and has the ability to sequester and store carbon.

The proposal intends to expose the mass timber structure as much as possible, to express the natural characteristics of wood to create a connection with the natural environment. This connection to the natural environment through wood as a building material, in addition to access to views to nature and opportunities for natural ventilation, will have a positive impact on the well-being of the building's occupants.

Mass Timber Precedent Image - Carbon 12, Portland, Oregon, Path Architecture

Mass Timber Precedent Image - SoLo, Soo Valley, BC, Delta Land Development and Perkins&Will



Mass Timber Precedent Image - SoLo, Soo Valley, BC, Delta Land Development and Perkins&Will

Mass Timber Precedent Image - Nexen, Perkins&Will

Mass Timber Precedent Image - House, Spain, Escribano Rosique Arquitectos

Mass Timber Precedent Image - Installation

Cross Laminated Timber

Section 04 | Design Rationale

4.05 Thoughtful relationship to Riparian zone

Ground Floor

The Murray Street frontage is redeveloped according to current guidelines and consistent with other nearby developments. A widened pedestrian zone runs across the full frontage, with transitions to adjacent sidewalk alignments both east and west, with the full grouping of existing trees preserved on the northeast corner. Mixed employment and residential entries facing Murray Street flank a central recessed outdoor terrace to provide a generous and flexible outdoor seating area with strong relationships to the street and views across to Rocky Point Park. The Metro Vancouver right-of-way flanking the east side of the new building has been enhanced as an outdoor terrace wrapping around the side of the building. This patio has been shaped to push out slightly into the creek restoration area to enhance its relationship, enabling visitors to have a greater sense of connectivity with the natural environment while respecting creek protection setbacks.

The west side and south sides of the building are simple urban laneway spaces to provide parking and service access.

GROUND FLOOR LANDSCAPE PLAN

Section 04 | Design Rationale

4.05 Thoughtful relationship to Riparian zone

Riparian Area and Creek

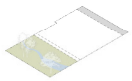
The key feature of the ground floor is the daylighting of Dallas Creek, demonstrating a strong ecological initiative and providing a key landscape expression for the project. As the creek channel will be well below the level of the adjoining public realm, a series of planted terraces will transition in layers up to street level. A mixture of native and restoration planting typologies including trees will be developed for diversity and habitat values, and denser planting provided on the east to provided screening from the existing buildings.

An idea to express rainwater management is under development and is indicated as a series of building integrated downspouts which connect underneath the southern section of the eastside terrace to release rainwater into perched raingardens or wetland like basins before discharge to the daylighted creek.

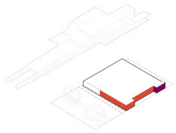
Riparian Area Precedent Images

Section 04 | Design Rationale

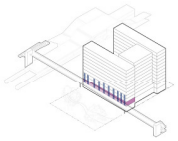
4.06 Massing Response Summary



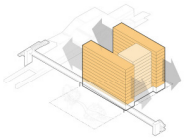
Location of Riparian Zone with Setbacks and Lane Above Existing Sewer Line



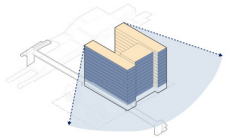
Activation of Streetfront and Riparian Promenade



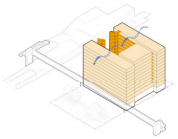
Relationship of Overpass with Amenity Program and Screening for Privacy



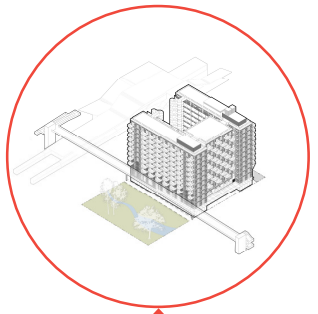
Massing to Emphasize North-South Orientation of the Proposed Overpass



Equality of Views for Homes



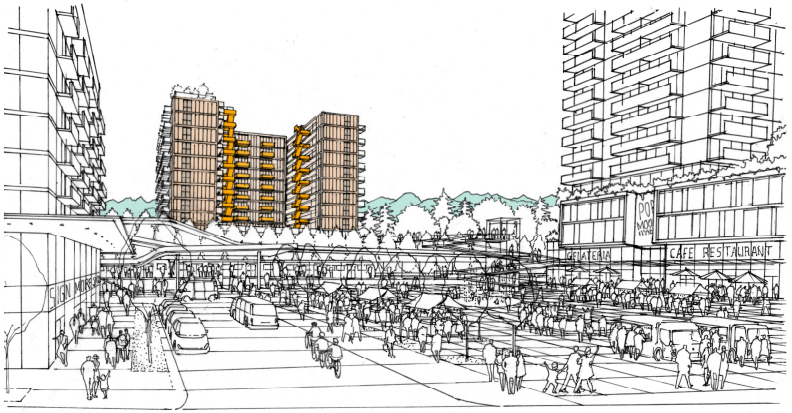
Use of Exterior Corridors and Thru Home Layouts to Optimize Daylight and Cross Ventilation



