City of Port Moody
Report/Recommendation to Council

Date: March 23, 2022
Submitted by: Community Development Department – Development Planning Division
Subject: Rezoning (Stacked Townhouses) – 2222 Clarke Street (Mara + Natha Architecture)

Purpose
To present for Council consideration of first and second reading, a rezoning application to facilitate the redevelopment of the property at 2222 Clarke Street. (File: 13-6700-20-REZ00020)

Recommended Resolution(s)

THAT City of Port Moody Zoning Bylaw, 2018, No. 2937, Amendment Bylaw No. 67, 2022, No. 3350 (2222 Clarke Street) (RM4) be read a first and second time as recommended in the report dated March 23, 2022 from the Community Development Department – Development Planning Division regarding Rezoning (Stacked Townhouses) – 2222 Clarke Street (Mara + Natha Architecture);

AND THAT City of Port Moody Zoning Bylaw, 2018, No. 2937, Amendment Bylaw No. 67, 2022, No. 3350 (2222 Clarke Street) (RM4) be referred to a Public Hearing.

Background
A previous rezoning application to facilitate a 10-unit stacked townhouse development at 2222 Clarke Street was presented to Council in 2021. The previous rezoning bylaw received first and second readings from Council on February 2, 2021. A Public Hearing was held on March 8, 2021, following which Council defeated the Bylaw at third reading consideration due to concerns regarding the unit count and amenity space; this ended the rezoning process for that application.

After consideration of all the feedback that has been received to this point, the owner of the property has submitted a new application which proposes the Medium Density Townhouse Residential (RM4) Zone instead of a Comprehensive Development (CD) Zone, with a reduction to the overall number of units and an increase in overall outdoor amenity space.

The current application was presented to the Land Use Committee (LUC) on January 10, 2022, the Advisory Design Panel (ADP) on January 20, 2022, and early input from Council on February 15, 2022. Draft meeting minutes for the LUC are included as **Attachment 1** and for

the ADP as **Attachment 2**. Draft Bylaw No. 3350 is included as **Attachment 3** and an Application Fact Sheet is included as **Attachment 4**.

Discussion

Property Description:

The development site consists of one existing single-family property on Clarke Street, west of Elgin Street, as shown on the Location Map (**Attachment 5**). The total site area is approximately 809m^2 (8,706ft^2) in size, and generally slopes downwards from south to north with a 3m (9.8ft) change in elevation. The site has limited development potential for assembly with adjacent sites due to a set of heritage buildings to the east and a watercourse to the west. The lot is currently occupied by a single-family dwelling in poor condition.

Official Community Plan (OCP) and Zoning:

The OCP designates the subject site for Multi-Family Residential uses up to a maximum of six storeys (**Attachment 6**). The site is also located in Development Permit Area 2 (DPA2) – Moody Centre – Heritage Conservation Area (HCA) (**Attachment 7**), which regulates the form and character through the DPA 2 and HCA Design Guidelines.

The subject lot is currently zoned Single Detached Residential (RS1) (**Attachment 8**).

Neighbourhood Context:

The subject property is located in the Moody Centre Heritage Conservation Area with a variety of heritage buildings in the immediate area. Specific surrounding development consists of:

- North: Vacant General Industrial (M2) lot;
- East: Two municipally-designated heritage buildings with commercial uses;
- South: A mix of RS1 lots and Adaptive Commercial (C6) lots; and
- West: RS1 lot developed with a single-family dwelling, which also has a watercourse located on it.

Development Proposal Description:

The current proposal consists of a three-storey, eight-unit stacked townhouse development containing:

- five two-bedroom units (two are proposed to be accessible one-storey units located on the ground floor);
- two two-bedroom and den units;
- one four-bedroom and den unit;
- a floor area ratio (FAR) of 1.24;
- 15 underground parking spaces accessed from Vintner Street, including 13 residential and two visitor spaces;
- 18 long-term bicycle storage spaces;
- 78m^2 (844ft^2) of private rooftop amenity spaces for four of the units; and
- 101m^2 (1,085ft^2) of outdoor common amenity courtyard area on the ground floor.

Project Plans and Technical Reports

- Architectural Plans for the project are included as **Attachment 9**;
- Landscape Plans are included as **Attachment 10**;
- An arborist report is included as **Attachment 11**;
- A geotechnical report is included as **Attachment 12**; and
- An environmental report is included as **Attachment 13**.

RM4 Zoning and Development Permit Variances

The rezoning application has been revised to rezone the lands to the RM4 Zone (instead of a CD Zone previously). As the rezoning request follows a conventional zone, the applicant is requesting the following variances as part of the Development Permit:

- To increase the lot coverage from 40% 43%;
- To reduce the number of Electric Vehicle (EV) Charging stations from 15 to eight (8).
    - The applicant has indicated that to make the units more affordable, each townhouse unit would be allotted at least one EV charging parking space.
- To reduce the minimum lot area and lot width of the RM4 Zone by 50%.
    - Due to the watercourse to the west and the heritage buildings to the east, assembly of multiple properties would be challenging and unlikely.

A comparison of the progression of each proposal from the first proposal to the current is outlined in the table below.

	Defeated Proposal (2021)	Current Proposal (at Early Input)	Current Proposal (First Reading)
Zone	Comprehensive Development	Comprehensive Development	RM4 Zone
Density (FAR)	1.32	1.29	1.24
Number of Units	10	9	8
Lot Coverage	44%	43%	43%
Common Outdoor Amenity Space	6.5m^2 per dwelling unit *Total: 65m^2 (700ft^2)*	7.2m^2 per dwelling unit *Total: 65m^2 (700ft^2)*	12.6m^2 per dwelling unit *Total: 101m^2 (1,085ft^2)*
Private Rooftop Amenity Space	None	Total: 78m^2 (844ft^2)	Total: 78m^2 (844ft^2)

Accessible Units

The project proposes two fully accessible two-bedroom units located on the ground floor to be secured through a restrictive covenant. To complement the accessible units, two accessible parking spaces are included in the underground parking structure, plus an elevator from the underground parking level to the ground floor. The two units will also have easy access to Clarke Street.

Affordable Housing

This project is exempt from the Interim Affordable Housing Guidelines Policy since it only proposes townhouse units and is under the 30-unit threshold. That said, the developer has indicated that as a part of the company's practice, a minimum of two units will be owned by the developer and available as market rental units.

Environmental Considerations

The applicant has worked with staff to ensure that a ditch along Vintner Street is protected with a 5m Riparian Protection and Enhancement Area (RPEA) as required by the Zoning Bylaw. This has resulted in a reduced separation distance and amenity space area between the two

proposed buildings. Notwithstanding these constraints, the site plan remains consistent with the design guidelines for this type of development.

Sustainability Report Card

The completed Sustainability Report Card for the development proposal is included as **Attachment 14**. It is noted that Council has endorsed a new Sustainability Report Card which came into effect on April 1, 2022. In-stream applications that proceed to second reading after May 1, 2022 will be required to submit the new version of the report card. Based on these procedures, the previous version of the report card is still included for this application and the following table summarizes the scoring.

Sustainability Pillar / Application	Cultural	Economic	Environmental	Social	**Overall Total**
2222 Clarke Street	73% (8 out of 11)	86% (6 out of 7)	63% (36 out of 53)	77% (27 out of 35)	73%

Other Option(s)

THAT City of Port Moody Zoning Bylaw, 2018, No. 2937, Amendment Bylaw No. 67, 2022, No. 3350 (2222 Clarke Street) (RM4) be revised to address the following:

- list issues.

Financial Implications

Community Amenity Contribution

Per the City's Community Amenity Contribution (CAC) Policy, the applicant has agreed to pay $6,000 per unit for a total of $42,000 after a CAC credit of $6,000 is calculated for the existing lot.

Public Art Contribution

The applicant has committed to providing a contribution to the Public Art Reserve Fund, which will be based on 0.5% of the cost of construction in accordance with the Public Art Policy. Construction costs for this project are projected to be approximately $2,800,000, which would provide an estimated contribution of $14,000 to the Public Art Reserve Fund.

Off-Site Improvement Contributions

Per the City's Master Transportation Plan, the development would contribute towards off-site amenities including $10,400 cash-in-lieu for a future bicycle infrastructure along Clarke Street and $10,000 cash-in-lieu for intersection improvements at St. Johns Street and Elgin Street.

Communications and Civic Engagement Initiatives

A notification sign informing the public of the rezoning application has been placed on the subject site in accordance with City of Port Moody Development Approval Procedures Bylaw, 2011, No. 2918.

If the rezoning application is given first and second readings, the public will have an opportunity to comment at the Public Hearing, which will occur following a mail-out notification to adjacent residents, an advertisement placed in the local newspaper, and a decal of the Public Hearing time and date placed on the notification sign.

The applicant held a public information meeting in accordance with the Public Stakeholder and Consultation for Major Development Projects or Area Plans Policy with the previous application on October 1, 2020. Based on the feedback received at this meeting and the previous Public Hearing on March 8, 2021, staff believe that a Public Hearing for the current proposal gives adequate opportunity for members of the community to provide their input.

Council Strategic Plan Objectives

The proposal is consistent with the 2019-2022 Council Strategic Plan priority of Community Evolution as it relates to the objective of ensuring that future community growth is carefully considered and strategically managed, consistent with the City's Official Community Plan.

Attachment(s)

1. Draft LUC Minutes, January 10, 2022.
2. Draft ADP Minutes, January 20, 2022.
3. Draft Bylaw No. 3350 (2222 Clarke Street) (RM4).
4. Application Fact Sheet – 2222 Clarke Street.
5. Location Map – 2222 Clarke Street.
6. OCP Land Use Designations Map – 2222 Clarke Street.
7. Moody Centre Heritage Conservation Area – 2222 Clarke Street.
8. Zoning Map – 2222 Clarke Street.
9. Architectural Plans – 2222 Clarke Street.
10. Landscape Plans – 2222 Clarke Street.
11. Arborist Report – 2222 Clarke Street.
12. Geotechnical Report – 2222 Clarke Street.
13. Environmental Report – 2222 Clarke Street.
14. Sustainability Report Card – 2222 Clarke Street.

Report Author

Wesley Woo, MCIP, RPP
Senior Planner

Report Approval Details

Document Title:	Rezoning (Stacked Townhouses) – 2222 Clarke Street (Mara + Natha Architecture).docx
Attachments:	- Attachment 1 - Draft LUC Minutes - January 10, 2022.pdf - Attachment 2 - Draft ADP Minutes - January 20, 2022.pdf - Attachment 3 - Draft Bylaw No. 3350 (2222 Clarke Street) (RM4).pdf - Attachment 4 - Application Fact Sheet - 2222 Clarke Street.pdf - Attachment 5 - Location Map - 2222 Clarke Street.pdf - Attachment 6 - OCP Land Use Designations Map - 2222 Clarke Street.pdf - Attachment 7 - Moody Centre Heritage Conservation Area - 2222 Clarke Street.pdf - Attachment 8 - Zoning Map - 2222 Clarke Street.pdf - Attachment 9 - Architectural Plans - 2222 Clarke Street.pdf - Attachment 10 - Landscape Plans - 2222 Clarke Street.pdf - Attachment 11 - Arborist Report - 2222 Clarke Street.pdf - Attachment 12 - Geotechnical Report - 2222 Clarke Street.pdf - Attachment 13 - Environmental Report - 2222 Clarke Street.pdf - Attachment 14 - Sustainability Report Card - 2222 Clarke Street.pdf
Final Approval Date:	Apr 14, 2022

This report and all of its attachments were approved and signed as outlined below:

André Boel, City Planner - Apr 13, 2022 - 10:41 AM

Kate Zanon, General Manager of Community Development - Apr 13, 2022 - 12:12 PM

Rosemary Lodge, Manager of Communications and Engagement - Apr 13, 2022 - 2:16 PM

Paul Rockwood, General Manager of Finance and Technology - Apr 13, 2022 - 7:01 PM

Paul Rockwood for Tim Savoie, City Manager - Apr 14, 2022 - 12:53 PM

City of Port Moody
Minutes
Land Use Committee

Minutes of the meeting of the Land Use Committee held on Monday, January 10, 2022 held via Zoom.

Present
Councillor Meghan Lahti, Vice-Chair
Haven Lurbiecki
Wilhelmina Martin
Hazel Mason
Sean Ogilvie (arrived at 7:07pm)
David Stuart (arrived at 8:10pm)

Absent
Councillor Zoe Royer, Chair (Regrets)

In Attendance
André Boel – City Planner
Jennifer Mills – Committee Coordinator
Wesley Woo – Senior Planner

1. Call to Order

Call to Order

1.1 The Vice-Chair called the meeting to order at 7:05pm.

Sean Ogilvie entered the meeting at this point.

2. Adoption of Minutes

Minutes

2.1 *LUC22/001*
Moved, seconded, and CARRIED
THAT the minutes of the Land Use Committee meeting held on Monday, November 8, 2021 be adopted.
(Voting against: Wilhelmina Martin)

3. Unfinished Business

4. New Business

Committee Orientation

4.1 City Planner and Committee Coordinator
Attachments:
a) Committee Orientation Manual, dated January 2022
b) Land Use Committee – Terms of Reference

The Committee Coordinator provided an overview of the the City's committee system.

The City Planner provided an overview of the Land Use Committee Terms of Reference, including information about the following topics:

- the three types of development approvals related to land use that can be referred to the Committee: Official Community Plan (OCP) amendments, zoning amendments, and temporary use permits;
- the Committee's role in the development review process; and
- the criteria for consideration of applications:
  - OCP;
  - land use/density;
  - neighbourhood context;
  - affordable housing;
  - economic impact; and
  - mobility.

Rezoning (Stacked Townhouses) – 2222 Clarke Street (Mara + Natha Architecture)

4.2 Report: Community Development Department – Development Planning Division, dated December 23, 2021

The Senior Planner gave a presentation on the rezoning application, including information about the location, OCP Land Use Designations, Moody Centre Heritage Conservation Area, Ottley Creek watercourse, zoning, key features, unit mix, stacked townhouse design details, views from Clarke Street and Vintner Street, site plan, and perspective views.

Staff answered questions from the Committee about the following topics:

- differences of this proposal compared to the previously defeated application;
- zoning of 2202 to 2222 Clarke Street;
- opportunities for similar developments in the area;
- impacts to the nearby watercourse; and
- tree replacement.

The Committee noted the following in discussion:

- the approval of a stacked townhouse development in this neighbourhood could set a precedent;
- the stacked townhouse design may not be appropriate for families;
- the target family market may favour the traditional townhouse format more where a small greenspace and garage are included in the design;
- the area is the right location for a family-oriented townhouse development;
- there are too many units in the design and the density is too high;
- the amenities are not appropriate for the target family market;
- there are concerns about the loss of tree canopy in the area and the loss of mature trees in Moody Centre;
- the City could consider tracking the removal and replacement of trees;
- the design may be desirable to seniors as it provides street-level accessible suites on a transit route with no outdoor maintenance;
- the developer has designed the space creatively with the intention of keeping the sale price affordable;
- the design could include more amenity space, such as a communal garden, as the surrounding area has little amenities; and
- the area could be more suitable for mixed-employment.

LUC22/002
Moved, seconded, and DEFEATED
THAT the Land Use Committee recommends that the proposed land use for application Rezoning – 2222 Clarke Street (Mara + Natha Architecture) is appropriate but that the applicant consider the comments made in the Land Use Committee meeting of January 10, 2022 regarding concerns about density and amenity space.
(Voting against: Haven Lurbiecki and Hazel Mason)

LUC22/003
Moved, seconded, and CARRIED
THAT the Land Use Committee recommends that the proposed land use for application Rezoning – 2222 Clarke Street (Mara + Natha Architecture) is not appropriate for the following reasons:

- **density is too high;**
- **amenity space is lacking; and**
- **more consideration is needed for the economic drivers in area.**

(Voting against: Wilhelmina Martin)

5. Information

Information

5.1 Attachments:

a) 2022 Meeting Schedule – Land Use Committee
b) Zoom Webinar Instructions for Committee Members
c) Anti-Racial Discrimination and Anti-Racism Policy
d) Privacy Breach Policy
e) Respectful Workplace Policy
f) Draft Five Year Financial Plan – 2020-2024
g) 2019-2022 Council Strategic Plan

This item was provided for information only.

David Stuart entered the meeting at this point.

6. Adjournment

The Vice-Chair adjourned the meeting at 8:12pm.

Councillor Meghan Lahti,
Vice-Chair

Jennifer Mills,
Committee Coordinator

City of Port Moody
Minutes
Advisory Design Panel

Minutes of the meeting of the Advisory Design Panel held on Thursday, January 20, 2022 via Zoom.

Present
Melissa Chaun
Eric Hedekar
Patricia Mace
Hossam Meawad
Callan Morrison (arrived at 7:04pm)
Kate O'Neill
Patrick Schilling
Mike Teed

Absent
Councillor Zoë Royer, Alternate Council Representative
Sam Zacharias – Constable, Port Moody Police Department (Regrets)

In Attendance
André Boel – City Planner
Esin Gozukara – Committee Coordinator
Councillor Steven Milani, Council Representative
Wesley Woo – Senior Planner

Also In Attendance
Krishan Anand, Applicant, Nugen Projects
Caelan Griffiths, Landscape Architect, PMG Landscape Architects
Ben Leavitt, Creative Director, Plaidfox
Rob Lee, Director, Mara + Natha Architecture

1. Call to Order

Call to Order

1.1 The Committee Coordinator called the meeting to order at 7:02pm.

2. Adoption of Minutes

Minutes

2.1 *ADP22/001*
Moved, seconded, and CARRIED
THAT the minutes of the Advisory Design Panel meeting held on Thursday, November 18, 2021 be adopted.

3. Unfinished Business

4. New Business

Committee Orientation

4.1 Presentation: Committee Coordinator

The Committee Coordinator gave an orientation to Panel members. The City Planner reviewed the Panel's consideration criteria for applications, and the Terms of Reference of the Panel. Panel members introduced themselves and provided their backgrounds.

ADP22/002
Moved, seconded, and CARRIED
THAT Hossam Meawad be appointed as Chair and Patrick Schilling be appointed as Vice-Chair of the Advisory Design Panel.

ADP – Rezoning (Stacked Townhouses) – 2222 Clarke Street (Mara + Natha Architecture)

4.2 Report: Community Development Department – Development Planning Division, dated January 13, 2022

Hossam Meawad assumed the role of Presiding Member at this point.

The applicants gave a presentation on the application, including design and branding elements, proposed unit summary, accessible units, design changes, landscaping plan, site plan, building plans, off-street parking, proposed amenity space, tree removal plans, and interior design.

Staff gave a presentation on the application, including location, Official Community Plan (OCP) land use designations, Moody Centre Heritage Conservation Area, site-specific special design guidelines, watercourse, riparian protection and enhancement area, and zoning bylaw.

The applicant responded to questions from the Panel regarding materials used in the exterior, driving inspiration of the exterior look, built-in air conditioning for the units, sound mitigation measures, access to bike parking from the parkade, location of the bike storage, stormwater management plan, tree removal plans, access to the units, irrigation plans, and weather protection for the stairs and elevator.

The Panel members noted the following in discussion:

- the underground parkade is a positive feature;
- units are well-distributed between the two buildings;

- the Clarke Street elevation requires more articulation;
- the applicant should consider introducing more colour variation or using different materials;
- this application does not differ significantly from the previously submitted one for this site;
- more windows could be added to the main levels of both buildings;
- typology is a good first-step for the neighbourhood, and if it is successfully applied, it could be replicated in other areas;
- the addition of the private decks is a positive feature;
- the outdoor common space could be increased as it appears to be crowded;
- the balconies of Building 1 could be repositioned to prevent them hanging over the outdoor common space;
- the usage of vinyl windows may not be a good choice;
- given the proximity to the railroad tracks, acoustic studies should be completed, and sound mitigation measures should be introduced;
- cross ventilation may not be adequate for the units, and the applicant should consider adding air conditioning features;
- the Clarke Street side of the buildings could be activated;
- the stacked townhouse concept, accessible units, and units with dens are appealing features of the project;
- elevator maintenance could be costly for the future residents;
- the courtyard, BBQ, and stairs could create hazardous conditions for children;
- it appears unlikely for this project to provide five to ten jobs in the community;
- the number of units could be reduced to provide less footprint on the ground level and create more greenspace;
- the Sustainability Report Card for the project should be reviewed;
- a good use of native plants is encouraged to add wildlife value; and
- the applicant should consider retaining the existing trees on site, and reconfiguring north-east corner.

ADP22/003
Moved, seconded, and CARRIED
THAT the meeting be extended for up to 30 minutes.

ADP22/004
Moved, seconded, and CARRIED
THAT the proposed project be endorsed subject to the applicant addressing the following specific items;

- **resolution of the material selection and colours;**
- **consideration of articulation of the frontage;**
- **compliance with any acoustical requirements;**
- **addition of cooling in each unit;**
- **addition of windows on the sides of the main level; and**
- **exploration of the tree retention opportunities.**

(Voting against: Melissa Chaun, Eric Hedekar, and Patricia Mace)

5. Information

6. Adjournment

The Chair adjourned the meeting at 9:04pm.

Hossam Meawad, Chair	Esin Gozukara, Committee Coordinator

City of Port Moody

Bylaw No. 3350

A Bylaw to amend City of Port Moody Zoning Bylaw, 2018, No. 2937 to rezone the property at 2222 Clarke Street from Single Detached Residential (RS1) to Medium Density Townhouse Residential (RM4).

The Council of the City of Port Moody enacts as follows:

1. Citation

1.1 This Bylaw may be cited as “City of Port Moody Zoning Bylaw, 2018, No. 2937, Amendment Bylaw No. 67, 2022, No. 3350 (2222 Clarke Street) (RM4)”.

2. Amendments

2.1 City of Port Moody Zoning Bylaw, 2018, No. 2937 is amended by rezoning the following lands from Single Detached Residential (RS1) to Medium Density Townhouse Residential (RM4).

Lot 40 Block 2 District Lot 202 Group 1 New Westminster District Plan 55

PID: 011-458-526

as shown on the map in Schedule A of this Bylaw.

3. Attachments and Schedules

3.1 The following schedules are attached to and form part of this Bylaw:

- Schedule A – Location Map.

4. Severability

4.1 If a portion of this Bylaw is found invalid by a court, it will be severed and the remainder of the Bylaw will remain in effect.

Read a first time this ___ day of _____, 2022.

Read a second time this ___ day of _____, 2022.

Read a third time this ___ day of _____, 2022.

Adopted this ___ day of _____, 2022.

R. Vagramov
Mayor

D. Shermer
Corporate Officer

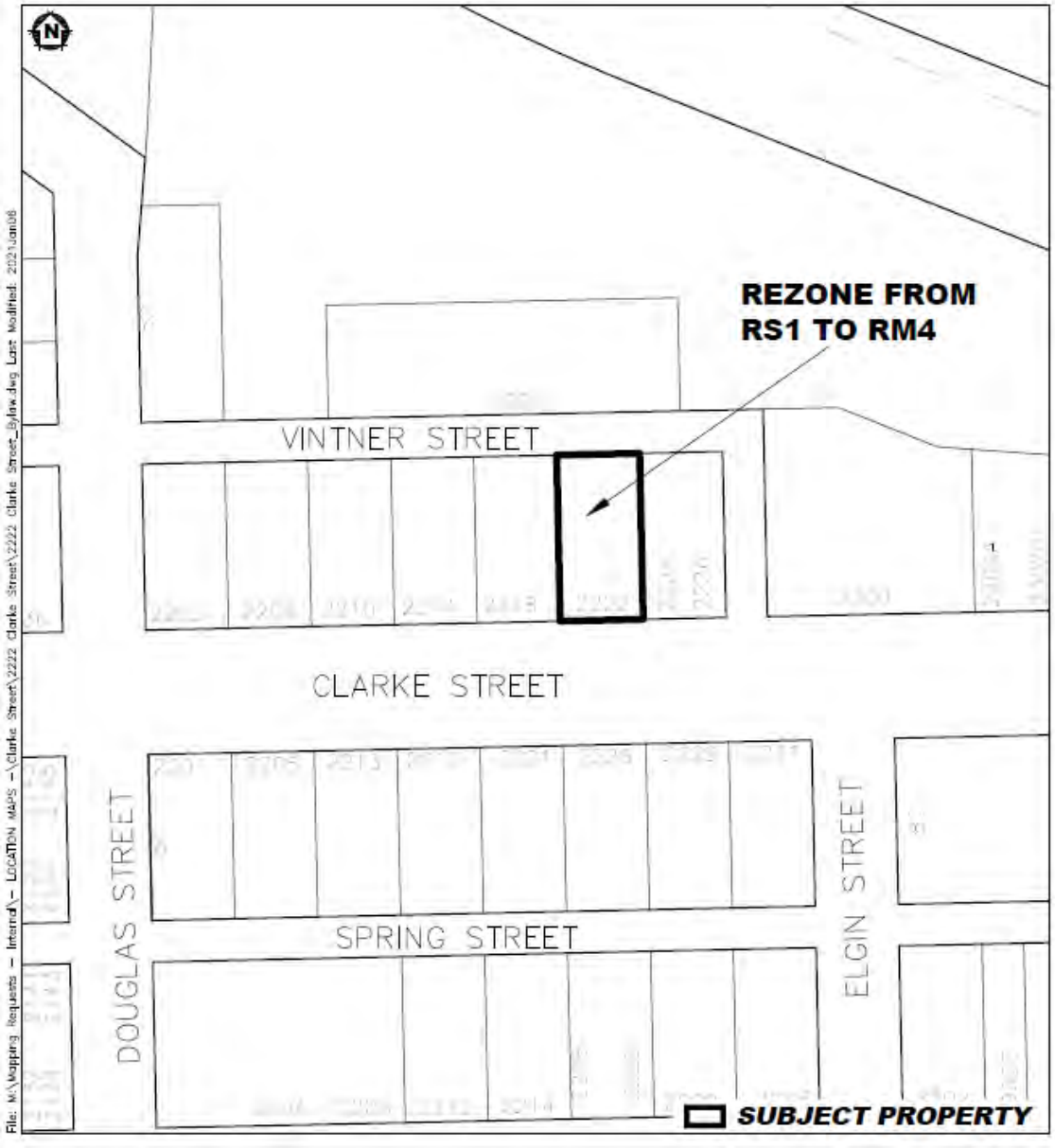
I hereby certify that the above is a true copy of Bylaw No. 3350 of the City of Port Moody.

D. Shermer
Corporate Officer

Schedule A – Location Map

This is a certified true copy of the map referred to in section 2 of City of Port Moody Zoning Bylaw, 2018, No. 2937, Amendment Bylaw No. 67, 2022, No. 3350 (2222 Clarke Street) (RM4).

_____
Corporate Officer



Application Fact Sheet

Applicant:	Mara + Natha Architecture.
Application Type:	Rezoning
Project Description:	A stacked townhouse project consisting of eight stacked townhouse units within two buildings.
Development Permit Area:	***Development Permit Area 2: Moody Centre***
Application Number:	REZ00020
Address:	2222 Clarke Street
Existing Zoning:	RS1
Proposed Zoning:	RM4
Existing OCP Designation:	Multi-Family Residential
Proposed OCP Designation:	No Change
Site Conditions:	The subject property is approximately 20m (66ft) wide by 40m (132ft) deep with a total area of 809m^2 (8,710ft^2). The subject property is currently occupied with a single family dwelling with driveway access from Clarke Street, shared with the neighbouring property to the west, as well as driveway access from Vintner Street. An unmapped watercourse (Ottley Creek) is located on the adjacent property to the west.
Surrounding Development:	Surrounding development consists of: • North: Vacant General Industrial (M2) lot; • East: Single Detached Residential (RS1) lot with two heritage buildings and two accessory buildings; • South: A mix of Single Detached Residential (RS1) lots and Adaptive Commercial (C6) lots; and • West: Single Detached Residential lot (RS1) with developed single family dwelling.

Zone Comparison:

	RM4 Regulations	**Proposed Development**
Density	Maximum 1.25 FAR with underground parking	1.24
Lot Coverage	Maximum 40%	43%
Front Lot Line Setback	Minimum 4.0m	4.0m
Side Lot Line Setbacks	Minimum 2.0m	2.0m
Rear Lot Line Setback	Minimum 3.0m	5.0m
Residential Parking Stalls	12	13
Visitor Parking Stalls	2	2
Common Amenity Space	$5m^2$ per dwelling unit	$12.6m^2$ per dwelling unit

LOCATION MAP - 2222 Clarke Street

SUBJECT PROPERTY

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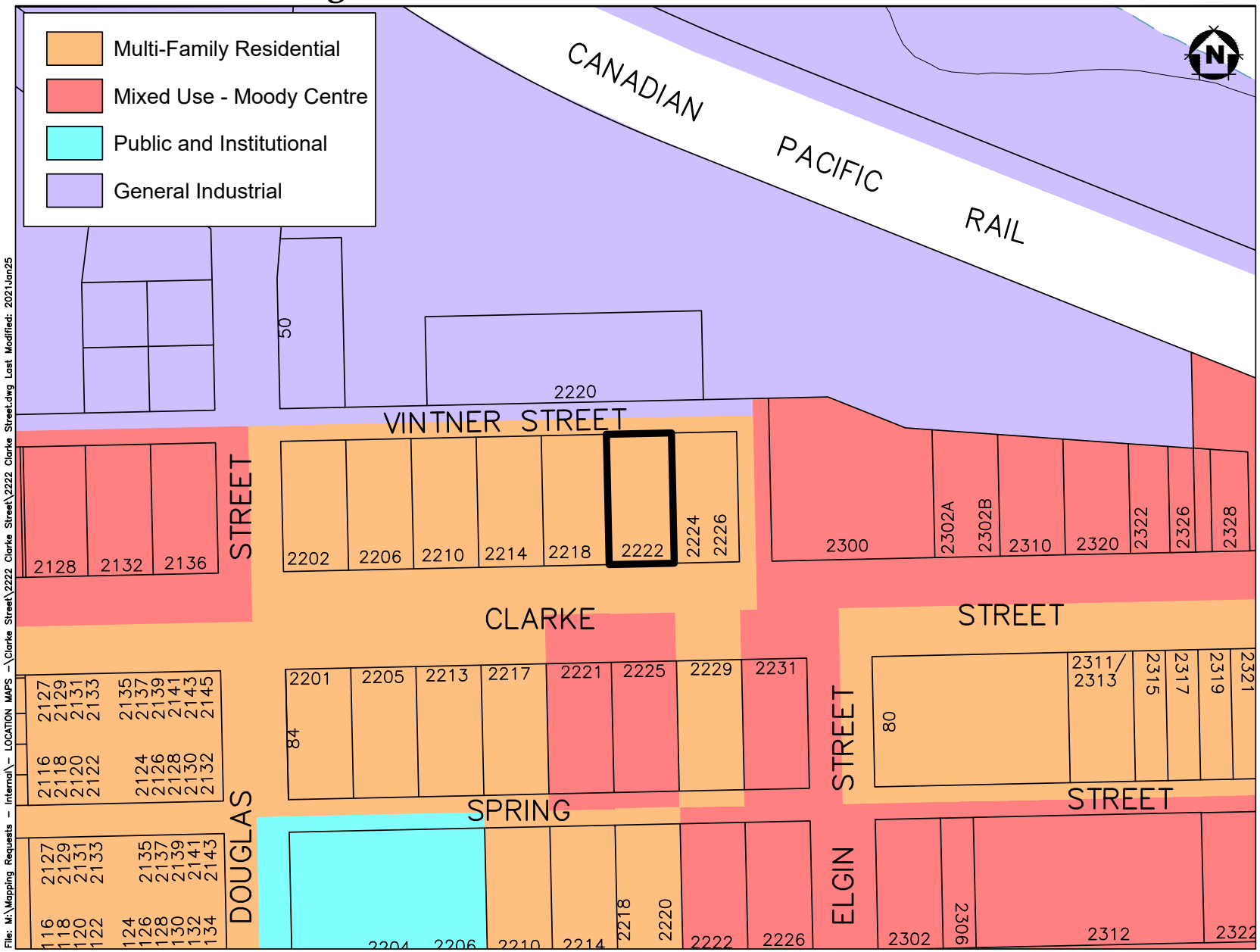
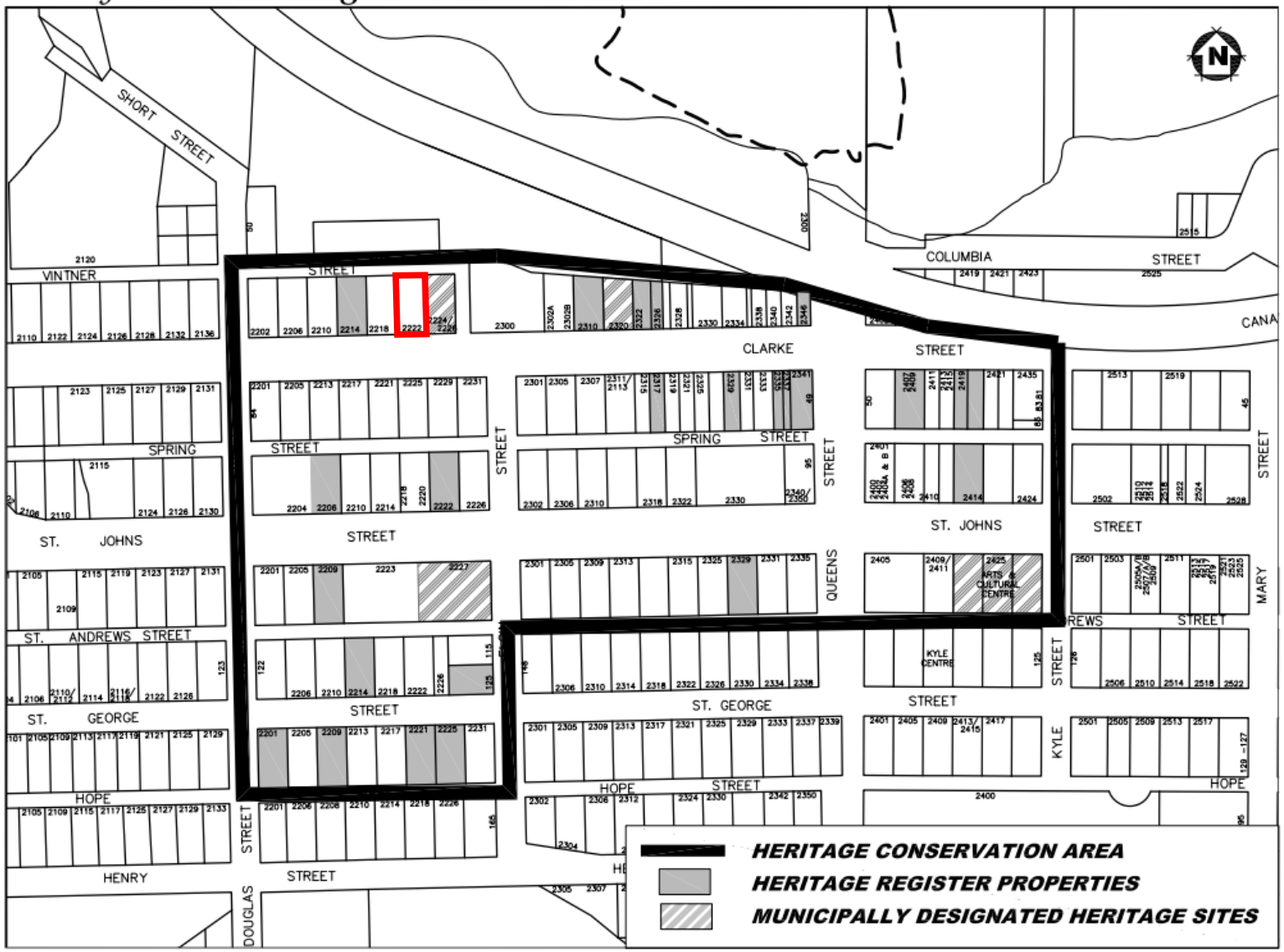
OCP Land Use Designations - 2222 Clarke Street

SUBJECT PROPERTY

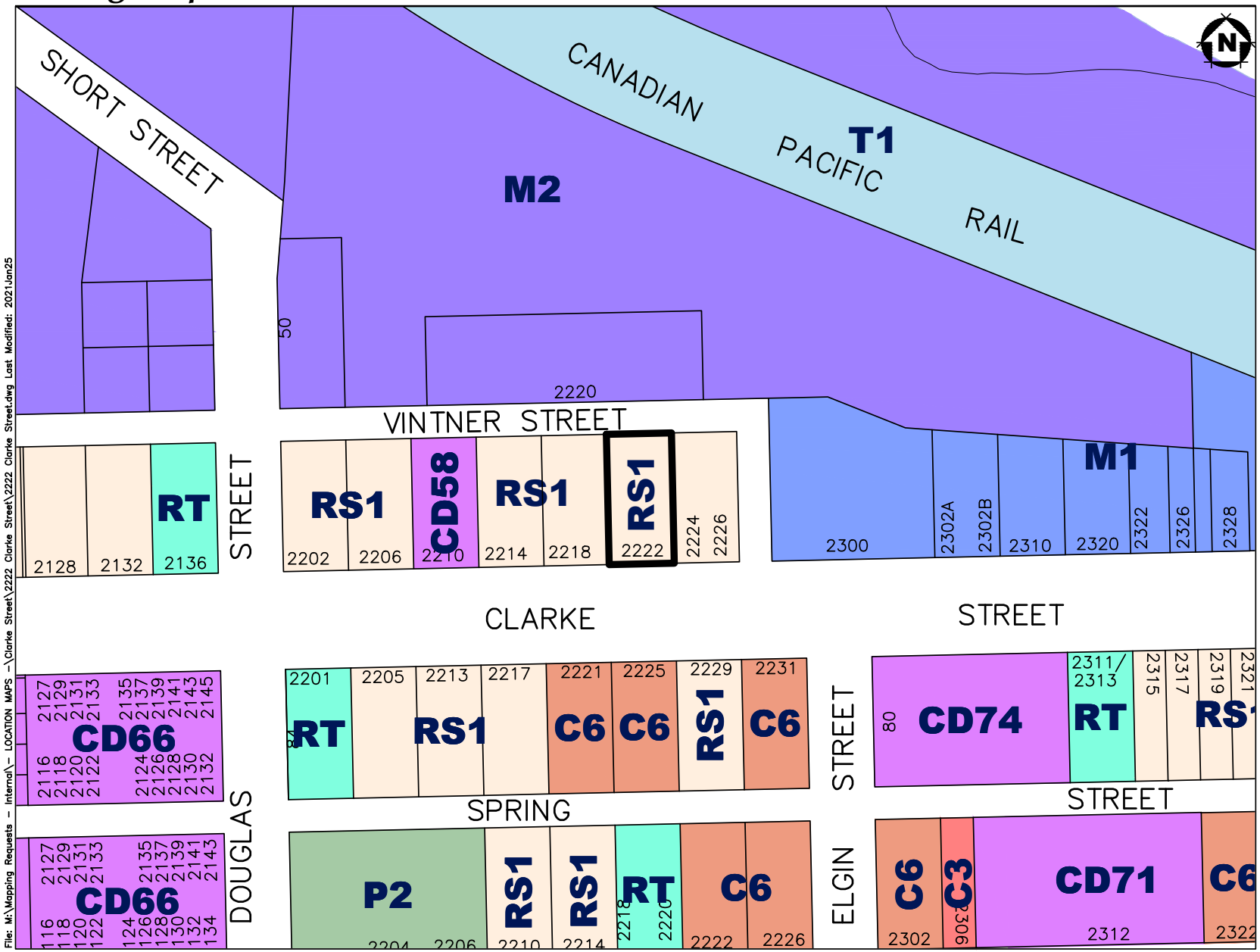


Moody Centre Heritage Conservation Area



Zoning Map- 2222 Clarke Street

SUBJECT PROPERTY



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PROPOSED 8 UNIT TOWNHOME DEVELOPMENT

24			16			8											
23			15			7											
22			14			6											
21			13			5											
20			12			4	ISSUED FOR DP SUBMISSION 2	MAR 8 2022									
19			11			3	ISSUED FOR EARLY INPUT COUNCIL	FEB 4 2022									
18			10			2	HPA ACCESS PLAN	NOV 25 2021									
17			9			1	ISSUED FOR DP SUBMISSION	NOV 3 2021									

Project Name: VINTNER LANDING 8-UNIT TOWNHOME DEVELOPMENT

Project Address: 2222 CLARKE STREET PORT MOODY, B.C.