Massing Response

Section 04 | Design Rationale

4.07 3D Views



Sketch - View from Future Public Plaza at Moody Centre Station, View to Mountains Beyond

Section 04 | Design Rationale

4.07 3D Views

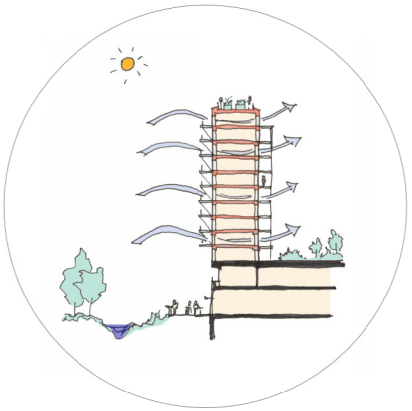


Diagram - Sustainability

Section 05
SUSTAINABILITY

Contents

5.01 Overview
5.02 Embodied Carbon Results

Section 05 | Sustainability

5.01 Overview

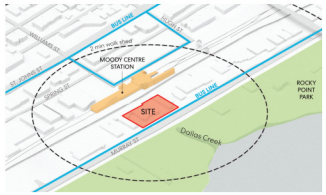
The proposed project aligns with Port Moody's Master Transportation Plan (**TransPort Moody**) as well as Port Moody's **Climate Action Plan** and declaration of a climate emergency by providing:

1 Transit Oriented Development

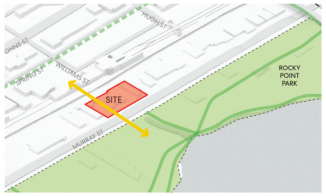
Providing rental homes directly adjacent to Moody Centre station and within an easy walk of daily needs.

2 Greenhouse Gas Emission Reduction & Contribution to Mode Split

Use of car-free transportation by residents will be highly desirable; therefore reducing greenhouse gas emissions and contributing to a sustainable mode split.



Supports Transit Oriented Development



Planning for a Translink and CP Rail supported overpass connection

Section 05 | Sustainability

5.01 Overview

3 Sustainable Design

- Required: BC Energy Step Code Step 3 or Step 2 with low carbon system

Provided, **exceeding requirement:**

Meets Step 3 of the BC Energy Step Code with a low carbon system

- Required: "Passive design strategies appropriate to the local climate to reduce energy use and enhance occupant comfort" (Sustainability Report Card)

Provided, **exceeding requirement:**

Livable homes with natural daylight, exemplary passive ventilation, and access to views

- Required: "Design/construct/renovate buildings with materials that are associated with low levels of embodies carbon and materials that store carbon" (Port Moody Climate Action Goals)

Provided, **exceeding requirement:**

Mass timber construction

We have included a supporting Embodied Carbon Asessment to demonstrate the scheme's low carbon properties, based on an LCA by our sustainability consultant Mantle Developments.

- Required: "...maintain and enhance...the ecological, recreational, aesthetic and economic values of Port Moody's streams" (Official Community Plan)

Provided, **exceeding requirement:**

Creation of a riparian area and daylighting of Dallas Creek

With our proposal, we are committing to take on daylighting of the creek and creation of an associated riparian area on our property.

Riparian Area Ecology and Public Education

Mass Timber - Embodied Carbon Reduction & Livable Homes

Section 05 | Sustainability

5.02 Embodied Carbon Results

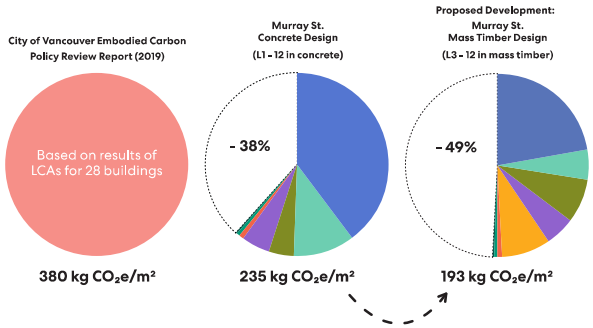
The whole-building Life Cycle Assessment (LCA) conducted by Mantle Developments estimates a total Global Warming Potential (GWP) of 4,343,000 kg CO_2e, equivalent to 193 kg CO_2e/m^2.

The City of Vancouver's 2019 Embodied Carbon Policy Review Report is used in the absence of an official local benchmark, the report includes results for 28 LCAs submitted to the City of Vancouver under the requirements of the Green Buildings Policy for Rezonings. This comparison to the City of Vancouver's report shows a 38% reduction in the Murray St. concrete design (baseline) and a 49% reduction in the Murray St. mass timber (proposed).

The use of a mass-timber structure for levels 3-12 is the key strategy to bring down the GWP of the project, reducing the quantity of high carbon materials like concrete and steel.