Sheet Name: TITLE PAGE

Sheet No.: A100

Project No.: 210905

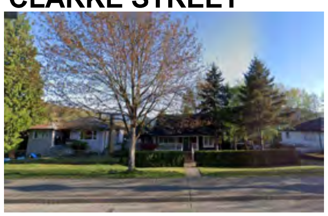
Start of Project: SEPTEMBER 2021

SIGN & SEAL

MARA + NATHA ARCHITECTURE LTD.
202 - 2414 St Johns Street,Port Moody B.C. V3H 2B1
O: 604, 420-2233
C: 604, 970-8413
Email: rob@maraarch.com
Web: www.maraarch.com
AIBC, AAA, SAA

1 Context Plan
3/4" = 1'-0"

CLARKE STREET

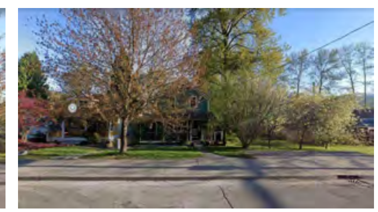


2210 CLARKE ST

2218 CLARKE ST

2222 CLARKE ST

2224 CLARKE ST [HERITAGE]



2226 CLARKE ST [HERITAGE]

VINTNER STREET

2226 VINTNER ST [HERITAGE]

2224 VINTNER ST [HERITAGE]

2222 VINTNER ST

2214 VINTNER ST

2210 VINTNER ST

24			16			8		
23			15			7		
22			14			6		
21			13			5		
20			12			4	ISSUED FOR DP SUBMISSION 2	MAR 9 2022
19			11			3	ISSUED FOR EARLY INPUT COUNCIL	FEB 4 2022
18			10			2	FIRE ACCESS PLAN	NOV 25 2021
17			9			1	ISSUED FOR DP SUBMISSION	NOV 3 2021

Project Name
VINTNER LANDING
8-UNIT TOWNHOME
DEVELOPMENT

Project Address
2222 CLARKE STREET
PORT MOODY, B.C.

Sheet Name
SITE CONTEXT

Sheet No.
A101

Project No.
210905

Start of Project
SEPTEMBER 2021

SIGN & SEAL

It is the responsibility of the Owner and General Contractor to verify all dimensions and site conditions prior to commencement of work and they shall notify the architect of any errors, omissions or discrepencies. Any work completed without architect's knowledge will be the full responsibility of the Owner and General Contractor.

MARA + NATHA ARCHITECTURE LTD.
202 - 2414 St Johns Street,Port Moody B.C. V3H 2B1
O: 604. 420-2233
C: 604. 970-8413
Email: rob@maraarch.com
Web: www.maraarch.com
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RENDERING - 1. VIEW FROM CLARKE STREET

24			16			8		
23			15			7		
22			14			6		
21			13			5		
20			12			4	ISSUED FOR DP SUBMISSION 2	MAR 9 2022
19			11			3	ISSUED FOR EARLY INPUT COUNCIL	FEB 4 2022
18			10			2	FIRE ACCESS PLAN	NOV 25 2021
17			9			1	ISSUED FOR DP SUBMISSION	NOV 3 2021

Project Name
VINTNER LANDING
8-UNIT TOWNHOME
DEVELOPMENT

Project Address
2222 CLARKE STREET
PORT MOODY, B.C.

Sheet Name
RENDERING - 1

Sheet No.
A102

Project No.
210905

Start of Project
SEPTEMBER 2021

SIGN & SEAL

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RENDERING - 2. VIEW FROM VINTNER STREET

24			16			8		
23			15			7		
22			14			6		
21			13			5		
20			12			4	ISSUED FOR DP SUBMISSION 2	MAR 9 2022
19			11			3	ISSUED FOR EARLY INPUT COUNCIL	FEB 4 2022
18			10			2	FIRE ACCESS PLAN	NOV 25 2021
17			9			1	ISSUED FOR DP SUBMISSION	NOV 3 2021

Project Name: VINTNER LANDING 8-UNIT TOWNHOME DEVELOPMENT

Project Address: 2222 CLARKE STREET PORT MOODY, B.C.

Sheet Name: RENDERING - 2

Sheet No. A103

Project No. 210905

Start of Project: SEPTEMBER 2021

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RENDERING - 3. VIEW OF COMMON AMENITY SPACE

RENDERING - 4. VIEW OF COVERED AMENITY SPACE

RENDERING - 5. STREETSCAPE

RENDERING - 6. VIEW OF COVERED AMENITY SPACE 2

24			16			8		
23			15			7		
22			14			6		
21			13			5		
20			12			4	ISSUED FOR DP SUBMISSION 2	MAR 9 2022
19			11			3	ISSUED FOR EARLY INPUT COUNCIL	FEB 4 2022
18			10			2	FIRE ACCESS PLAN	NOV 25 2021
17			9			1	ISSUED FOR DP SUBMISSION	NOV 3 2021

Project Name
VINTNER LANDING
8-UNIT TOWNHOME
DEVELOPMENT

Project Address
2222 CLARKE STREET
PORT MOODY, B.C.

Sheet Name
RENDERING - 3

Sheet No.
A104

Project No.
210905

Start of Project
SEPTEMBER 2021

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PROPOSED 8 UNIT TOWNHOME DEVELOPMENT

LOT INFORMATION

CIVIC ADDRESS : **2222 CLARKE STREET, PORT MOODY, B.C**
LEGAL DESCRIPTION : LOT 40 BLOCK 2 DL 202 GP 1 NWD
LOT AREA : 809.5 m² (8713.4 ft²)
LOT DEDICATIONS : N/A

ZONING
EXISTING : RS1
PROPOSED : RM4
NCP : MOODY CENTRE
OCP : MULTI-FAMILY RESIDENTIAL

SETBACKS	ALLOWED	PROPOSED
FRONT	4.00 m	4.01 m
INTERIOR	2.00 m	2.01 m
REAR	3.00 m	4.98 m

BUILDING HEIGHT
STOREYS 3 STOREYS
BUILDING 1 12.82 m
BUILDING 2 12.30 m

LOT COVERAGE AT GROUND LEVEL
BUILDING 1 : 182.7 m²
BUILDING 2 + : 134.9 m²
TOTAL COVERAGE : 333.6 m²

LOT COVERAGE = TOTAL LOT COVERAGE @ GROUND = 317.6 m² / LOT AREA 809.5 m² x 100
LOT COVERAGE = 39.2 %

LOT COVERAGE ZONING BYLAW DEFINITION
BUILDING 1 : 182.7m²
BUILDING 2 + : 166.3 m²
TOTAL COVERAGE : 349.0 m²

LOT COVERAGE = TOTAL LOT COVERAGE = 349.0 m² / LOT AREA 809.5 m² x 100
LOT COVERAGE = 43.1 %

FLOOR AREA RATIO (PER FLOOR LEVEL)

BUILDING 1 - F.A.R. (PER FLOOR LEVEL)

BUILDING - FLOOR	AREA (sm)	AREA (sf)	FAR
BLDG1 - 1st FLOOR			
UNIT 101	59.5 m²	640.5 ft²	0.07
UNIT 102	106.2 m²	1143.4 ft²	0.13
UNIT 201	7.0 m²	75.5 ft²	0.01
UNIT 202	5.5 m²	59.3 ft²	0.01
	178.3 m²	1918.7 ft²	0.22
BLDG1 - 2nd FLOOR			
UNIT 101	55.7 m²	599.3 ft²	0.07
UNIT 201	59.7 m²	642.4 ft²	0.07
UNIT 202	61.4 m²	661.0 ft²	0.08
	176.8 m²	1902.7 ft²	0.22
BLDG1 - 3rd FLOOR			
UNIT 101	64.7 m²	696.7 ft²	0.08
UNIT 201	51.2 m²	550.7 ft²	0.06
UNIT 202	64.4 m²	693.4 ft²	0.08
	180.3 m²	1940.8 ft²	0.22
BLDG1- ROOF LEVEL			
UNIT 101	1.7 m²	17.9 ft²	0.00
UNIT 202	1.7 m²	17.9 ft²	0.00
	3.3 m²	35.8 ft²	0.00
FAR TOTAL	538.6 m²	5797.9 ft²	0.67

BUILDING 2 - F.A.R. (PER FLOOR LEVEL)

BUILDING - FLOOR	AREA (sm)	AREA (sf)	FAR
BLDG2 - 1st FLOOR			
UNIT 103	107.4 m²	1155.7 ft²	0.13
UNIT 104	6.5 m²	70.3 ft²	0.01
UNIT 203	5.3 m²	56.8 ft²	0.01
UNIT 204	5.3 m²	56.7 ft²	0.01
	124.4 m²	1339.5 ft²	0.15
BLDG2 - 2nd FLOOR			
UNIT 104	45.3 m²	487.9 ft²	0.06
UNIT 203	63.4 m²	681.9 ft²	0.08
UNIT 204	62.5 m²	672.9 ft²	0.08
	171.2 m²	1842.8 ft²	0.21
BLDG2 - 3rd FLOOR			
UNIT 104	47.8 m²	514.4 ft²	0.06
UNIT 203	66.7 m²	717.7 ft²	0.08
UNIT 204	54.0 m²	581.3 ft²	0.07
	168.5 m²	1813.5 ft²	0.21
BLDG2 - ROOF LEVEL			
UNIT 104	1.6 m²	17.2 ft²	0.00
UNIT 203	1.4 m²	15.6 ft²	0.00
	3.0 m²	32.8 ft²	0.00
FAR TOTAL	467.2 m²	5028.6 ft²	0.58

TOTAL FAR AREA OF BUILDING 1 & 2 = 538.6 + 467.2 = 1005.8 m²

NUMBER OF ADAPTABLE UNITS = 2 UNITS.
EXCLUDE 2.0 m² PER EACH ADAPTABLE DWELLING UNIT
2 UNITS x 2.0 m² = 4.0 m² DEDUCTION.

1005.8m² - 4.0 m² = 1001.8 m²

FINAL FAR = 1001.8 m² / 809.5 m² = 1.24

FLOOR AREA RATIO (PER UNIT)

BUILDING 1 - F.A.R. (PER UNIT)

Level	AREA (sm)	AREA (sf)	FAR
UNIT 101			
BLDG1 - 1st FLOOR	59.5 m²	640.5 ft²	0.07
BLDG1 - 2nd FLOOR	55.7 m²	599.3 ft²	0.07
BLDG1 - 3rd FLOOR	64.7 m²	696.7 ft²	0.08
BLDG1- ROOF LEVEL	1.7 m²	17.9 ft²	0.00
	181.6 m²	1954.4 ft²	0.22
UNIT 102			
BLDG1 - 1st FLOOR	106.2 m²	1143.4 ft²	0.13
	106.2 m²	1143.4 ft²	0.13
UNIT 201			
BLDG1 - 1st FLOOR	7.0 m²	75.5 ft²	0.01
BLDG1 - 2nd FLOOR	59.7 m²	642.4 ft²	0.07
BLDG1 - 3rd FLOOR	51.2 m²	550.7 ft²	0.06
	117.9 m²	1268.6 ft²	0.15
UNIT 202			
BLDG1 - 1st FLOOR	5.5 m²	59.3 ft²	0.01
BLDG1 - 2nd FLOOR	61.4 m²	661.0 ft²	0.08
BLDG1 - 3rd FLOOR	64.4 m²	693.4 ft²	0.08
BLDG1- ROOF LEVEL	1.7 m²	17.9 ft²	0.00
	133.0 m²	1431.6 ft²	0.16
FAR TOTAL	538.6 m²	5797.9 ft²	0.67

BUILDING 2 - F.A.R. (PER UNIT)

Level	AREA (sm)	AREA (sf)	FAR
UNIT 103			
BLDG2 - 1st FLOOR	107.4 m²	1155.7 ft²	0.13
	107.4 m²	1155.7 ft²	0.13
UNIT 104			
BLDG2 - 1st FLOOR	6.5 m²	70.3 ft²	0.01
BLDG2 - 2nd FLOOR	45.3 m²	487.9 ft²	0.06
BLDG2 - 3rd FLOOR	47.8 m²	514.4 ft²	0.06
BLDG2 - ROOF LEVEL	1.6 m²	17.2 ft²	0.00
	101.2 m²	1089.8 ft²	0.13
UNIT 203			
BLDG2 - 1st FLOOR	5.3 m²	56.8 ft²	0.01
BLDG2 - 2nd FLOOR	63.4 m²	681.9 ft²	0.08
BLDG2 - 3rd FLOOR	66.7 m²	717.7 ft²	0.08
BLDG2 - ROOF LEVEL	1.4 m²	15.6 ft²	0.00
	136.8 m²	1472.0 ft²	0.17
UNIT 204			
BLDG2 - 1st FLOOR	5.3 m²	56.7 ft²	0.01
BLDG2 - 2nd FLOOR	62.5 m²	672.9 ft²	0.08
BLDG2 - 3rd FLOOR	54.0 m²	581.3 ft²	0.07
	121.8 m²	1311.0 ft²	0.15
FAR TOTAL	467.2 m²	5028.6 ft²	0.58

8			
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6			
5			
4	ISSUED FOR DP SUBMISSION 2	MAR 8 2022	
3	ISSUED FOR EARLY INPUT COUNCIL	FEB 4 2022	
2	FIRE ACCESS PLAN	NOV 25 2021	
1	ISSUED FOR DP SUBMISSION	NOV 3 2021	

Project Name: VINTNER LANDING 8-UNIT TOWNHOME DEVELOPMENT
Project Address: 2222 CLARKE STREET PORT MOODY, B.C.
Sheet Name: PROJECT DATA
Sheet No.: A105
Project No.: 210905
Start of Project: SEPTEMBER 2021
SIGN & SEAL

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PROPOSED 8 UNIT TOWNHOME DEVELOPMENT

OFF STREET PARKING

OFF STREET PARKING			
UNIT	# ROOMS	STALLS PER UNIT	REQ. STALLS
101	4 BED + DEN	2	2
102	2 BED (ACCESSIBLE)	1.5	1.5
103	2 BED (ACCESSIBLE)	1.5	1.5
104	2 BED	1.5	1.5
201	2 BED	1.5	1.5
202	2 BED + DEN	1.5	1.5
203	2 BED + DEN	1.5	1.5
204	2 BED	1.5	1.5
TOTAL REQUIRED STALLS			12.5

REQUIRED NUMBER OF PARKING STALLS = 13 STALLS

PROVIDED NUMBER OF PARKING STALLS = 11 STALLS
\+ 2 ACCESSIBLE STALLS
= **13 STALLS PROVIDED**

VISITOR PARKING			
UNIT	# ROOMS	VISITOR PER UNIT	# VISITOR STALLS
101	4 BED + DEN	0.2	0.2
102	2 BED (ACCESSIBLE)	0.2	0.2
103	2 BED (ACCESSIBLE)	0.2	0.2
104	2 BED	0.2	0.2
201	2 BED	0.2	0.4
202	2 BED + DEN	0.2	0.2
203	2 BED + DEN	0.2	0.2
204	2 BED	0.2	0.2
TOTAL REQUIRED STALLS			1.8

REQUIRED NUMBER OF VISITOR STALLS = 2 STALLS

PROVIDED NUMBER OF VISITOR STALLS = 2 STALLS

ELECTRIC VEHICLE (EV) CHARGING STATION ROUGH-INs = 8 STALLS (1 PER UNIT)

PROVIDED TOTAL NUMBER OF PARKING STALLS = 2 + 13 = 15 STALLS

BICYCLE PARKING

LONG TERM BICYCLE PARKING					
STORAGE	**TYPE**	**BICYC. PER UNIT**	**UNIT COUNT**	**REQ. BICYC.PARKING**	**PROVIDED**
BICYCLE STORAGE	VERTICAL STORAGE	2	8	16	18

REQUIRED NUMBER OF LONG TERM BICYCLE PARKING = 16

PROVIDED NUMBER OF LONG TERM BICYCLE PARKING = 18

PROVIDED NUMBER OF SHORT TERM BICYCLE PARKING = 6 (AT GROUND LEVEL)

UNIT SUMMARY

UNIT SCHEDULE (DRYWALL TO DRYWALL)			
UNIT NUMBER	# ROOMS	AREA (sm)	AREA (sf)
UNIT			
101	4 BED + DEN	163.8 m²	1763.5 ft²
102	2 BED (ACCESSIBLE)	97.5 m²	1049.8 ft²
103	2 BED (ACCESSIBLE)	99.4 m²	1069.5 ft²
104	2 BED	88.8 m²	955.8 ft²
201	2 BED	109.2 m²	1175.6 ft²
202	2 BED + DEN	118.5 m²	1275.2 ft²
203	2 BED + DEN	123.4 m²	1327.8 ft²
204	2 BED	111.8 m²	1203.8 ft²
UNIT		912.4 m²	9821.1 ft²
ROOF LEVEL			
104	PRIVATE	15.1 m²	162.6 ft²
202	PRIVATE	22.2 m²	238.7 ft²
203	PRIVATE	19.4 m²	208.8 ft²
ROOF LEVEL		56.7 m²	610.0 ft²
DECK			
101	PRIVATE	21.7 m²	233.4 ft²
201	PRIVATE	10.0 m²	107.8 ft²
204	PRIVATE	10.6 m²	114.1 ft²
DECK		42.3 m²	455.4 ft²
TOTAL FLOOR + ROOF LEVEL + DECK =		1011.4 m²	10886.5 ft²

TOTAL UNIT COUNT = 8 UNITS

AMENITY SPACE

AMENITY				
UNIT NO.	TYPE	COMMON / PRIVATE	AREA (sm)	AREA (sf)
(GROUND)	AMENITY	COMMON	100.8 m²	1085.0 ft²
COMMON			100.8 m²	1085.0 ft²
101	DECK	PRIVATE	21.7 m²	233.4 ft²
104	ROOF LEVEL	PRIVATE	15.1 m²	162.6 ft²
201	DECK	PRIVATE	10.0 m²	107.8 ft²
202	ROOF LEVEL	PRIVATE	22.2 m²	238.7 ft²
203	ROOF LEVEL	PRIVATE	19.4 m²	208.8 ft²
204	DECK	PRIVATE	10.6 m²	114.1 ft²
PRIVATE			99.0 m²	1065.4 ft²
TOTAL AMENITY AREA =			199.8 m²	2150.4 ft²

REQUIRED AMENITY AREA = No. UNITS x 5.0 m^2 per UNIT = 9 x 5 = 45.0 m^2

PROVIDED COMMON AMENITY AREA @ GROUND LEVEL = 100.8 m^2

PROVIDED PRIVATE AMENITY AREA @ ROOF DECK = 99.0 m^2

PROVIDED TOTAL AREA OF AMENITY SPACES = 199.8 m^2

UNITS WITHOUT PRIVATE ROOF DECKS TO SHARE THE COMMON AMENITY AREA.

4	ISSUED FOR DP SUBMISSION 2	MAR 9 2022
3	ISSUED FOR EARLY INPUT COUNCIL	FEB 4 2022
2	FIRE ACCESS PLAN	NOV 25 2021
1	ISSUED FOR DP SUBMISSION	NOV 3 2021

Project Name: VINTNER LANDING 8-UNIT TOWNHOME DEVELOPMENT

Project Address: 2222 CLARKE STREET PORT MOODY, B.C.

Sheet Name: PROJECT DATA - CONTINUED

Sheet No.: A106

Project No.: 210905

Start of Project: SEPTEMBER 2021

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1 **AXO - 1 - EAST CORNER OF CLARKE STREET**

24		16			8		
23		15			7		
22		14			6		
21		13			5		
20		12			4	ISSUED FOR DP SUBMISSION 2	MAR 9 2022
19		11			3	ISSUED FOR EARLY INPUT COUNCIL	FEB 4 2022
18		10			2	FIRE ACCESS PLAN	NOV 25 2021
17		9			1	ISSUED FOR DP SUBMISSION	NOV 3 2021

Project Name: VINTNER LANDING 8-UNIT TOWNHOME DEVELOPMENT

Project Address: 2222 CLARKE STREET PORT MOODY, B.C.

Sheet Name: 3D VIEW - 1

Sheet No.: A107

Project No.: 210905

Start of Project: SEPTEMBER 2021

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1 AXO - 2 - WEST CORNER OF CLARKE STREET

24			16			8		
23			15			7		
22			14			6		
21			13			5		
20			12			4	ISSUED FOR DP SUBMISSION 2	MAR 9 2022
19			11			3	ISSUED FOR EARLY INPUT COUNCIL	FEB 4 2022
18			10			2	FIRE ACCESS PLAN	NOV 25 2021
17			9			1	ISSUED FOR DP SUBMISSION	NOV 3 2021

Project Name
VINTNER LANDING
8-UNIT TOWNHOME
DEVELOPMENT

Project Address
2222 CLARKE STREET
PORT MOODY, B.C.

Sheet Name
3D VIEW - 2

Sheet No.
A108

Project No.
210905

Start of Project
SEPTEMBER 2021

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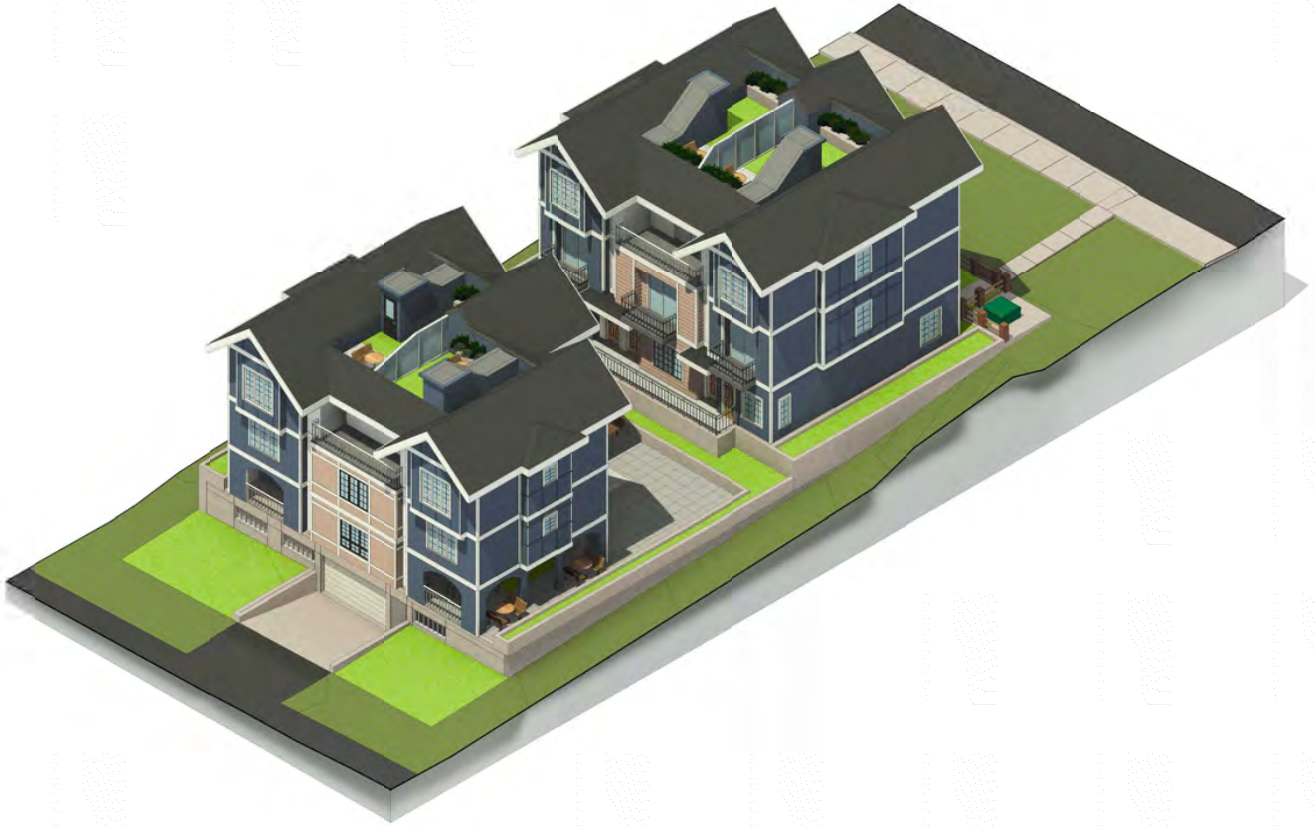

1 AXO - 3 - WEST CORNER OF VINTNER STREET

24			16			8					
23			15			7					
22			14			6					
21			13			5					
20			12			4	ISSUED FOR DP SUBMISSION 2	MAR 9 2022			
19			11			3	ISSUED FOR EARLY INPUT COUNCIL	FEB 4 2022			
18			10			2	HPB ACCESS PLAN	NOV 25 2021			
17			9			1	ISSUED FOR DP SUBMISSION	NOV 3 2021			

Project Name: VINTNER LANDING 8-UNIT TOWNHOME DEVELOPMENT

Project Address: 2222 CLARKE STREET PORT MOODY, B.C.

Sheet Name: 3D VIEW - 3

Sheet No.: A109

Project No.: 210905

Start of Project: SEPTEMBER 2021

SIGN & SEAL

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1 AXO - 4 - EAST CORNER OF VINTNER STREET

24			16			8		
23			15			7		
22			14			6		
21			13			5		
20			12			4	ISSUED FOR DP SUBMISSION 2	MAR 9 2022
19			11			3	ISSUED FOR EARLY INPUT COUNCIL	FEB 4 2022
18			10			2	FIRE ACCESS PLAN	NOV 25 2021
17			9			1	ISSUED FOR DP SUBMISSION	NOV 3 2021

Project Name
VINTNER LANDING
8-UNIT TOWNHOME
DEVELOPMENT

Project Address
2222 CLARKE STREET
PORT MOODY, B.C.

Sheet Name
3D VIEW - 4

Sheet No.
A110

Project No.
210905

Start of Project
SEPTEMBER 2021

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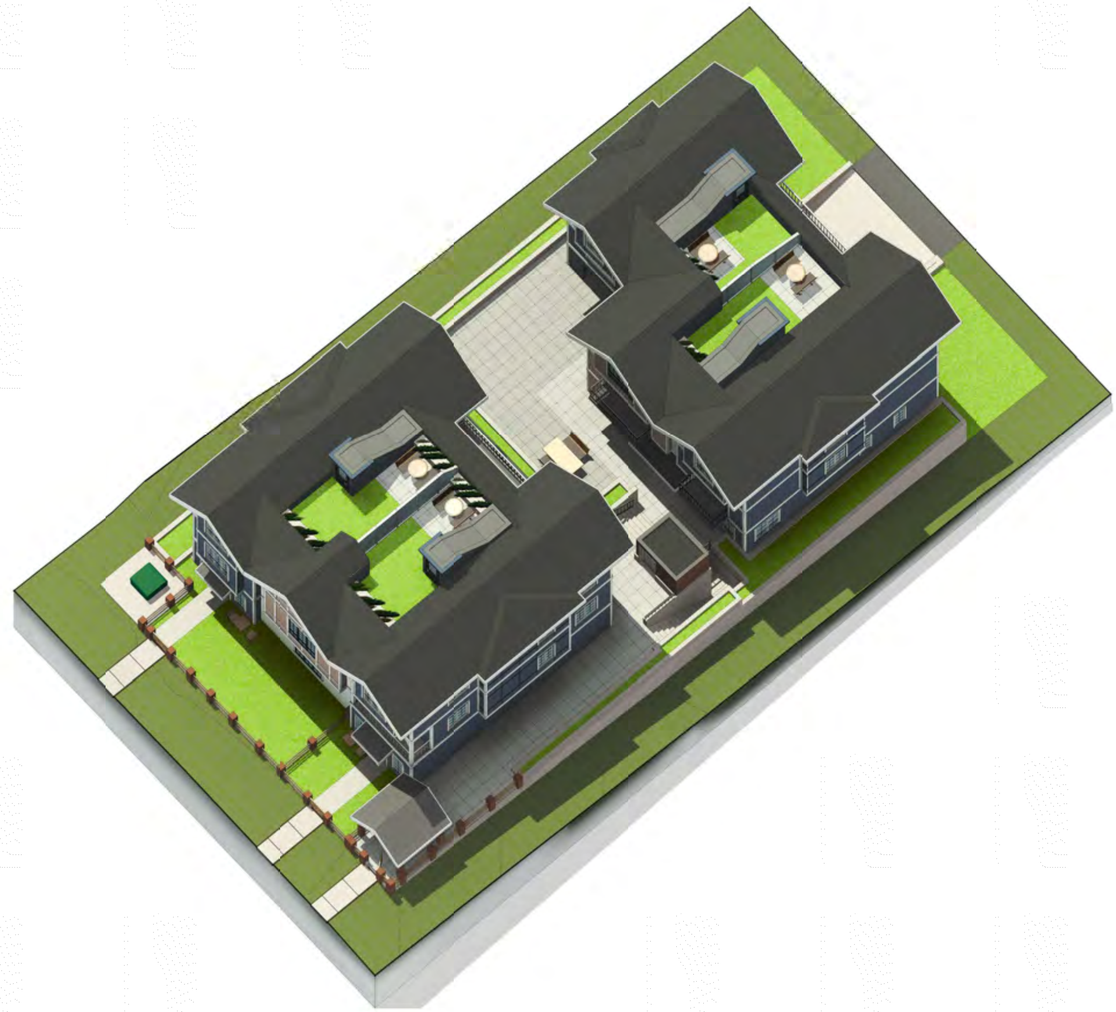

1 AXO - 5 - ROOF TOP AMENITY

24			16			8		
23			15			7		
22			14			6		
21			13			5		
20			12			4	ISSUED FOR DP SUBMISSION 2	MAR 9 2022
19			11			3	ISSUED FOR EARLY INPUT COUNCIL	FEB 4 2022
18			10			2	FIRE ACCESS PLAN	NOV 25 2021
17			9			1	ISSUED FOR DP SUBMISSION	NOV 3 2021

Project Name
VINTNER LANDING
8-UNIT TOWNHOME
DEVELOPMENT

Project Address
2222 CLARKE STREET
PORT MOODY, B.C.

Sheet Name
3D VIEW - 5

Sheet No.
A111

Project No.
210905

Start of Project
SEPTEMBER 2021

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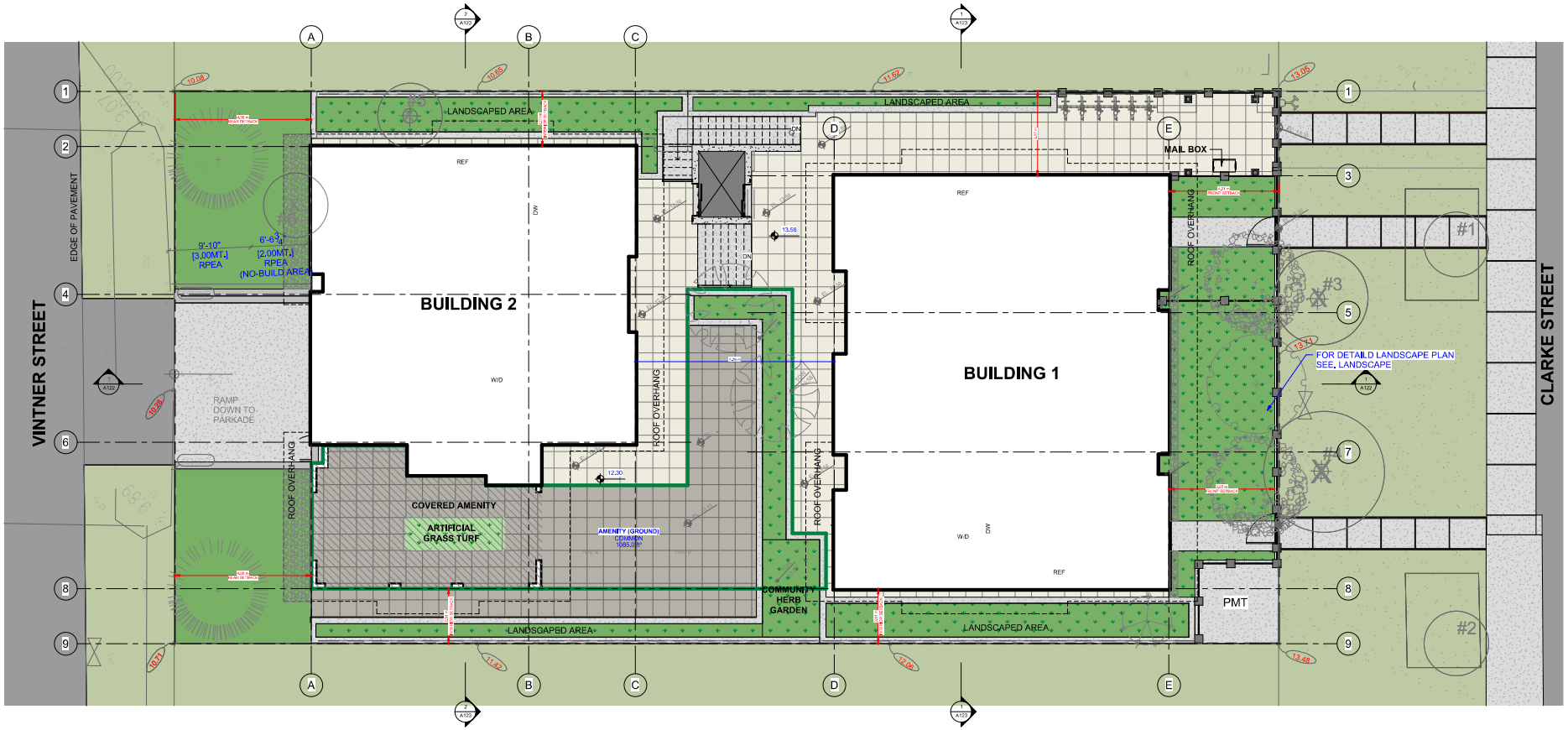

1 **SITE PLAN GROUND LEVEL**
3/16" = 1'-0"

4	ISSUED FOR DP SUBMISSION 2	MAR 8 2022
3	ISSUED FOR EARLY INPUT COUNCIL	FEB 4 2022
2	HPB ACCESS PLAN	NOV 25 2021
1	ISSUED FOR DP SUBMISSION	NOV 3 2021

Project Name: VINTNER LANDING 8-UNIT TOWNHOME DEVELOPMENT

Project Address: 2222 CLARKE STREET PORT MOODY, B.C.

Sheet Name: SITE PLAN - GROUND LEVEL

Sheet No.: A112

Project No.: 210905

Start of Project: SEPTEMBER 2021

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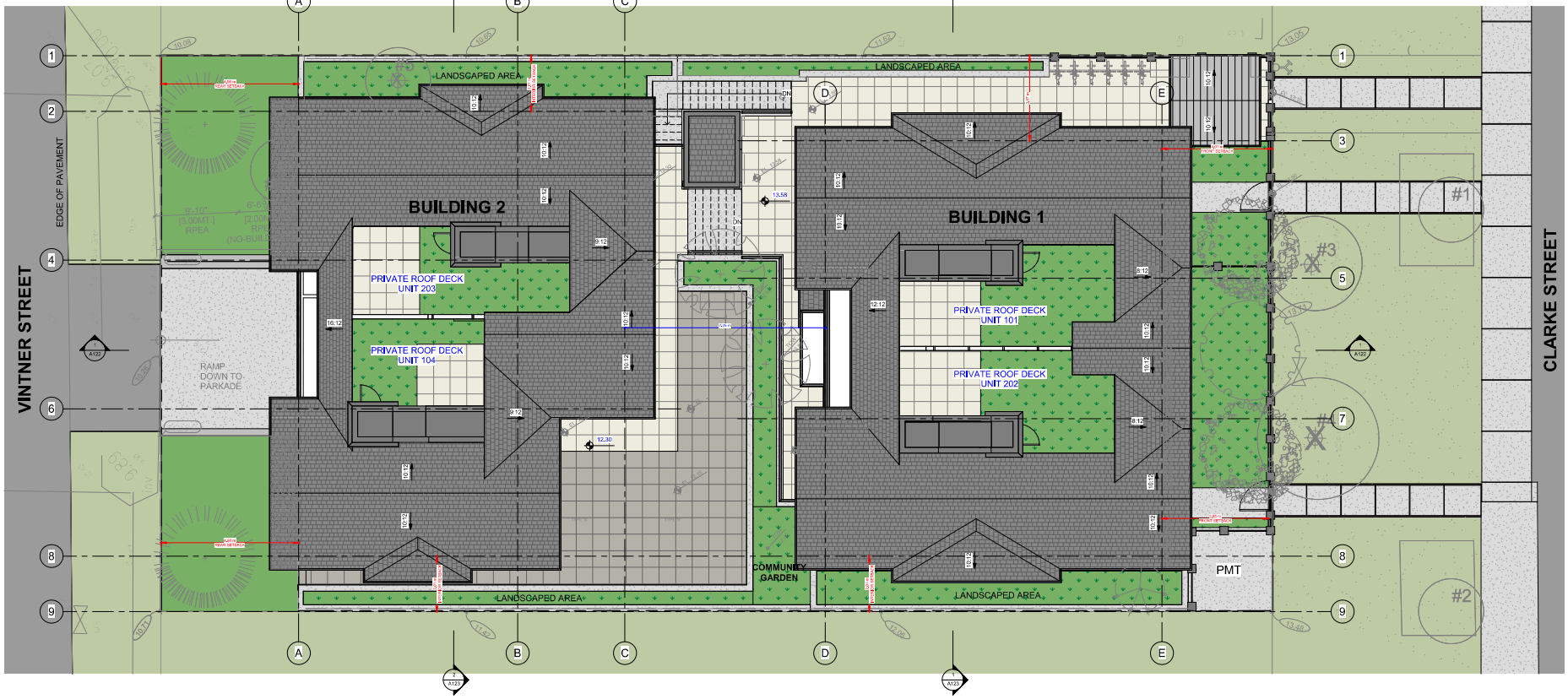

1 **SITE PLAN - ROOF LEVEL**
3/16" = 1'-0"

8		
7		
6		
5		
4	ISSUED FOR DP SUBMISSION 2	MAR 8 2022
3	ISSUED FOR EARLY INPUT COUNCIL	FEB 4 2022
2	HPB ACCESS PLAN	NOV 25 2021
1	ISSUED FOR DP SUBMISSION	NOV 3 2021

Project Name: VINTNER LANDING 8-UNIT TOWNHOME DEVELOPMENT

Project Address: 2222 CLARKE STREET PORT MOODY, B.C.

Sheet Name: SITE PLAN - ROOF LEVEL

Sheet No.: A113

Project No.: 210905

Start of Project: SEPTEMBER 2021

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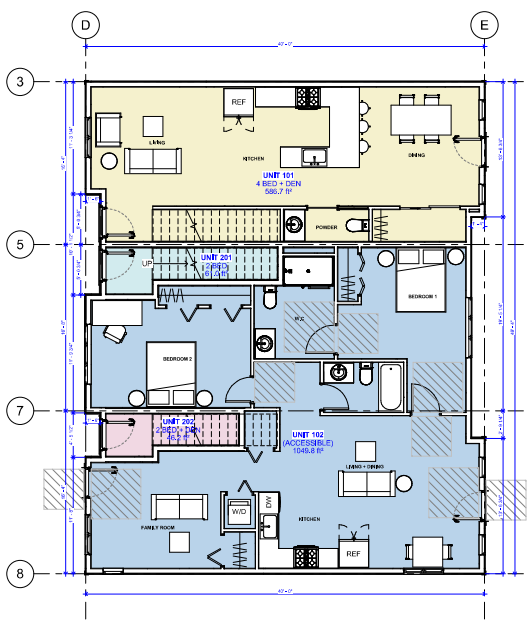
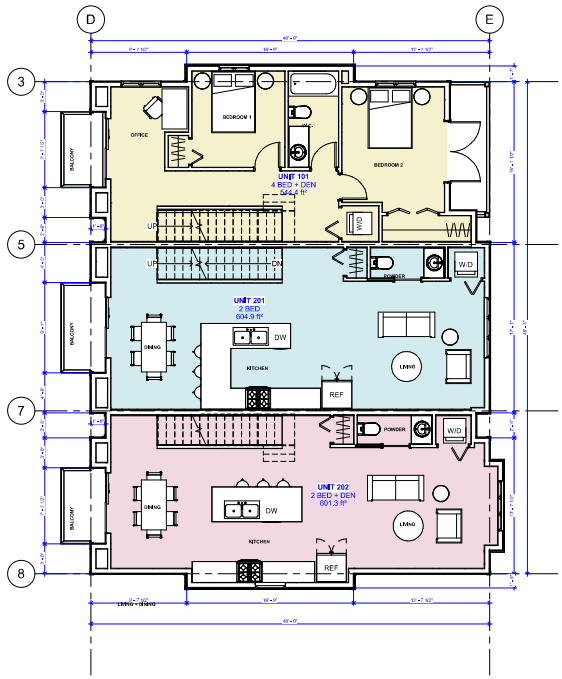
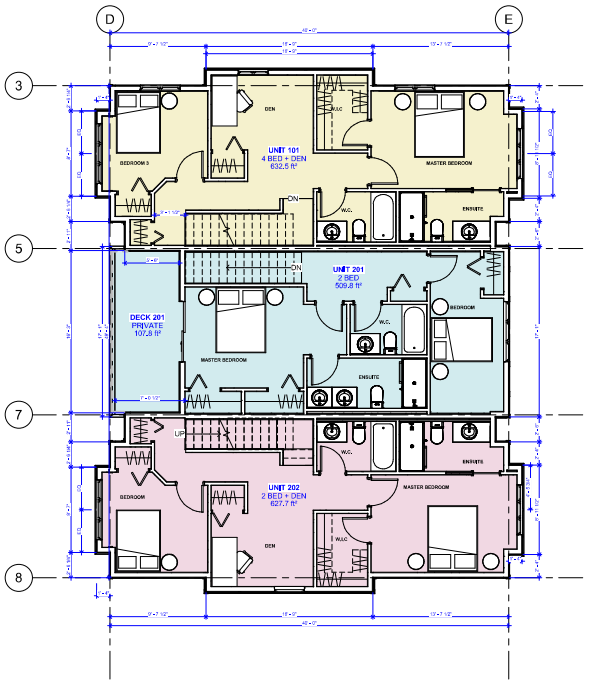


1 **BLDG1 - 1st FLOOR**
3/16" = 1'-0"



2 **BLDG1 - 2nd FLOOR**
3/16" = 1'-0"



3 **BLDG1 - 3rd FLOOR**
3/16" = 1'-0"

24		16		8							
23		15		7							
22		14		6							
21		13		5							
20		12		4	ISSUED FOR DP SUBMISSION 2	MAR 9 2022					
19		11		3	ISSUED FOR EARLY INPUT COUNCIL	FEB 4 2022					
18		10		2	HPB ACCESS PLAN	NOV 25 2021					
17		9		1	ISSUED FOR DP SUBMISSION	NOV 3 2021					

Project Name: VINTNER LANDING 8-UNIT TOWNHOME DEVELOPMENT

Project Address: 2222 CLARKE STREET PORT MOODY, B.C.