The design team will continue to refine low carbon solutions as the design progresses, the next areas of study include considering additional structural items that can be mass timber, increasing the recycled content and low-carbon cementitious materials in the concrete mixes, maximizing the recycled content in steel, and reviewing the GWP of different insulation and cladding products.

With these further refinements, the design team anticipates that the embodied carbon will be further reduced from the current 18% reduction illustrated that includes only this first step of moving from concrete to mass timber structure.



This is an 18% reduction from Murray St. Concrete Design (Baseline), equivalent to:

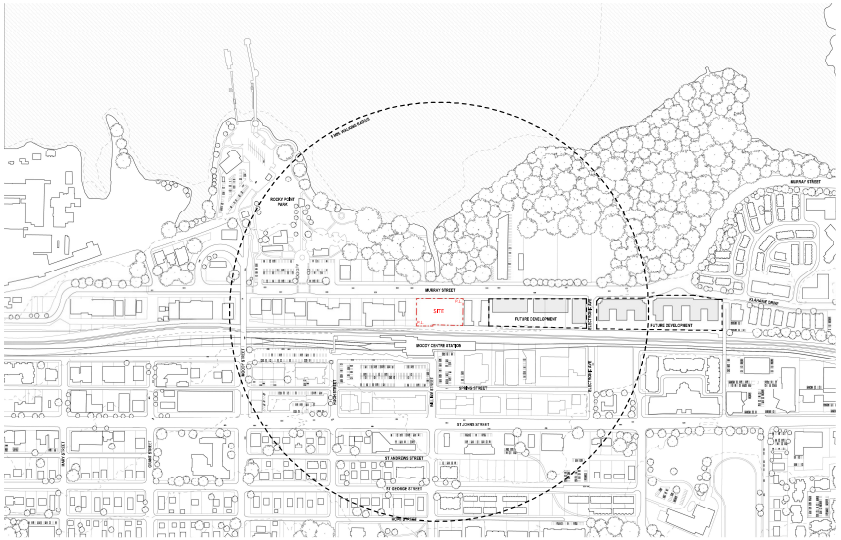
Avoided emissions from 3,785,745 kilometers driven by an average passenger vehicle

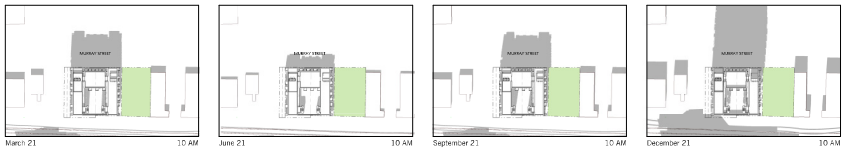
Carbon sequestered by 15,477 tree seedlings grown for 10 years

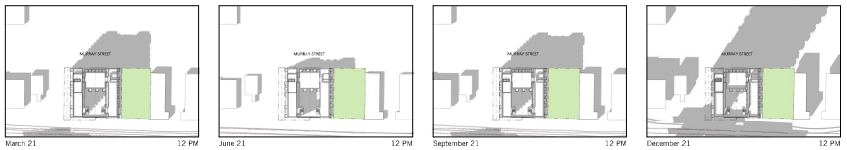
Section 06
ARCHITECTURAL DRAWINGS

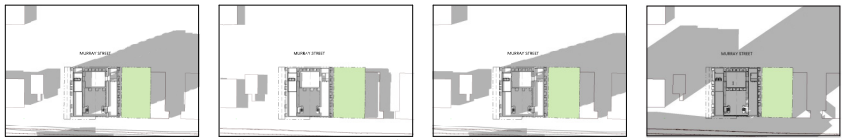
Contents

Context Plan
Setbacks Plan
Site Plan - Grade
Site Plan - Roof
Shadow Study
Overall Parking Plans - Level P3, P2 & P1
Floor Plan- Level 01
Floor Plan - Level 02
Floor Plan - Level 03
Floor Plan - Level 04 - 12, typ.
Floor Plan - Roof
Building Elevations
Building Sections


MURRAY STREET
SITE
FUTURE DEVELOPMENT
FUTURE DEVELOPMENT
ROCKY POINT PARK
ROCKY POINT PARK
MURRAY STREET
ROCKY POINT STATION
SYDNEY STREET
ST JOHNS STREET
ST GEORGE STREET
ALBERT STREET
ALBERT STREET
ALBERT