Sheet Name: BLDG 1 - FLOOR PLAN

Sheet No.: A114

Project No.: 210905

Start of Project: SEPTEMBER 2021

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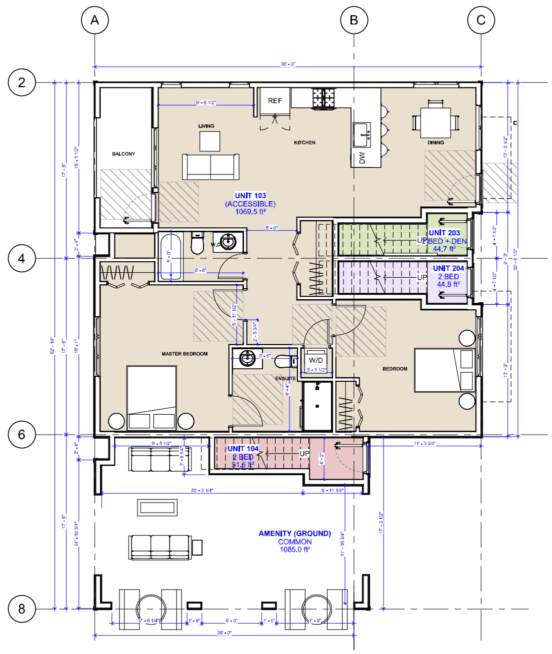
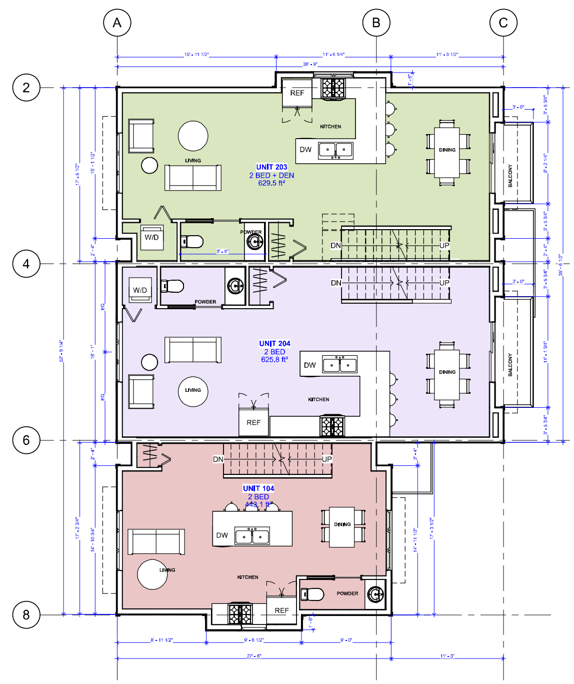
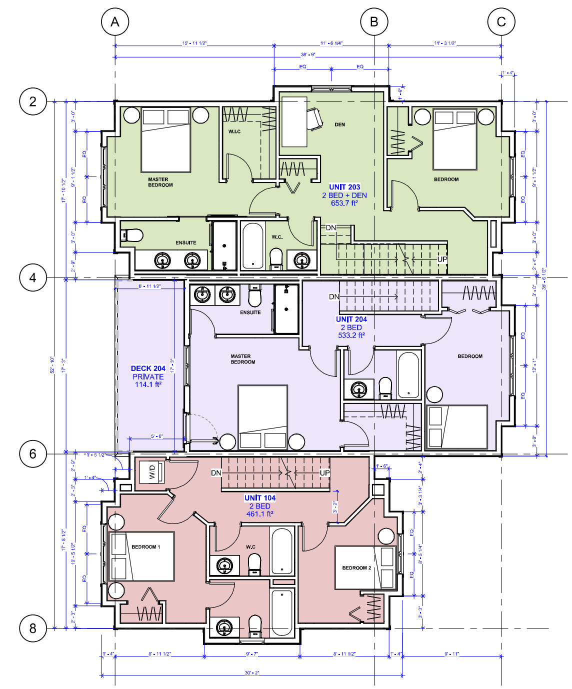


3 **BLDG2 - 1st FLOOR**
3/16" = 1'-0"



1 **BLDG2 - 2nd FLOOR**
3/16" = 1'-0"



2 **BLDG2 - 3rd FLOOR**
3/16" = 1'-0"

24			16			8					
23			15			7					
22			14			6					
21			13			5					
20			12			4	ISSUED FOR DP SUBMISSION 2	MAR 9 2022			
19			11			3	ISSUED FOR EARLY INPUT COUNCIL	FEB 4 2022			
18			10			2	FIRE ACCESS PLAN	NOV 25 2021			
17			9			1	ISSUED FOR DP SUBMISSION	NOV 3 2021			

Project Name
VINTNER LANDING
8-UNIT TOWNHOME
DEVELOPMENT

Project Address
2222 CLARKE STREET
PORT MOODY, B.C.

Sheet Name
BLDG 2 - FLOOR PLAN

Sheet No.
A115

Project No.
210905

Start of Project
SEPTEMBER 2021

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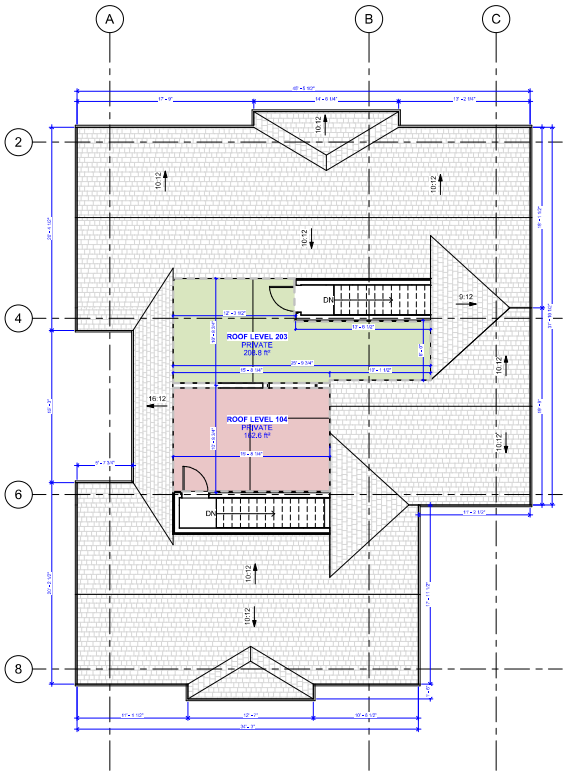
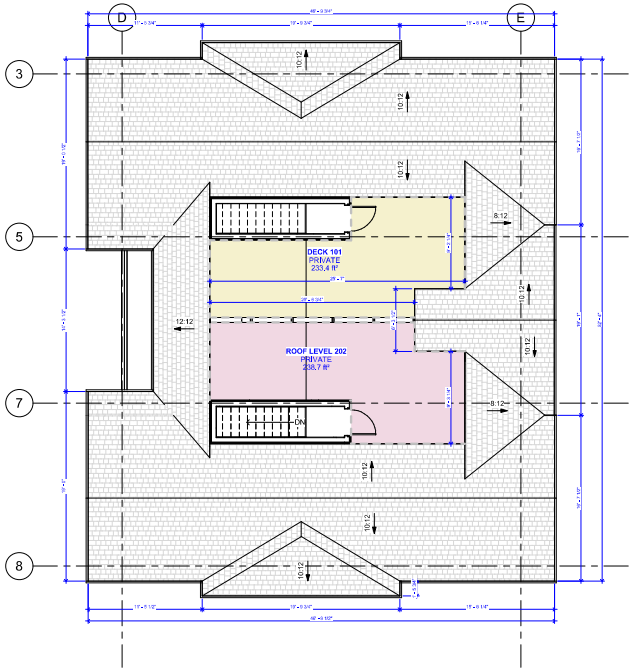


2 BLDG2 - ROOF LEVEL
3/16" = 1'-0"



1 BLDG1- ROOF LEVEL
3/16" = 1'-0"

24		16		8							
23		15		7							
22		14		6							
21		13		5							
20		12		4	ISSUED FOR DP SUBMISSION 2	MAR 9 2022					
19		11		3	ISSUED FOR EARLY INPUT COUNCIL	FEB 4 2022					
18		10		2	HPA ACCESS PLAN	NOV 25 2021					
17		9		1	ISSUED FOR DP SUBMISSION	NOV 3 2021					

Project Name: VINTNER LANDING 8-UNIT TOWNHOME DEVELOPMENT

Project Address: 2222 CLARKE STREET PORT MOODY, B.C.

Sheet Name: BLDG 1 & 2 ROOF DECK

Sheet No.: A116

Project No.: 210905

Start of Project: SEPTEMBER 2021

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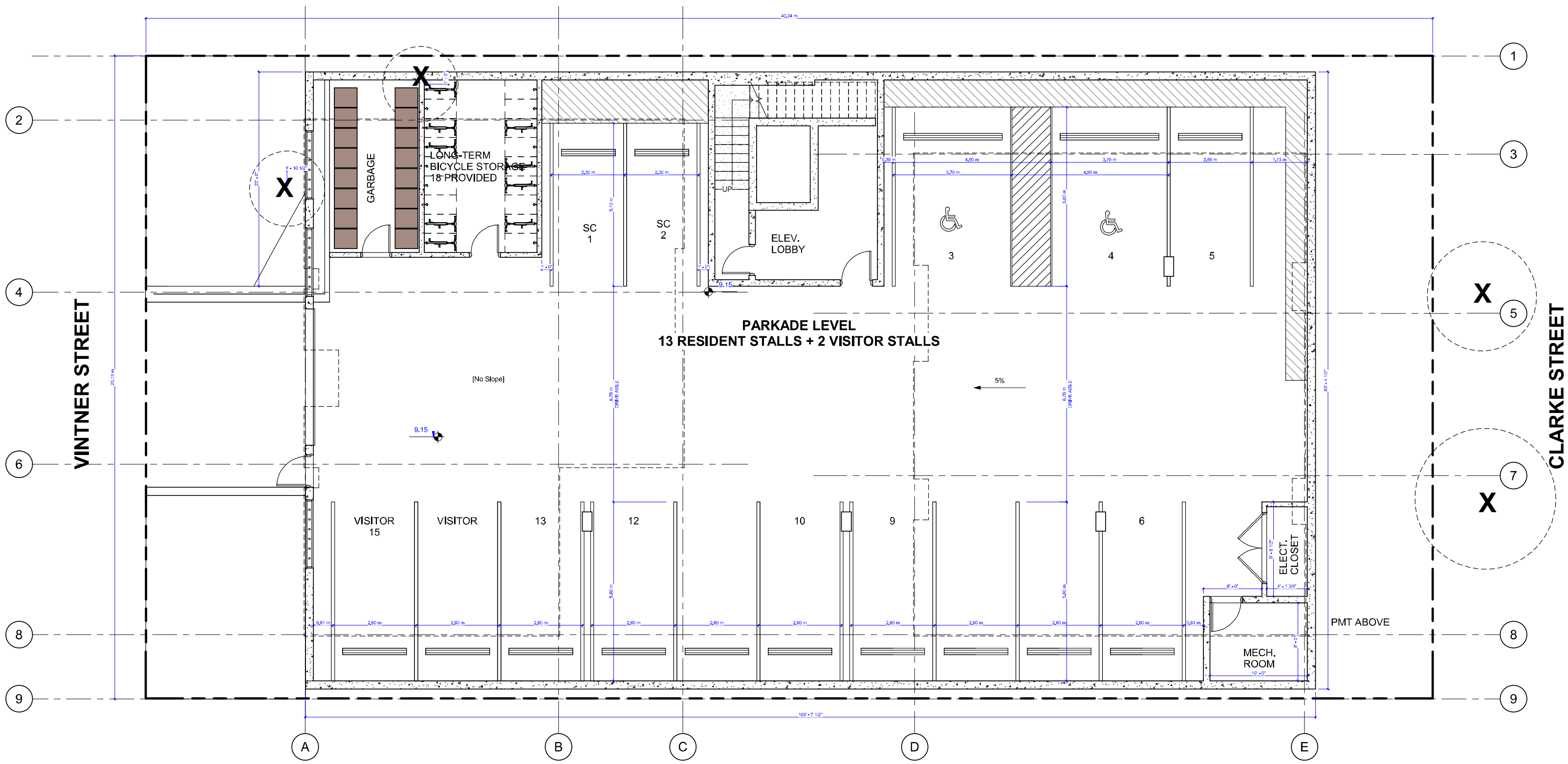

1 **0 - PARKADE**
3/16" = 1'-0"

24			16			8				
23			15			7				
22			14			6				
21			13			5				
20			12			4	ISSUED FOR DP SUBMISSION 2	MAR 9 2022		
19			11			3	ISSUED FOR EARLY INPUT COUNCIL	FEB 4 2022		
18			10			2	FIRE ACCESS PLAN	NOV 25 2021		
17			9			1	ISSUED FOR DP SUBMISSION	NOV 3 2021		

Project Name: VINTNER LANDING 8-UNIT TOWNHOME DEVELOPMENT

Project Address: 2222 CLARKE STREET PORT MOODY, B.C.

Sheet Name: PARKADE

Sheet No.: A117

Project No.: 210905

Start of Project: SEPTEMBER 2021

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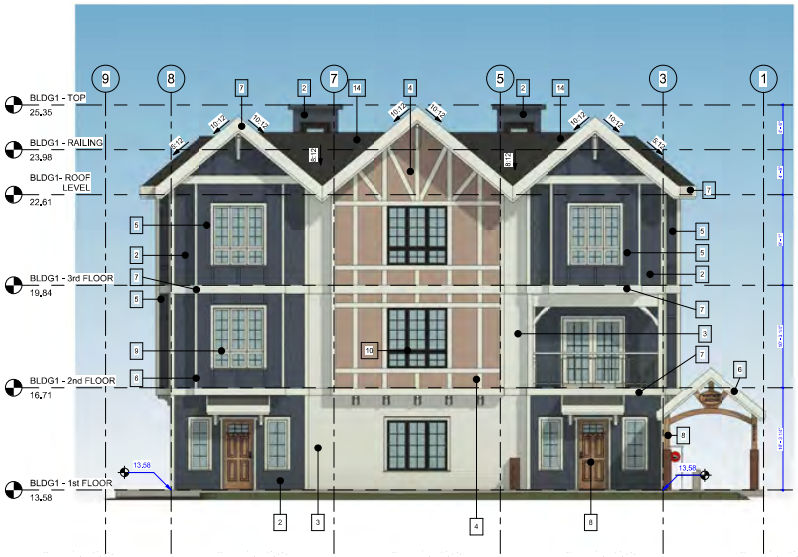
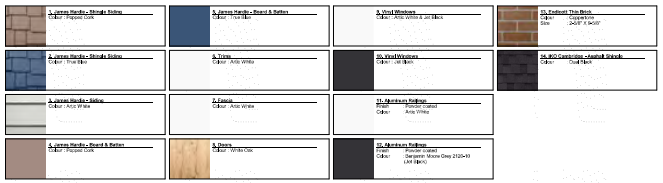


1 **BLDG1 - SOUTH**
3/16" = 1'-0"

2 **BLDG1 - NORTH**
3/16" = 1'-0"

FINISH SCHEDULE



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2	HPB ACCESS PLAN	NOV 25 2021
1	ISSUED FOR DP SUBMISSION	NOV 3 2021

Project Name: VINTNER LANDING 8-UNIT TOWNHOME DEVELOPMENT

Project Address: 2222 CLARKE STREET PORT MOODY, B.C.

Sheet Name: BLDG 1 ELEVATIONS -1

Sheet No.: A118

Project No.: 210905

Start of Project: SEPTEMBER 2021

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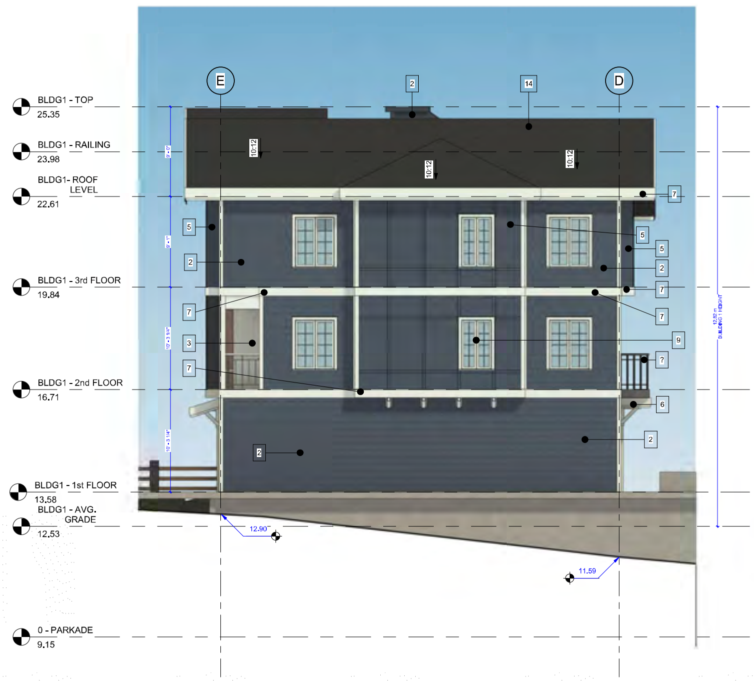
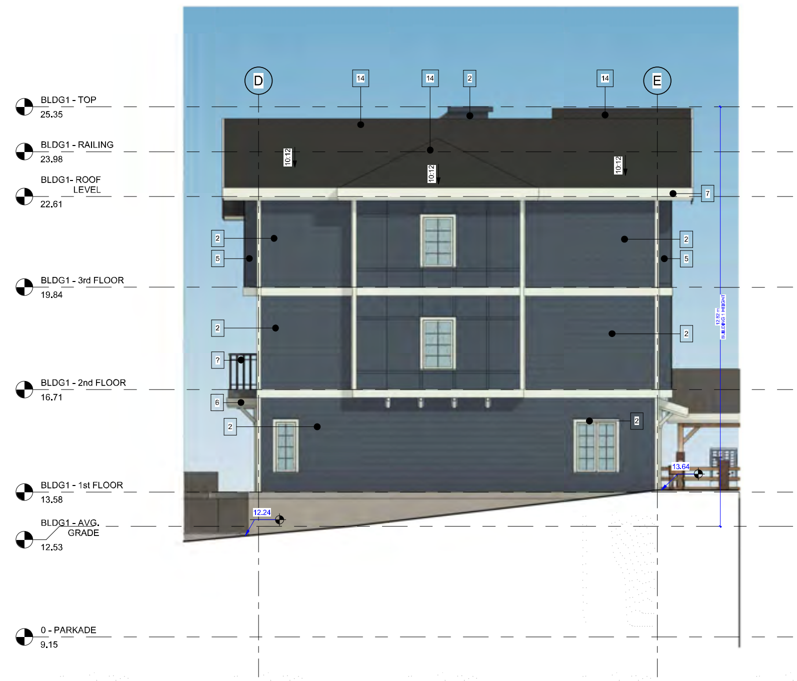


1 **BLDG1 - EAST**
3/16" = 1'-0"



2 **BLDG1 - WEST**
3/16" = 1'-0"

FINISH SCHEDULE

1. James Hardie - Shingle Siding Colour : Popped Cork	5. James Hardie - Board & Batten Colour : True Blue	9. Vinyl Windows Colour : Artic White & Jet Black	13. Endicott Thin Brick Colour : Coppertone Size 2-5/8" X 9-5/8"
2. James Hardie - Shingle Siding Colour : True Blue	6. Trims Colour : Artic White	10. Vinyl Windows Colour : Jet Black	14. IKO Cambridge - Asphalt Shingle Colour : Dual Black
3. James Hardie - Siding Colour : Artic White	7. Fascia Colour : Artic White	11. Aluminum Railings Finish : Powder coated Colour : Artic White	
4. James Hardie - Board & Batten Colour : Popped Cork	8. Doors Colour : White Oak	12. Aluminum Railings Finish : Powder coated Colour : Benjamin Moore Grey 2120-10 (Jet Black)	

24			16			8					
23			15			7					
22			14			6					
21			13			5					
20			12			4	ISSUED FOR DP SUBMISSION 2	MAR 9 2022			
19			11			3	ISSUED FOR EARLY INPUT COUNCIL	FEB 4 2022			
18			10			2	FIRE ACCESS PLAN	NOV 25 2021			
17			9			1	ISSUED FOR DP SUBMISSION	NOV 3 2021			

Project Name
VINTNER LANDING 8-UNIT TOWNHOME DEVELOPMENT

Project Address
2222 CLARKE STREET PORT MOODY, B.C.

Sheet Name
BLDG 1 ELEVATIONS -2

Sheet No.
A119

Project No.
210905

Start of Project
SEPTEMBER 2021

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1 BLDG2 - SOUTH
3/16" = 1'-0"

2 BLDG2 - NORTH
3/16" = 1'-0"

FINISH SCHEDULE

1. James Hardie - Shingle Siding
Colour : Popped Cork

2. James Hardie - Shingle Siding
Colour : True Blue

3. James Hardie - Siding
Colour : Artic White

4. James Hardie - Board & Batten
Colour : Popped Cork

5. James Hardie - Board & Batten
Colour : True Blue

6. Trims
Colour : Artic White

7. Fascia
Colour : Artic White

8. Doors
Colour : White Oak

9. Vinyl Windows
Colour : Artic White & Jet Black

10. Vinyl Windows
Colour : Jet Black

11. Aluminum Railings
Finish : Powder coated
Colour : Artic White

12. Aluminum Railings
Finish : Powder coated
Colour : Benjamin Moore Grey 2120-10 (Jet Black)

13. Endicott Thin Brick
Colour : Coppertone
Size : 2-5/8" X 9-5/8"

14. IKO Cambridge - Asphalt Shingle
Colour : Dual Black

24			16			8		
23			15			7		
22			14			6		
21			13			5		
20			12			4	ISSUED FOR DP SUBMISSION 2	MAR 9 2022
19			11			3	ISSUED FOR EARLY INPUT COUNCIL	FEB 4 2022
18			10			2	FIRE ACCESS PLAN	NOV 25 2021
17			9			1	ISSUED FOR DP SUBMISSION	NOV 3 2021

Project Name
VINTNER LANDING 8-UNIT TOWNHOME DEVELOPMENT

Project Address
2222 CLARKE STREET PORT MOODY, B.C.

Sheet Name
BLDG 2 - ELEVATIONS - 1

Sheet No.
A120

Project No.
210905

Start of Project
SEPTEMBER 2021

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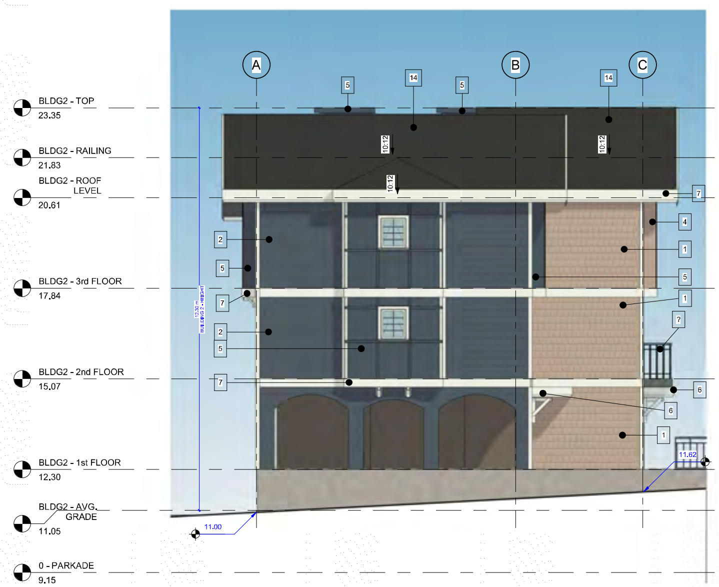

1 **BLDG2 - WEST**
3/16" = 1'-0"

2 **BLDG2 - EAST**
3/16" = 1'-0"

FINISH SCHEDULE

1. James Hardie - Shingle Siding Colour : Popped Cork	5. James Hardie - Board & Batten Colour : True Blue	9. Vinyl Windows Colour : Artic White & Jet Black	13. Endicott Thin Brick Colour : Coppertone Size : 2-5/8" X 9-5/8"
2. James Hardie - Shingle Siding Colour : True Blue	6. Trims Colour : Artic White	10. Vinyl Windows Colour : Jet Black	14. IKO Cambridge - Asphalt Shingle Colour : Dual Black
3. James Hardie - Siding Colour : Artic White	7. Fascia Colour : Artic White	11. Aluminum Railings Finish : Powder coated Colour : Artic White	
4. James Hardie - Board & Batten Colour : Popped Cork	8. Doors Colour : White Oak	12. Aluminum Railings Finish : Powder coated Colour : Benjamin Moore Grey 2120-10 (Jet Black)	

24			16			8		
23			15			7		
22			14			6		
21			13			5		
20			12			4	ISSUED FOR DP SUBMISSION 2	MAR 9 2022
19			11			3	ISSUED FOR EARLY INPUT COUNCIL	FEB 4 2022
18			10			2	FIRE ACCESS PLAN	NOV 25 2021
17			9			1	ISSUED FOR DP SUBMISSION	NOV 3 2021

Project Name: VINTNER LANDING 8-UNIT TOWNHOME DEVELOPMENT

Project Address: 2222 CLARKE STREET PORT MOODY, B.C.

Sheet Name: BLDG 2 - ELEVATIONS - 2

Sheet No. A121

Project No. 210905

Start of Project: SEPTEMBER 2021

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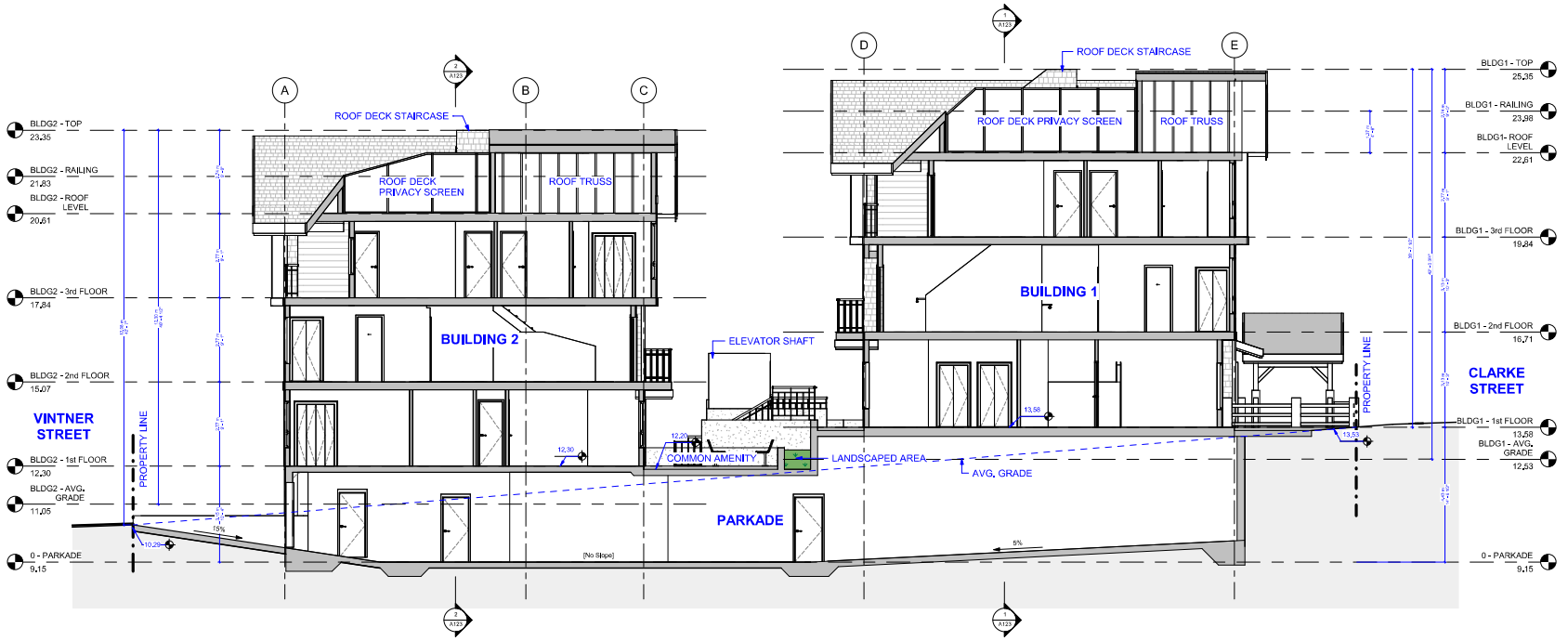

1 **SECTION - 1**
3/16" = 1'-0"

4	ISSUED FOR DP SUBMISSION 2	MAR 8 2022	
3	ISSUED FOR EARLY INPUT COUNCIL	FEB 4 2022	
2	HPB ACCESS PLAN	NOV 25 2021	
1	ISSUED FOR DP SUBMISSION	NOV 3 2021	

Project Name: VINTNER LANDING 8-UNIT TOWNHOME DEVELOPMENT

Project Address: 2222 CLARKE STREET PORT MOODY, B.C.

Sheet Name: BUILDING SECTION - 1

Sheet No.: A122

Project No.: 210905

Start of Project: SEPTEMBER 2021

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1 **SECTION - 2**
3/16" = 1'-0"

2 **SECTION - 3**
3/16" = 1'-0"

24			16			8		
23			15			7		
22			14			6		
21			13			5		
20			12			4	ISSUED FOR DP SUBMISSION 2	MAR 9 2022
19			11			3	ISSUED FOR EARLY INPUT COUNCIL	FEB 4 2022
18			10			2	FIRE ACCESS PLAN	NOV 25 2021
17			9			1	ISSUED FOR DP SUBMISSION	NOV 3 2021

Project Name
VINTNER LANDING
8-UNIT TOWNHOME
DEVELOPMENT

Project Address
2222 CLARKE STREET
PORT MOODY, B.C.

Sheet Name
BUILDING SECTION - 2

Sheet No.
A123

Project No.
210905

Start of Project
SEPTEMBER 2021

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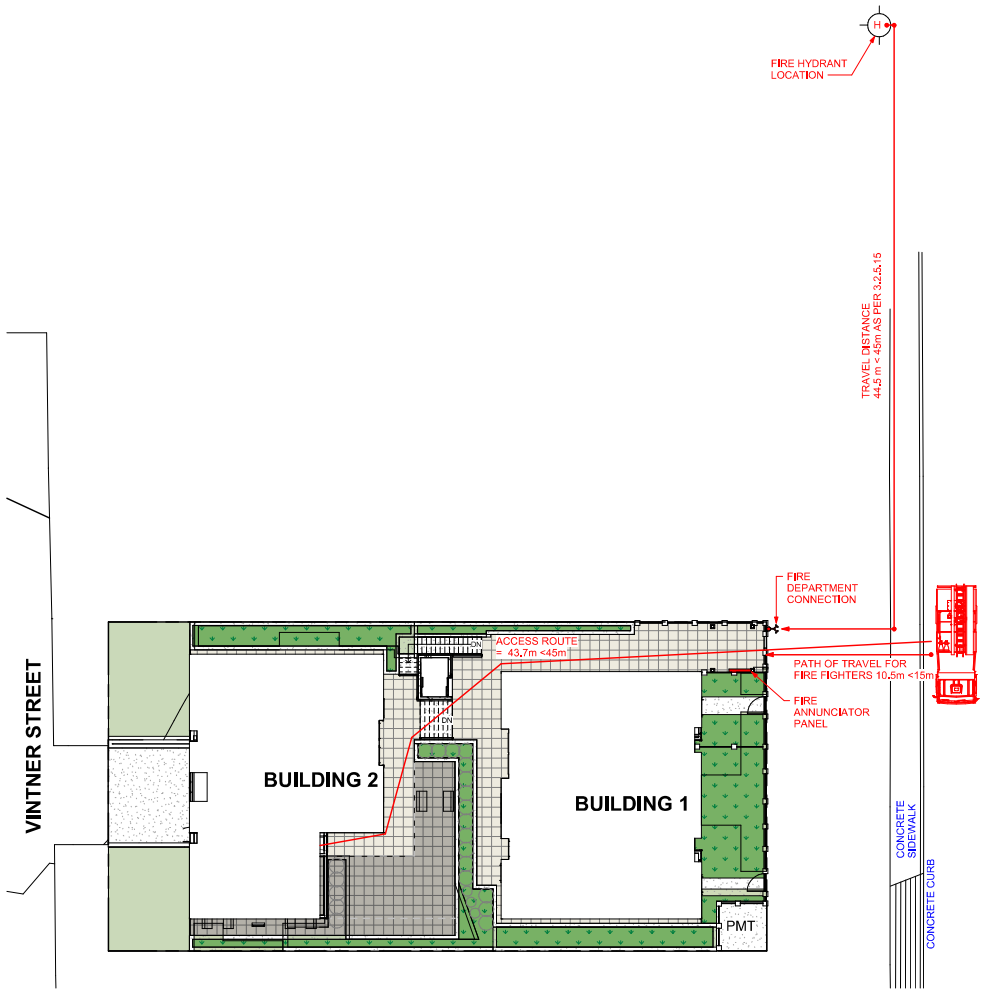

1 FIRE ACCESS PLAN
3/32" = 1'-0"

Revision Schdule

No	Description	Date
24		
23		
22		
21		
20		
19		
18		
17		
16		
15		
14		
13		
12		
11		
10		
9		
8		
7		
6		
5		
4	ISSUED FOR DP SUBMISSION 2	MAR 9 2022
3	ISSUED FOR EARLY INPUT COUNCIL	FEB 4 2022
2	FIRE ACCESS PLAN	NOV 25 2021
1	ISSUED FOR DP SUBMISSION	NOV 3 2021

Project Name
VINTNER LANDING
8-UNIT TOWNHOME
DEVELOPMENT

Project Address
2222 CLARKE STREET
PORT MOODY, B.C.

Sheet Name
FIRE ACCESS PLAN

Sheet No.
A124

Project No.
210905

Start of Project
SEPTEMBER 2021

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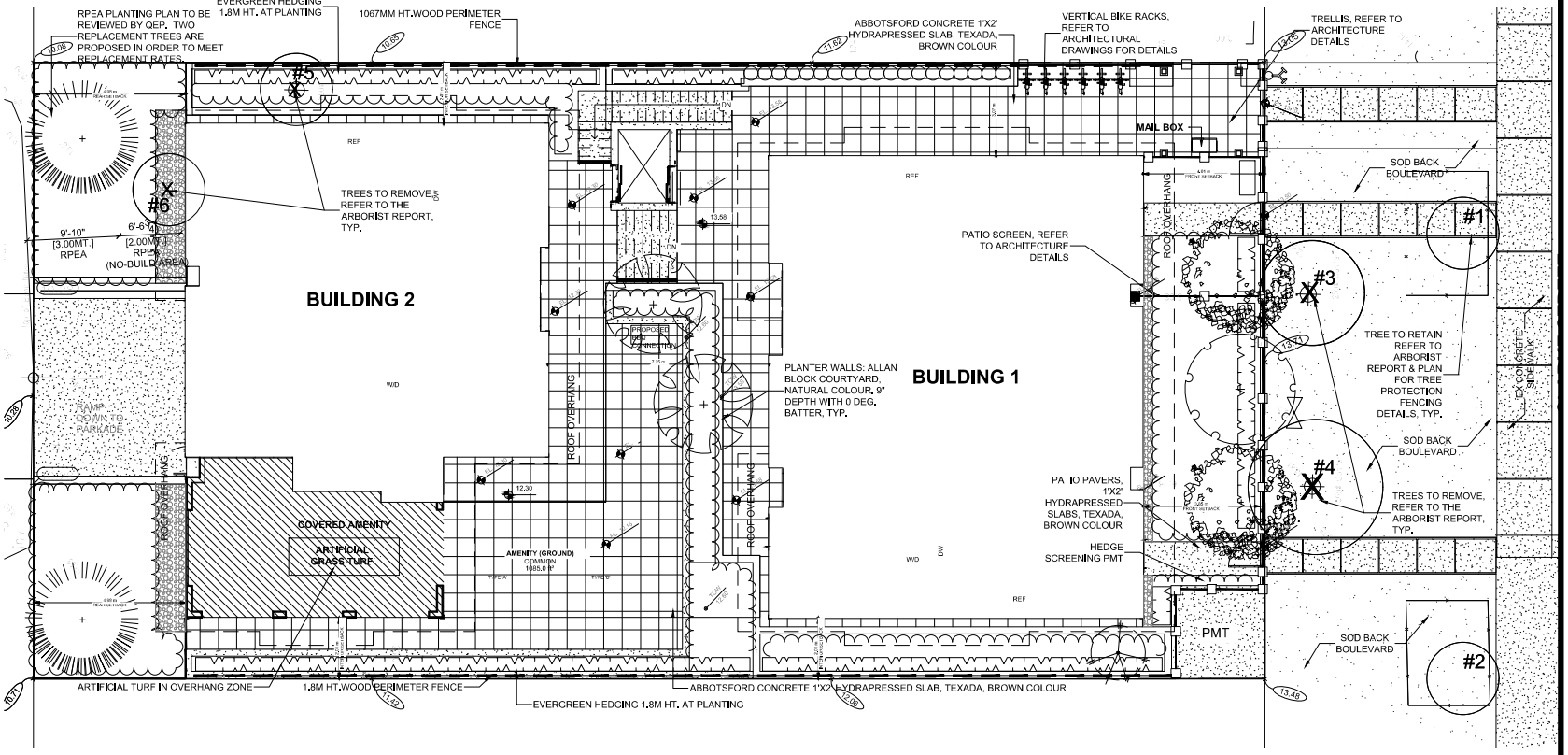


PLANT SCHEDULE - MAIN LEVEL

PMG PROJECT NUMBER: 18-121

KEY	QTY	BOTANICAL NAME	COMMON NAME	PLANTED SIZE / REMARKS
TREE				
	2	ACER CIRCINATUM	VINE MAPLE	6.0CM CAL; B&B; 3 STEM CLUMP
	1	ACER RUBRUM 'ARMSTRONG'	COLUMNAR ARMSTRONG MAPLE	7.0CM CAL; 2M STD; B&B
	2	CHAMAECYPARIS OBTUSA 'GRACILIS'	SLENDER HINOKI FALSE CYPRESS	2.5M HT; B&B
	2	CORNUS KOUSA 'SATOMI'	PINK KOUSA DOGWOOD	6.0CM CAL; 1.5M STD; B&B
SHRUB				
B	18	BUXUS MICROPHYLLA 'WINTER GEM'	LITTLE-LEAF BOX	#3 POT; 40CM
C	3	LONICERA PILEATA	BOXLEAF HONEYSUCKLE	#2 POT; 30CM
D	2	OSMANTHUS X BURKWOODII	BURKWOOD OSMANTHUS	#3 POT; 50CM
E	101	SARCOCOCCA HOOKERIANA VAR. HUMILIS	HIMALAYAN SWEET BOX	#2 POT; 25CM
F	28	SKIMMIA REEVESIANA	DWARF SKIMMIA	#2 POT; 25CM
G	61	THUJA OCCIDENTALIS 'SMARAGD'	EMERALD GREEN CEDAR	1.8M HT; B&B
H	3	VACCINIUM OVATUM 'THUNDERBIRD'	EVERGREEN HUCKLEBERRY	#2 POT
GRASS				
C	79	CAREX OSHIMENSIS 'EVERGOLD'	EVERGOLD JAPANESE SEDGE	#1 POT
PERENNIAL				
A	8	HELLEBORUS x HYBRIDUS	LENTEN ROSE	15CM POT
B	12	HEUCHERA MACRANTHA 'PALACE PURPLE'	CORAL BELLS; PURPLE-RED	15CM POT
GC				
A	2	ALLIUM SHOENOPRASUM	CHIVES (SHADE TOLERANT HERB)	9 CM POT
B	3	MENTHA PIPERITA	PEPPERMINT (SHADE TOLERANT HERB)	9CM POT
C	3	PETROSELINUM CRISPUM	PARSLEY (SHADE TOLERANT HERB	9CM POT
D	38	POLYSTICHUM MUNITUM	WESTERN SWORD FERN	#1 POT; 20CM

NOTES: * PLANT SIZES IN THIS LIST ARE SPECIFIED ACCORDING TO THE BC LANDSCAPE STANDARD AND CANADIAN LANDSCAPE STANDARD, LATEST EDITION. CONTAINER SIZES SPECIFIED AS PER CNLA STANDARD, BOTH PLANT SIZE AND CONTAINER SIZE ARE THE MINIMUM ACCEPTABLE SIZES. * REFER TO SPECIFICATIONS FOR DEFINED CONTAINER MEASUREMENTS AND OTHER PLANT MATERIAL REQUIREMENTS. * SEARCH AND REVIEW: MAKE PLANT MATERIAL AVAILABLE FOR OPTIONAL REVIEW BY LANDSCAPE ARCHITECT AT SOURCE OF SUPPLY. AREA OF SEARCH TO INCLUDE LOWER MAINLAND AND FRASER VALLEY. * SUBSTITUTIONS: OBTAIN WRITTEN APPROVAL FROM THE LANDSCAPE ARCHITECT PRIOR TO MAKING ANY SUBSTITUTIONS. TO THE SPECIFIED MATERIAL. UNAPPROVED SUBSTITUTIONS WILL BE REJECTED. ALLOW A MINIMUM OF FIVE DAYS PRIOR TO DELIVERY FOR REQUEST TO SUBSTITUTE. SUBSTITUTIONS ARE SUBJECT TO BC LANDSCAPE STANDARD AND CANADIAN LANDSCAPE STANDARD - DEFINITION OF CONDITIONS OF AVAILABILITY. * ALL LANDSCAPE MATERIAL AND WORKMANSHIP MUST MEET OR EXCEED BC LANDSCAPE STANDARD AND CANADIAN LANDSCAPE STANDARD LATEST EDITION. * ALL PLANT MATERIAL MUST BE PROVIDED FROM CERTIFIED DISEASE FREE NURSERY. * BIO-SOLIDS NOT PERMITTED IN GROWING MEDIUM UNLESS AUTHORIZED BY LANDSCAPE ARCHITECT.