Perkins&Will

PCI

REZONING & OCP AMENDMENT
MAY 14, 2021

ISSUED

KEYPLAN

PROJECT

MURRAY STREET

PROJECT NUMBER

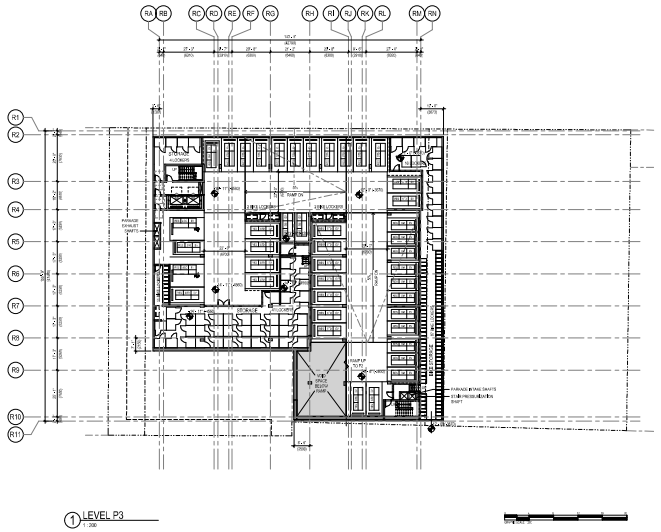
REVISIONS

TITLE

SHADOW STUDY

SHEET NUMBER

RZ-030



1 LEVEL P3
1:200

Perkins&Will

PCI

REZONING & OCP AMENDMENT
MAY 14, 2021

ISSUED

KEYPLAN

PROJECT

MURRAY STREET

PROJECT NUMBER

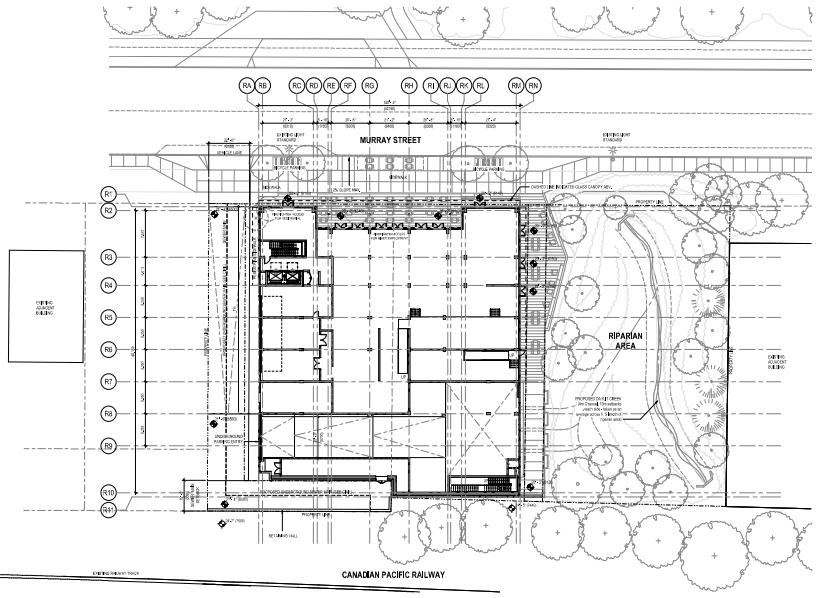
REVISIONS

TITLE

OVERALL PARKING PLAN - LEVEL P3

SHEET NUMBER

RZ-100



1 SITE PLAN - GRADE
1" = 30'

Perkins&Will

PCI

REZONING & OCP AMENDMENT
MAY 14, 2021

ISSUED

KEYPLAN

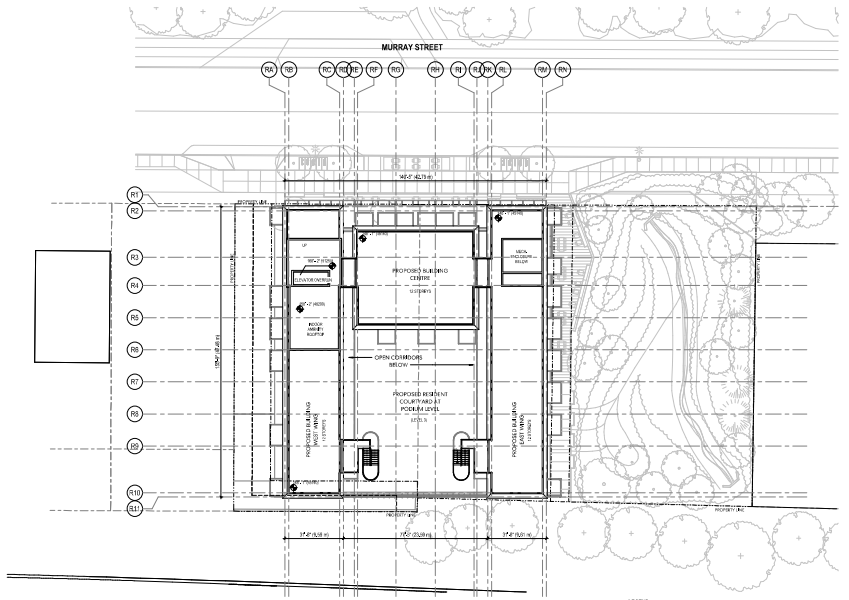
PROJECT
MURRAY STREET

PROJECT NUMBER

REVISIONS

TITLE
SITE PLAN - GRADE

SHEET NUMBER
RZ-016



1 SITE PLAN - ROOF
1" = 30'

Perkins&Will

PCI

REZONING & OCP AMENDMENT
MAY 14, 2021

ISSUED

KEYPLAN

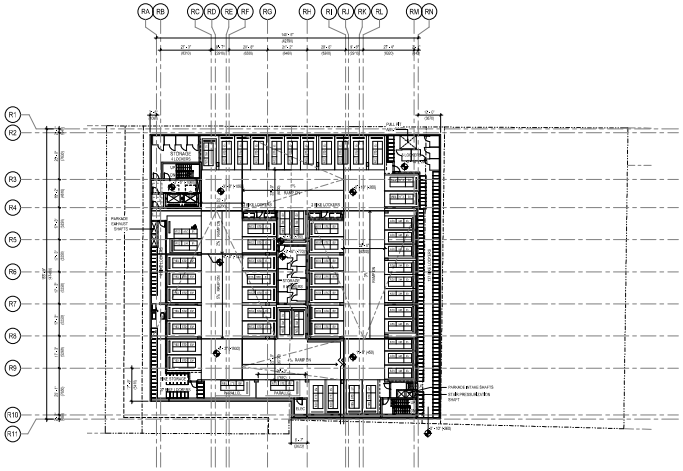
PROJECT
MURRAY STREET

PROJECT NUMBER

REVISIONS

TITLE
SITE PLAN - ROOF

SHEET NUMBER
RZ-017



RESIDENTIAL PARKING
ACCESSIBLE
SMALL
STANDARD
TOTAL

COMMERCIAL PARKING
ACCESSIBLE
SMALL
STANDARD
TOTAL

VISITOR PARKING
ACCESSIBLE
SMALL
STANDARD
TOTAL

LONG TERM BICYCLE PARKING
TOTAL

1 LEVEL P2
1" = 30'-0"

Perkins&Will

PCI

REZONING & OCP AMENDMENT
MAY 14, 2021

ISSUED

KEYPLAN

PROJECT

MURRAY STREET

PROJECT NUMBER

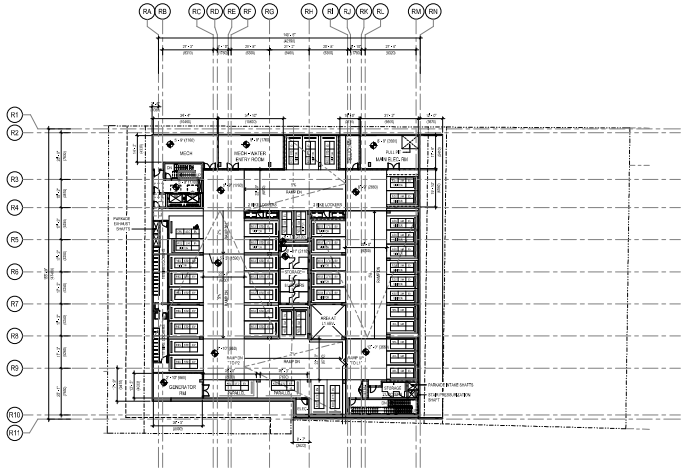
REVISIONS

TITLE

OVERALL PARKING PLAN - LEVEL P2

SHEET NUMBER

RZ-101



RESIDENTIAL PARKING
ACCESSIBLE
SMALL
STANDARD
TOTAL

COMMERCIAL PARKING
ACCESSIBLE
SMALL
STANDARD
TOTAL

VISITOR PARKING
ACCESSIBLE
SMALL
STANDARD
TOTAL

LONG TERM BICYCLE PARKING
TOTAL

1 LEVEL P1
1" = 30'-0"

Perkins&Will

PCI

REZONING & OCP AMENDMENT
MAY 14, 2021

ISSUED

KEYPLAN

PROJECT

MURRAY STREET

PROJECT NUMBER

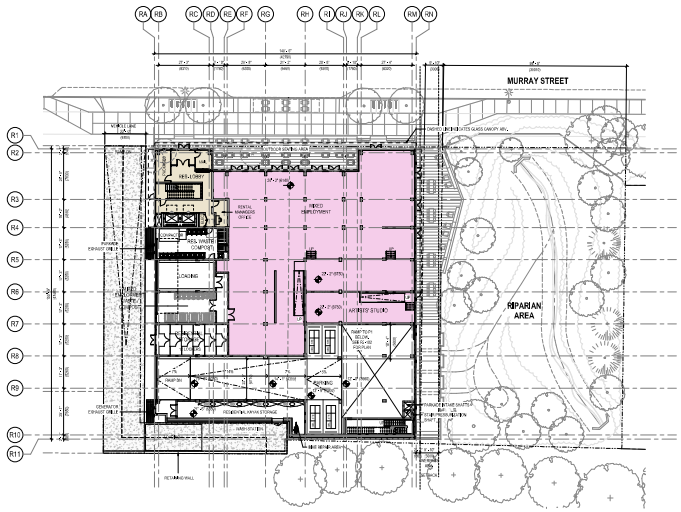
REVISIONS

TITLE

OVERALL PARKING PLAN - LEVEL P1

SHEET NUMBER

RZ-102



1 LEVEL 01
1 : 200

Perkins&Will

PCI

REZONING & OCP AMENDMENT
MAY 14, 2021

ISSUED

KEYPLAN

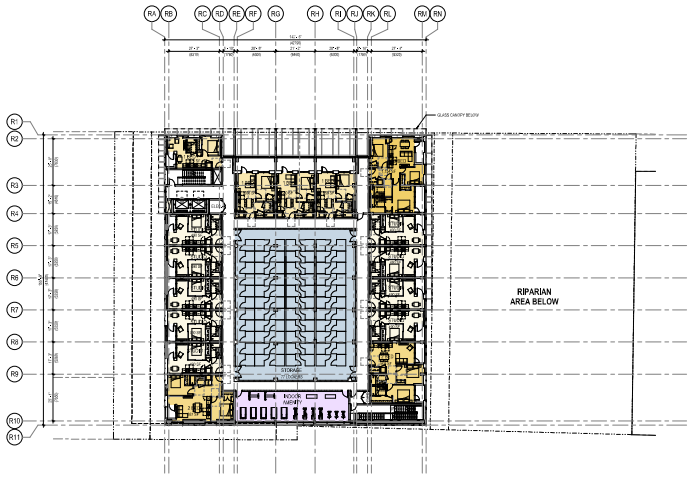
PROJECT
MURRAY STREET

PROJECT NUMBER

REVISIONS

TITLE
FLOOR PLAN - LEVEL 01

SHEET NUMBER
RZ-103