18121-8.ZIP

pmg LANDSCAPE ARCHITECTS
Suite C100 - 4185 Still Creek Drive
Burnaby, British Columbia, V5C 6G9
p: 604 294-0011 | f: 604 294-0022

SEAL:

NO.	DATE	REVISION DESCRIPTION	DR.
11	22.MAR.05	UPDATE PER NEW SITE PLAN	CLC
10	21.NOV.05	UPDATE PER NEW SITE PLAN - SUBMISSION	CLC
9	21.JUN.21	UPDATE RPEA DIMENSIONS	CLC
8	20.MAR.20	UPDATE PER NEW ARBORIST REPORT	CLC
7	20.MAR.19	UPDATE RPEA PER COMMENTS	CLC
6	20.MAR.05	UPDATE SPRATTREE REPLACEMENT	CLC
5	20.FEB.20	UPDATE PER NEW SITE PLAN	CLC
4	19.JUN.07	UPDATE DRAWN STRIP DETAIL	CLC
3	19.MAR.11	UPDATE AND REISSUE	CLC
2	18.FEB.22	NEW SITE PLAN	RJ
1	18.JUN.18	DESIGN CONCEPT	CLC

CLIENT:

PROJECT:
10 UNIT TOWNHOUSE DEVELOPMENT

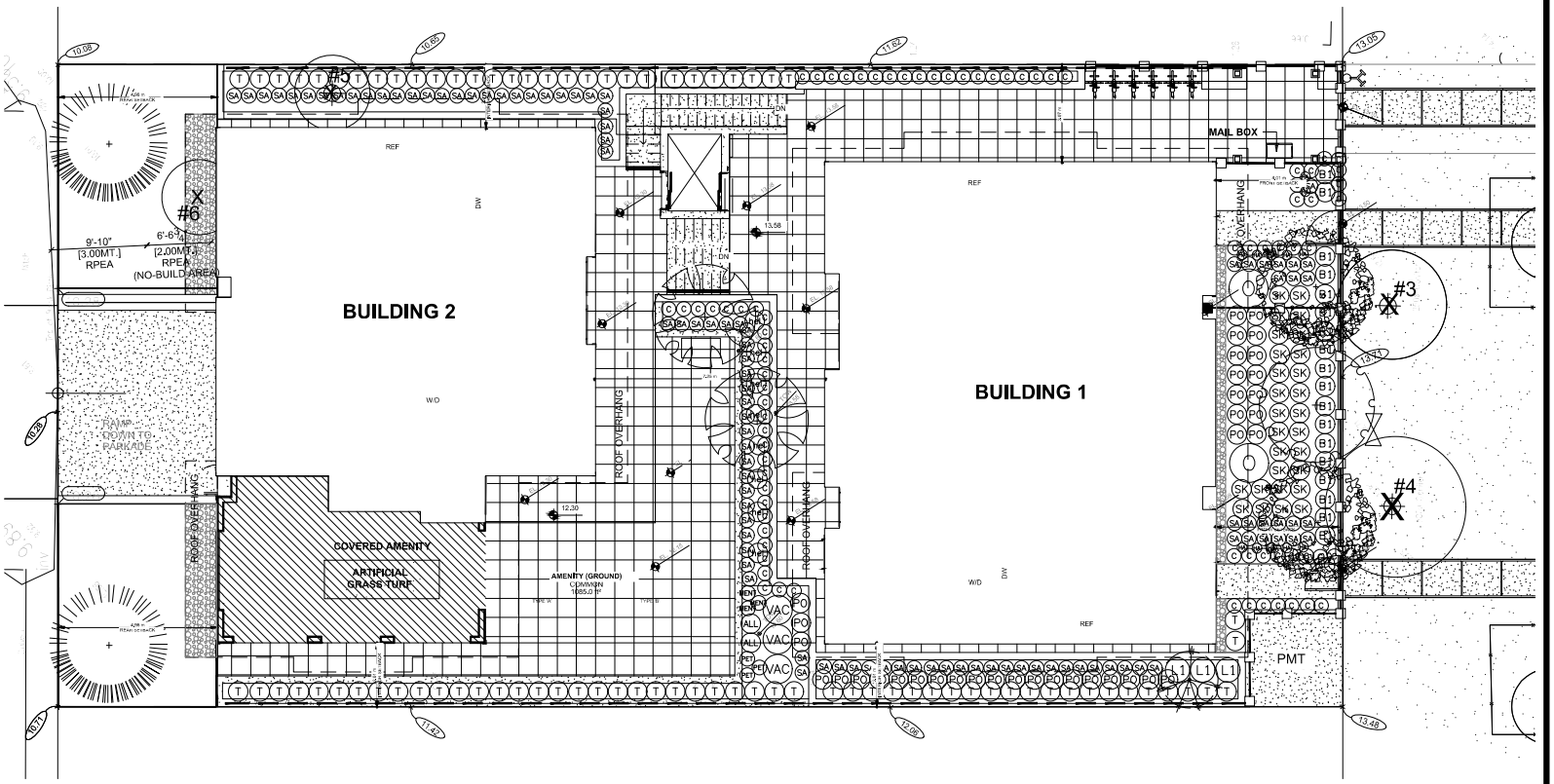
2222 CLARKE STREET
PORT MOODY

DRAWING TITLE:
LANDSCAPE PLAN

DATE: 18.FEB.21
SCALE: 3/16" = 1'-0"
DRAWN:
DESIGN:
CHKD: PCM

DRAWING NUMBER: **L1**
OF 4

PMG PROJECT NUMBER: **18-121**



PLANT SCHEDULE - MAIN LEVEL

PMG PROJECT NUMBER: 18-121

KEY	QTY	BOTANICAL NAME	COMMON NAME	PLANTED SIZE / REMARKS
TREE				
	2	ACER CIRCINATUM	VINE MAPLE	6.0CM CAL; B&B; 3 STEM CLUMP
	3	ACER RUBRUM 'ARMSTRONG'	COLUMNAR ARMSTRONG MAPLE	7.0CM CAL; 2M STD; B&B
	11	CHAMAECYPARIS OBTUSA 'GRACILIS'	SLENDER HINOKI FALSE CYPRESS	2.5M HT; B&B
	2	CORNUS KOUSA 'SATOMI'	PINK KOUSA DOGWOOD	6.0CM CAL; 1.5M STD; B&B
SHRUB				
B	18	BUXUS MICROPHYLLA 'WINTER GEM'	LITTLE-LEAF BOX	#3 POT; 40CM
C	3	LONICERA PILEATA	BOXLEAF HONEYSUCKLE	#2 POT; 30CM
OS	2	OSMANTHUS x BURKWOODII	BURKWOOD OSMANTHUS	#3 POT; 50CM
SA	101	SARCOCOCCA HOOKERANA VAR. HUMILIS	HIMALAYAN SWEET BOX	#2 POT; 25CM
SK	28	SKIMMIA REEVESIANA	DWARF SKIMMIA	#2 POT; 25CM
T	81	THUJA OCCIDENTALIS 'SMARAGD'	EMERALD GREEN CEDAR	1.8M HT; B&B
VAC	3	VACCINIUM OVATUM 'THUNDERBIRD'	EVERGREEN HUCKLEBERRY	#2 POT
GRASS				
C	78	CAREX OSHIMENSIS 'EVERGOLD'	EVERGOLD JAPANESE SEDGE	#1 POT
PERENNIAL				
HEL	8	HELLEBORUS x HYBRIDUS	LENTEN ROSE	15CM POT
HEU	12	HEUCHERA MACRANTHA 'PALACE PURPLE'	CORAL BELLS, PURPLE-RED	15CM POT
CH				
ALL	2	ALLIUM SHOENOPRASUM	CHIVES (SHADE TOLERANT HERB)	9 CM POT
MEN	3	MENTHA PIPERITA	PEPPERMINT (SHADE TOLERANT HERB)	9CM POT
PET	3	PETROSELINUM CRISPUM	PARSLEY (SHADE TOLERANT HERB	9CM POT
POL	36	POLYSTICHUM MUNITUM	WESTERN SWORD FERN	#1 POT; 20CM

NOTES: * PLANT SIZES IN THIS LIST ARE SPECIFIED ACCORDING TO THE BC LANDSCAPE STANDARD AND CANADIAN LANDSCAPE STANDARD, LATEST EDITION. CONTAINER SIZES SPECIFIED AS PER CNLA STANDARD, BOTH PLANT SIZE AND CONTAINER SIZE ARE THE MINIMUM ACCEPTABLE SIZES. * REFER TO SPECIFICATIONS FOR DEFINED CONTAINER MEASUREMENTS AND OTHER PLANT MATERIAL REQUIREMENTS. * SEARCH AND REVIEW: MAKE PLANT MATERIAL AVAILABLE FOR OPTIONAL REVIEW BY LANDSCAPE ARCHITECT AT SOURCE OF SUPPLY, AREA OF SEARCH TO INCLUDE LOWER MAINLAND AND FRASER VALLEY. * SUBSTITUTIONS: OBTAIN WRITTEN APPROVAL FROM THE LANDSCAPE ARCHITECT PRIOR TO MAKING ANY SUBSTITUTIONS TO THE SPECIFIED MATERIAL. UNAPPROVED SUBSTITUTIONS WILL BE REJECTED. ALLOW A MINIMUM OF FIVE DAYS PRIOR TO DELIVERY FOR REQUEST TO SUBSTITUTE. SUBSTITUTIONS ARE SUBJECT TO BC LANDSCAPE STANDARD AND CANADIAN LANDSCAPE STANDARD - DEFINITION OF CONDITIONS OF AVAILABILITY. * ALL LANDSCAPE MATERIAL AND WORKMANSHIP MUST MEET OR EXCEED BC LANDSCAPE STANDARD AND CANADIAN LANDSCAPE STANDARD LATEST EDITION. * ALL PLANT MATERIAL MUST BE PROVIDED FROM CERTIFIED DISEASE FREE NURSERY. * BIO-SOLIDS NOT PERMITTED IN GROWING MEDIUM UNLESS AUTHORIZED BY LANDSCAPE ARCHITECT.

18121-8.ZIP

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9	21.JUN.21	UPDATE PER DRAWDOWN	CLG
8	20.MAR.20	UPDATE PER NEW ARBORIST REPORT	CLG
7	20.MAR.19	UPDATE RPEA PER COMMENTS	CLG
6	20.MAR.05	UPDATE TREE/TREE REPLACEMENT	CLG
5	20.FEB.20	UPDATE PER NEW SITE PLAN	CLG
4	19.JUN.07	UPDATE DRAWN STRIP DETAIL	CLG
3	19.MAR.11	UPDATE AND REISSUE	CLG
2	18.JUL.12	NEW SITE PLAN	RL
1	18.JUN.18	DESIGN CONCEPT	CLG

CLIENT:

PROJECT:
10 UNIT TOWNHOUSE DEVELOPMENT

2222 CLARKE STREET
PORT MOODY

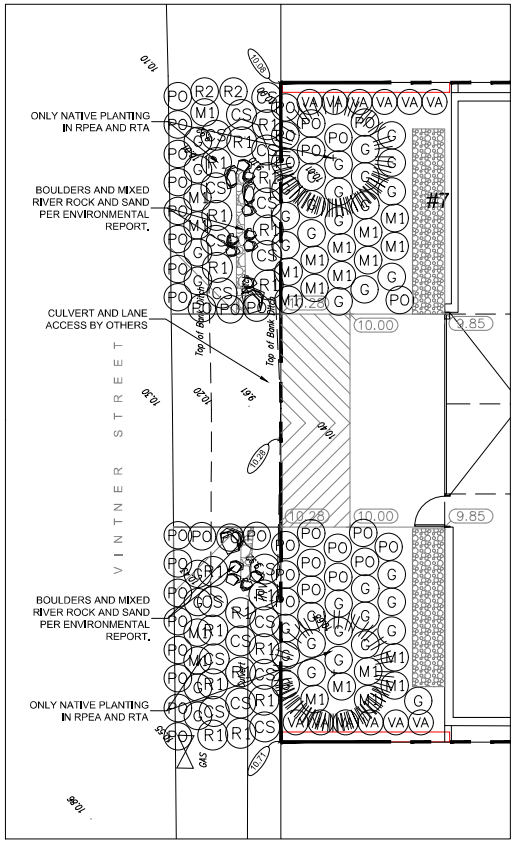
DRAWING TITLE:
SHRUB PLAN MAIN LEVEL

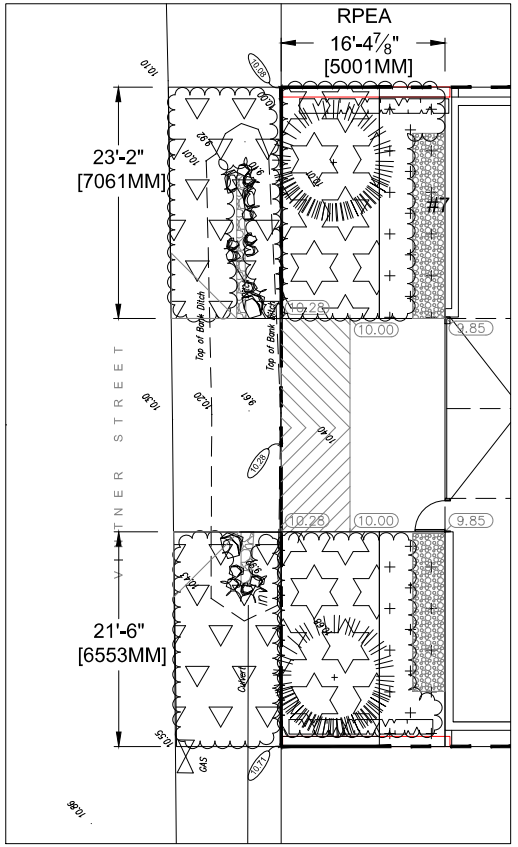
DATE: 18.FEB.21
SCALE: 3/16" = 1'-0"
DRAWN:
DESIGN:
CHK'D: PCM

DRAWING NUMBER: **L2**

OF 4

PMG PROJECT NUMBER: **18-121**





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7	20.MAR.19	UPDATE RPEA PER COMMENTS	CLC
6	20.MAR.05	UPDATE SPEATHER REPLACEMENT	CLC
5	20.FEB.20	UPDATE PER NEW SITE PLAN	CLC
4	19.JUN.07	UPDATE DRAWN STRIP DETAIL	CLC
3	19.MAR.11	UPDATE AND REISSUE	CLC
2	18.JUL.12	NEW SITE PLAN	RL
1	18.JUN.18	DESIGN CONCEPT	CLC

CLIENT:

PROJECT:
10 UNIT TOWNHOUSE DEVELOPMENT

2222 CLARKE STREET
PORT MOODY

DRAWING TITLE:
ENVIRONMENTAL AREA SHRUB PLAN

DATE: 18.FEB.21
SCALE: 3/16" = 1'-0"
DRAWN:
DESIGN:
CHK'D: PCM

DRAWING NUMBER: **L3**

OF 4

PMG PROJECT NUMBER: **18-121**

18121-8.ZIP

LEGEND

KEY	QTY	
		DITCH RESTORATION PLANTING = 45.5M2
		RPEA PLANTING = 39.9M2
		RTA PLANTING = 26.6M2

ENVIRONMENTAL AREA PLANT SCHEDULE - OFFSITE ON LANE

PMG PROJECT NUMBER: 18-121

KEY	QTY	BOTANICAL NAME	COMMON NAME	PLANTED SIZE / REMARKS
SHRUB				
(CS)	18	CORNUS SERICEA	RED OSIER DOGWOOD	#3 POT; 80CM
(M)	5	MAHONIA AQUIFOLIUM	OREGON GRAPE	#3 POT; 50CM
(R1)	18	RIBES SANGUINEUM	RED FLOWERING CURRANT	#3 POT; 80CM
(R2)	2	ROSA GYMNOCARPA	BALDHIP ROSE	#2 POT; 40CM
GC				
(G)	8	GAULTHERIA SHALLON	SALAL	#1 POT; 20CM; 100CM O.C.
(PO)	22	POLYSTICHUM MUNITUM	WESTERN SWORD FERN	#1 POT; 20CM

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PARKADE LEVEL PLANT SCHEDULE

PMG PROJECT NUMBER: 18-121

KEY	QTY	BOTANICAL NAME	COMMON NAME	PLANTED SIZE / REMARKS
TREE				
(T)	2	THUJA PLICATA	WESTERN RED CEDAR	1.5M HT; B&B
SHRUBS				
(M)	16	MAHONIA AQUIFOLIUM	OREGON GRAPE	#3 POT; 50CM
(VM)	12	VACCINIUM OVATUM	EVERGREEN HUCKLEBERRY	#3 POT; 60CM
GC				
(S)	34	GAULTHERIA SHALLON	SALAL	#1 POT; 20CM; 100CM O.C.
(PO)	19	POLYSTICHUM MUNITUM	WESTERN SWORD FERN	#1 POT; 20CM

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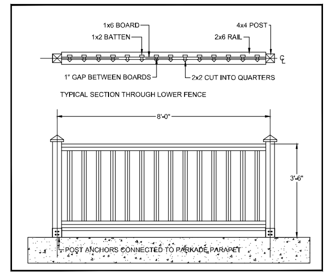
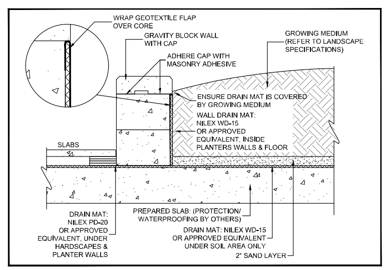
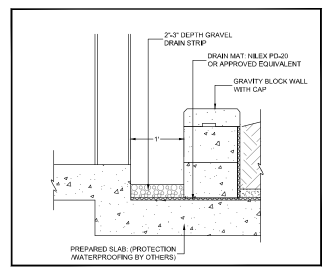


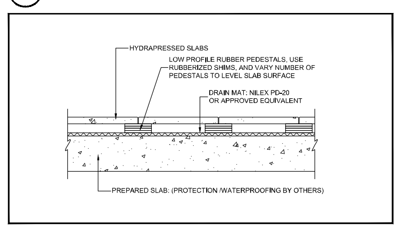
1 / - 1067MM [42"] HT. PERIMETER FENCE
1/2"=1'-0"



4 / - PLANTER WALL ON SLAB
1"=1'-0"



3 / - DRAIN ROCK STRIP AT BUILDING ON SLAB
1"=1'-0"



5 / - HYDRAPRESSED SLABS ON PARKADE STRUCTURE
1"=1'-0"

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11	22.MAR.16	UPDATE PER NEW SITE PLAN	CLG
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7	20.MAR.19	UPDATE RPEA PER COMMENTS	CLG
6	20.MAR.05	UPDATE RPEA/TREE REPLACEMENT	CLG
5	20.FEB.20	UPDATE PER NEW SITE PLAN	CLG
4	19.JUN.07	UPDATE DRAIN STRIP DETAIL	CLG
3	19.MAR.11	UPDATE AND REISSUE	CLG
2	18.JUL.12	NEW SITE PLAN	RJ
1	18.JUN.18	DESIGN CONCEPT	CLG

CLIENT:

PROJECT:
10 UNIT TOWNHOUSE DEVELOPMENT

2222 CLARKE STREET
PORT MOODY

DRAWING TITLE:
LANDSCAPE DETAILS

DATE: 18.FEB.21
SCALE: 1:500
DRAWN:
DESIGN:
CHK'D: PCM

DRAWING NUMBER: **L4** OF 4

18121-8.ZIP

PMG PROJECT NUMBER: 18-121

ABC TREE MEN

CERTIFIED ARBORIST REPORT

PROJECT LOCATION:
2222 Clarke St, Port Moody

PREPARED FOR:
1156038 B.C. LTD.