1 LEVEL 02
1 : 200

Perkins&Will

PCI

REZONING & OCP AMENDMENT
MAY 14, 2021

ISSUED

KEYPLAN

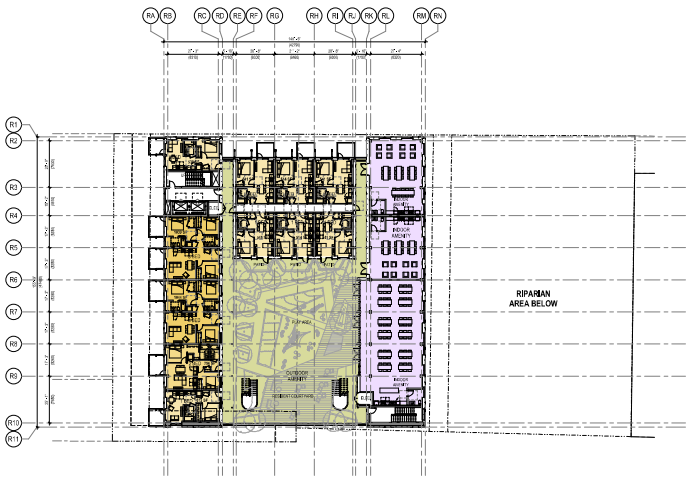
PROJECT
MURRAY STREET

PROJECT NUMBERS

REVISIONS

TITLE
FLOOR PLAN - LEVEL 02

SHEET NUMBER
RZ-104



1 LEVEL 03
1:200

Perkins&Will

PCI

REZONING & OCP
AMENDMENT
MAY 14, 2021

ISSUED

KEYPLAN

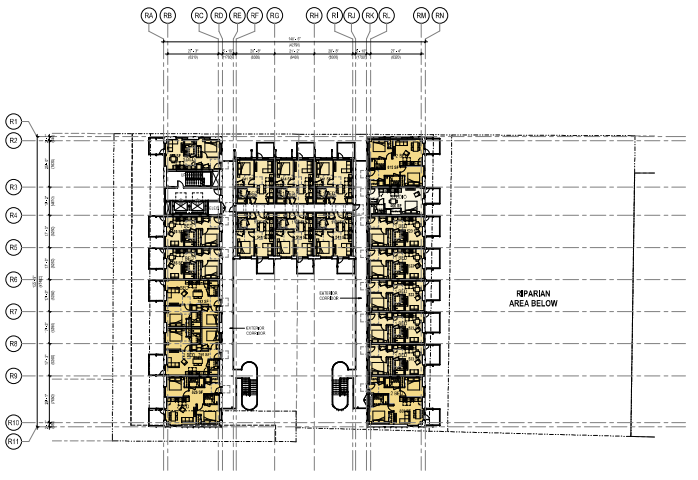
PROJECT
MURRAY STREET

PROJECT NUMBER

REVISIONS

TITLE
FLOOR PLAN - LEVEL 03

SHEET NUMBER
RZ-105



1 TYP. RESIDENTIAL
1:200

Perkins&Will

PCI

REZONING & OCP
AMENDMENT
MAY 14, 2021

ISSUED

KEYPLAN

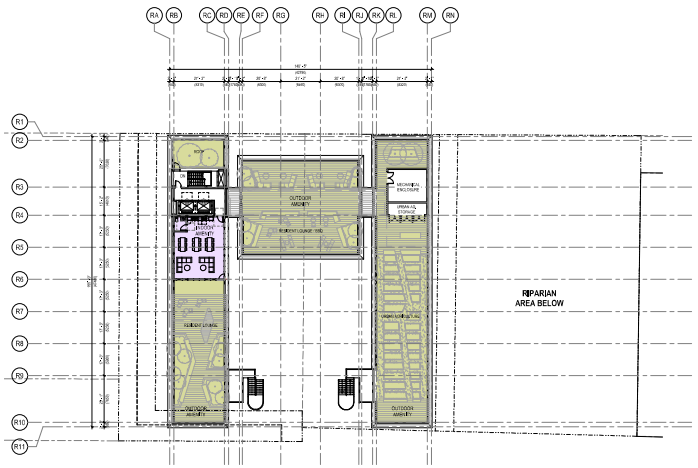
PROJECT
MURRAY STREET

PROJECT NUMBER

REVISIONS

TITLE
FLOOR PLAN - LEVEL
04-12

SHEET NUMBER
RZ-107



1 ROOF PLAN
1 : 100

Perkins&Will

PCI

REZONING & OCP
AMENDMENT
MAY 14, 2021

ISSUED

KEYPLAN

PROJECT

MURRAY STREET

PROJECT NUMBER

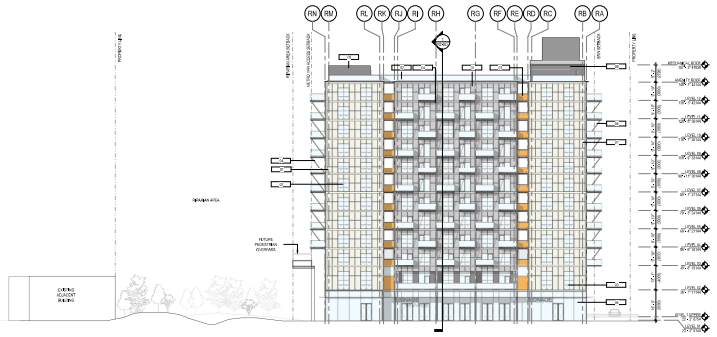
REVISIONS

TITLE

FLOOR PLAN - AMENITY
ROOF PLAN

SHEET NUMBER

RZ-108



1 NORTH BUILDING ELEVATION
1 : 200

Perkins&Will

PCI

REZONING & OCP
AMENDMENT
MAY 14, 2021

ISSUED

KEYPLAN

PROJECT

MURRAY STREET

PROJECT NUMBER

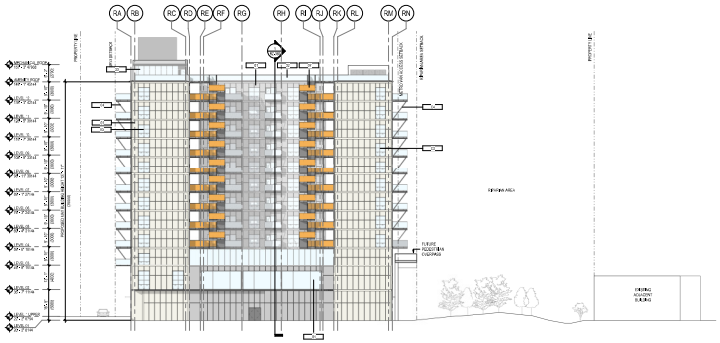
REVISIONS

TITLE

BUILDING ELEVATIONS -
NORTH

SHEET NUMBER

RZ-300



② SOUTH BUILDING ELEVATION
1 : 300

Perkins&Will

PCI

REZONING & OCP AMENDMENT
MAY 14, 2021

ISSUED

KEYPLAN

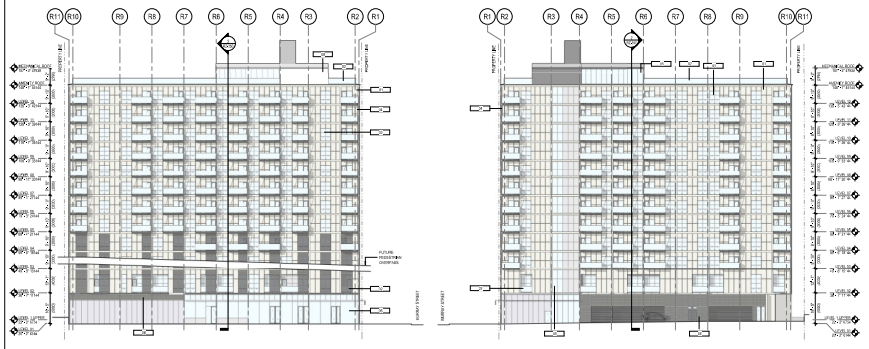
PROJECT
MURRAY STREET

PROJECT NUMBER

REVISIONS

TITLE
BUILDING ELEVATIONS - SOUTH

SHEET NUMBER
RZ-301



③ EAST BUILDING ELEVATION
1 : 200

④ WEST BUILDING ELEVATION
1 : 300

Perkins&Will

PCI

REZONING & OCP AMENDMENT
MAY 14, 2021

ISSUED

KEYPLAN

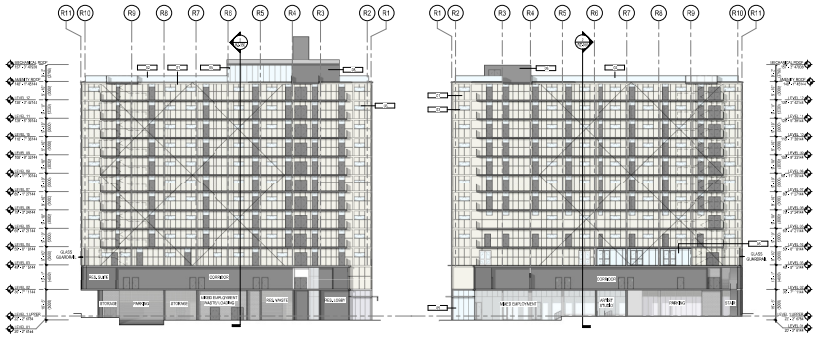
PROJECT
MURRAY STREET

PROJECT NUMBER

REVISIONS

TITLE
BUILDING ELEVATIONS - EAST & WEST

SHEET NUMBER
RZ-302



5 EAST COURTYARD ELEVATION
1 : 200

6 WEST COURTYARD ELEVATION
1 : 200

Perkins&Will

PCI

REZONING & OCP AMENDMENT
MAY 14, 2021

ISSUED

KEYPLAN

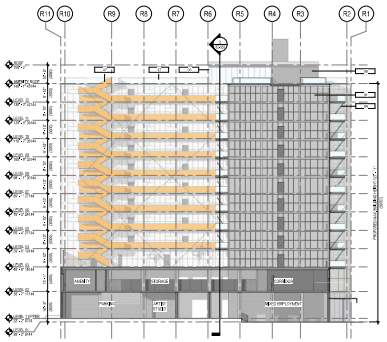
PROJECT
MURRAY STREET

PROJECT NUMBER

REVISIONS

TITLE
BUILDING ELEVATIONS - EAST & WEST COURTYARD WINGS

SHEET NUMBER
RZ-305



7 CENTER BLOCK - EAST ELEVATION
1 : 200

8 CENTER BLOCK - WEST ELEVATION
1 : 200

Perkins&Will

PCI

REZONING & OCP AMENDMENT
MAY 14, 2021

ISSUED

KEYPLAN

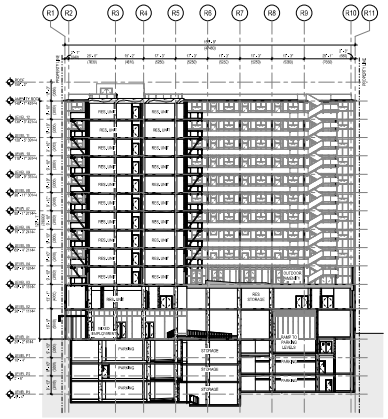
PROJECT
MURRAY STREET

PROJECT NUMBER

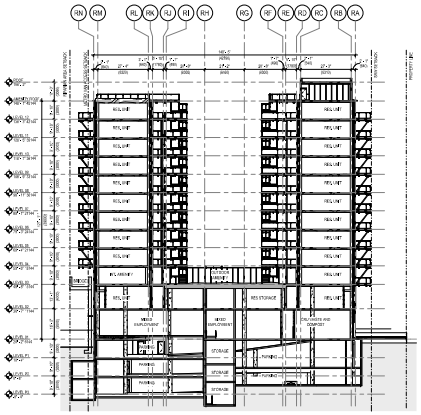
REVISIONS

TITLE
BUILDING ELEVATIONS - EAST & WEST COURTYARD CENTER

SHEET NUMBER
RZ-306



1 NORTH SOUTH SECTION
1 : 200



2 EAST WEST SECTION
1 : 200

Perkins&Will

PCI

REZONING & OCP AMENDMENT
MAY 14, 2021

ISSUED

KEYPLAN

PROJECT

MURRAY STREET

PROJECT NUMBER

REVISIONS

TITLE

BUILDING SECTIONS

SHEET NUMBER

RZ-350

Section 07
APPENDICES

Contents

1.1 Architectural drawings
1.2 FAR drawings
2.1 Site profile
3.1 Traffic report and plans
4.1 Site survey
5.1 Arborist report
6.1 Civil drawings
7.1 Landscape drawings
8.2 Sustainability report card
8.2 Mantle Developments Embodied Carbon Study
8.3 Building Energy Performance Design Guidelines Checklist
8.4 Proposed Waste Management Strategy