PREPARED BY:
ABC Tree Men
8952 15th Ave, Burnaby B.C.

April 27, 2018
1st revision done on July 18, 2018

Francis R. Klimo
ISA Certified Arborist
ISA Certified Tree Risk Assessor
BC Wildlife Danger Tree Assessor

1.0 SCOPE OF WORK

ABC Tree Men was contracted by 1156038 B.C. LTD. to conduct and prepare a Tree assessment, Tree management plan, and Arborist report for its location at 2222 Clarke St, Port Moody. The objective of this report is to ensure the proposed development is in compliance with the *City of Port Moody Tree Protection Bylaw No. 2961, 2015.* We were conducting our field inspections on April 27, 2018 at around 10:30am. Our scope of work was to identify all key trees onsite and offsite, assess, document its condition, and recommend actions on removing or retaining the trees in question.

❖ 1.1 Limits of assignment

- Our investigation is based solely on visual inspection of the trees on April 27, 2018 and the analysis of photos taken and tree diagnosis gathered during the inspection.
- Our inspection was conducted from ground level. We did not conduct soil tests or below grade root examination to assess the condition of the root system of the trees.
- We conducted a level 2 assessment.
- Calm cloudy day, no notable adverse weather conditions.

❖ 1.2 Purpose and use of the report

- Meet municipal criteria for development submissions and to provide documentation pertaining to onsite and offsite trees to supplement the proposed development permit application for 2222 Clarke St, Port Moody.

2.0 SITE ANALYSIS

Currently on the property is an existing dwelling that is slated for demolition encompassing on an 800 square meter lot. A new townhouse with an underground parkade will be constructed.

Since the levels of the property are relatively flat runoff water and erosion would not affect neighboring trees and should not be of concern. Substantial grade changes will occur and should be of concern to the health and stability of one neighboring tree. Also, major excavation will be inside several on and offsite trees and its critical root zone. All trees that are located directly within building footprints or other construction zones with high disturbances requirements have been selected for removal.

No presence of bird nesting or any wildlife living in the trees can be identified. We are not qualified environmentalist or Geotechnical engineers, and should therefore be used as anecdotal observations only.

Figure 1. Location of subject site– 2222 Clarke St, Port Moody

3.0 TREE ASSESMENT PROCESS

Our tree inspection process is a systematic process for accurately identifying and cataloging trees. Using the site survey as a reference to their location and proposed townhouse house plans we have produced accurate findings to our recommendations to ensure proper tree protection during the construction phase and or prescribe removal recommendations.

- **3.1 Health and structure rating**

  - 5 - A healthy, vigorous tree, reasonably free of disease, with good structure and form typical of the species.
  - 4 - A tree with slight decline in vigor, small amount of twig dieback, minor structural defects that could be corrected.
  - 3 - A tree with moderate vigor, moderate twig and small branch dieback, thinning of crown, poor leaf color, moderate structural defects that may be mitigated with care.
  - 2 - A tree in decline, epicormics growth, extensive dieback of medium to large branches, significant structural defects that cannot be abated.
  - 1 - A tree in severe decline, dieback of scaffold branches and or trunk, mostly epicormic growth; extensive structural defects that cannot be abated.

4.0 SUMMARY OF FINDINGS

On April 27, 2018, ABC Tree Men conducted a site visit and visual inspection. A total of six (6) trees have been identified both offsite and onsite. Of the six (6) trees identified, four (4) are off-site city trees and two (2) trees are located onsite.

Overall, all trees range from fair to good in condition. Trees that were located directly within building footprints or other construction zones with high disturbances requirements were selected for removal.

We observed five (5) types of species of trees located on and offsite: Spruce, Laurel, Maple, Apple, and Westen redcedar.

DBH varies from 21cm to 87cm for all trees identified offsite and 91cm to 28cm for trees onsite.

Of the six (6) trees identified, two (2) trees will be retained with tree protection measures implemented and four (4) trees will be removed.

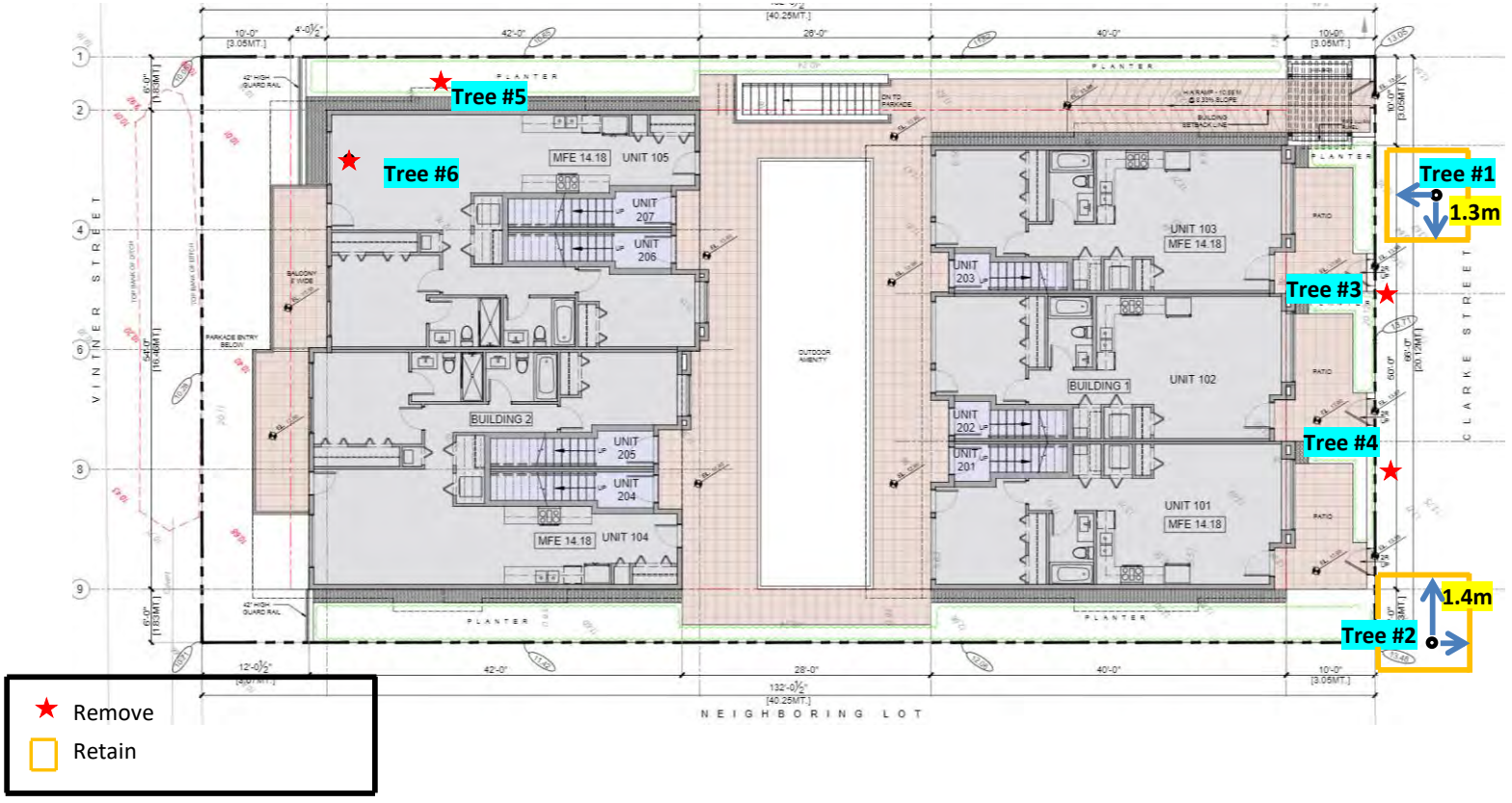
5.0 SITE MAP


Tree #5
Tree #6
Tree #1
Tree #3
Tree #4
Tree #2
Existing Dwelling
2222 Clarke Street
Port Moody, BC
Roof Peak
Main Floor Elevation
Top of Bank Ditch
Top of Bank Ditch
Culvert
Ret Wall
Ret Wall
CLARK STREET
ER STREET
40.24
40.24
20.11
20.12
6.50
6.60
5.98
6.08
5.63
5.57
0.93
0.94
66'-0"
[20.12M]

6.0 TREE INVENTORY

Table 1								
ABC Tree Men								
April 27, 2018								
2222 Clarke St, Port Moody								
Tag #	Name	Species	DBH(cm)	Height(m)	Condition (rating)	Retain or Remove	Comments	TPZ (m)
1	Maple	*Acer*	21	8	Boulevard tree, located to the front of the lot. Exposed surface roots observed along the TPZ and it seems to have been damaged by the lawnmower. Moderate trunk taper and live crown ratio. Overall, subject tree is in fair to good condition. (4)	Retain	Place tree protection barrier to protect trunk, roots, and structure.	1.3
2	Maple	*Acer*	23	8	Boulevard tree, located to the front of the lot. Exposed surface roots observed along the TPZ. Located within the driveways. No major defects and or signs of stress. Overall, subject tree is in fair to good condition. (4)	Retain	Place tree protection barrier to protect trunk, roots, and structure. Arborist supervision required during removal of the existing driveway.	1.4
3	Spruce	*Picea*	29	11	Offsite city tree, located to the front of the lot. Existing retaining wall located within CRZ. Co dominant at 1.8m. Low live crown ratio. Overall, subject tree is in fair to good condition. (4)	Remove	Removal is recommended due to conflicts with the proposed development	1.8
4	Spruce	*Picea*	35	11	Offsite city tree, located to the front of the lot. Co dominant at 3.0m. One limb protruding from main trunk at 1.2m. Low live crown ratio. Overall, subject tree is in fair to good condition. (4)	Remove	Removal is recommended due to conflicts with the proposed development	2.1
5	Western redcedar	*Thuja plicata*	91	27	Onsite tree, located to the north eastern side of the lot. Large dominant tree with a multi stemmed top. Large past limb failure with an open wound and dead wood within. Overall, subject tree is in fair to poor condition. (3)	Remove	Removal is recommended due to conflicts with the proposed development	5.5
6	Apple	*Malus*	28	6	Onsite tree, located to the back of the lot. Poor overall structure and health. Dead wood located throughout the crown. Past pruning cuts. Overall, subject tree is in poor condition. (2)	Remove	Removal is recommended due to conflicts with the proposed development	1.7

7.0 TREE MANAGEMENT PLAN



8.0 TREE RETENTION/REMOVAL RECOMMENDATIONS

A total of six (6) trees have been found both on and offsite. Based on the factors that include the pre-existing condition of the subject trees as detailed in the general observations, tree inventory, and the proposed development, trees are proposed to be treated a follows.

❖ Tree retention

Pursuant to the *City of Port Moody Tree Protection Bylaw No. 2961, 2015* the following trees are recommended for retention as detailed in the report and tree recommendations. Information regarding specific recommendations can be found in the *Tree retention plan recommendations above and section 10.0 Tree Protection barriers.*

- **Tree #1 and #2** will be retained with tree protection measures implemented. Place barriers to specifications and leave during whole construction period and remove when the director has authorized its removal.

❖ Tree removal

Pursuant to the *City of Port Moody Tree Protection Bylaw No. 2961, 2015* the following trees are recommended for removal as per the following sections or as detailed in the report.

- **Tree #3, #4, #5, and #6** will be removed due to conflicts with the proposed development and falls within the footprint of the building & within zone of heaviest construction & excavation activity.

9.0 GENERAL OBSERVATIONS, RECOMMENDATIONS AND PHOTOS

Photo 1. Facing towards the east looking at Tree #1

Photo 2. Facing westwards towards the west looking at tree #2

Species: Maple (*Acer*)

Tree#: 1, 2

Observations: Tree #1 and #2 are both Maples and are located to the front of the lot. Both are boulevard trees. The DBH measures 21cm and 23cm and both have an overall height of about 8m and a crown spread of 5m.

- Observing the crown and structure on both of the subject trees, there are no major concerns of stress or any major defects. Examining the base and surrounding TPZ, exposed surface roots can be observed on both trees. Tree #2 is situated within two driveways and surface roots have travelled along the native soil. Overall, subject trees are in fair to good condition.

Recommendations: Tree #1 and #2 will be both retained. Due to the close proximity to the construction site it is required to place tree protection barriers to protect its trunk, roots, and structure. Place barriers to drip line or to measurements outlined in section 10.0. Only removal of the driveway using low impact methods approved by arborist and under supervision should be implemented. Below are the necessary precautions during removal of the driveway:

- **Method of removal for driveway and placement of new driveway**
  The method of removal is going to be done in a carefully coordinated effort inside the TPZ of the subject tree #2. Only hand tools with the assistance of machinery will be used in the process of removing the existing driveway within the root protection zone, no excavation will go below the grade. During and after the removal process a certified Arborist will be monitoring all activities that will happen around the critical root zone.

Photo 3. Facing towards the east looking at Tree #3 and #4

Photo 4. Looking at the retaining wall within CRZ of tree #3

Species: Spruce (*Picea*)

Tree#: 3, 4

Observations: Tree #3 and #4 are both Spruces and are located to the front of the lot. Both trees are located on City property. The DBH measures 29cm and 35cm and both have an overall height of about 11m and a crown spread of 4.5m.

- Observing the crown and structure on both of the subject trees, both are co dominant at around 1.8m and 3m. A low live crown ratio on both trees can be examined. While assessing the base and surrounding TPZ, existing hardscapes and structures such as retaining walls and walkways can be observed and will be in conflict during the demolition process. Overall, subject trees are in fair to good condition.

Recommendations: Tree #3 and #4 will be both in conflict with the proposed development, and falls just outside the proposed building footprint and underground parkade & within zone of heaviest construction & excavation activity. Removal is recommended.

Substantial grade changes will occur within the TPZ of the subject trees if the excavation goes to specifications for the underground parkade. This will be devastating to its health and overall structure. As observed by the photos other structures such as the retaining wall running from the existing house up to the trunks of tree #3 and a concrete walkway within the CRZ can also be examined, all these structures will be removed and will cause disturbances to the subject trees. It is important to note that these trees have shallow spreading roots that go way beyond the drip line/TPZ and the excavation and grade changes would impact those roots. This can be detrimental and can influence the moisture availability to the subject tree. This is due to a reduction in the total rooting mass, changes in drainage, and overall moisture content

Photo 6. Facing towards tree #5

Species: Western redcedar (*Thuja plicata*)

Tree#: 5

Observations: Tree #5 is a Western redcedar and is located to the back of the property and is situated to the north eastern side of the lot. The DBH measures 91cm at 1.4 meters high from the ground with an overall height of about 27m and a crown spread of about 9m.

- Observing the tree, a multi stem attachment near the top third can be examined that seem to be weakly attached with poor junctions. A large wound from a past large limb failure can be observed. Examining the wound, dead wood and what appears to be insect infestation can be examined. Low live crown ratio tree. Observing overall, subject tree is in fair to poor condition.

Recommendations: Tree #5 will be in conflict with the proposed development, and falls just outside the proposed building footprint of the laneway house & within zone of heaviest construction & excavation activity. Removal is recommended.

10.0 TREE PROTECTION BARRIER

Tree protection barrier summary		
Tree number (species)	DBH(cm)	Minimum tree protection barrier Radial span (m)
1	21	1.3
2	23	1.4

All trees identified above will require tree protection barriers to protect and prevent the tree trunk, branches and roots being damaged by any construction activities/operations. Prior to any construction activity on site, tree protection fences must be constructed at the specified distance from the tree trunks. The protection barrier or temporary fencing must be at least 1.2 m in height and constructed of 2 by 4 lumber with orange plastic mesh screening. Structure must be sturdy with vertical posts driven firmly into the ground. This must be constructed prior to excavation or construction and remain intact throughout the entire period of construction. Further standards for fencing construction can be found at: *City of Port Moody Tree Protection Bylaw No. 2961, 2015*

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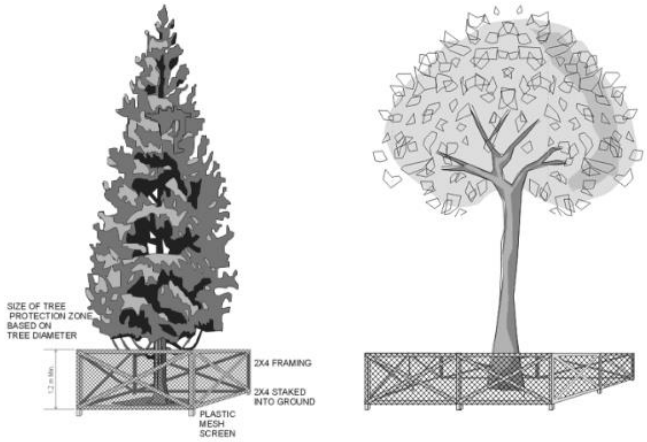

11.0 CONCLUSIONS

Based on our findings, a total of six (6) trees have been identified both offsite and onsite; four (4) trees are offsite city trees and two (2) trees are located onsite. A total of two (2) trees will be retained and protected with tree protection barriers implemented and a total of four (4) trees will be removed due to conflicts with the proposed development and unsuitability for retention.

Thank you for choosing ABC Tree Men. Any further questions can be forwarded to Francis Klimo at (604)358-5562

Regards,

Francis R. Klimo
ISA Certified Arborist #PN-8149A
ISA Certified Tree Risk Assessor (TRAQ)
BC Wildlife Danger Tree Assessor #7193

Considered at the Regular Council Meeting of May 10, 2022

JECTH Consultants Inc.
Geotechnical & Environmental Engineers

GEOTECHNICAL ENGINEERING REVIEW & ASSESSMENT
PROPOSED TOWNHOUSE DEVELOPMENT

AT

2222 CLARKE STREET
PORT MOODY, BC

FOR

NU-GEN PROJECTS LTD.

PREPARED BY

JECTH CONSULTANTS INC.

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JOB NO.: 218N551

DATE: JULY 14, 2018

JECTH Consultants Inc.
Geotechnical & Environmental Engineers

Client: Nu-Gen Projects Ltd.
Date: July 14, 2018
Our File No.: 218N551

GEOTECHNICAL REPORT REVIEW & ASSESSMENT
PROPOSED TOWNHOUSE DEVELOPMENT
2222 CLARKE STREET, PORT MOODY, BC

1.0 INTRODUCTION

1.1 AUTHORIZATION

Further to the authorization from Nu-Gen Projects Ltd. on July 3, 2018, as requested, JECTH Consultants Inc. (JCI) had carried out a Geotechnical Review and Assessment Report, based on the latest Architectural plan, for the proposed Townhouse development at 2222 Clarke Street, Port Moody, BC (see Figure 1 - Site Location Plan)

1.2 METHODOLOGY

The Geotechnical Review and Assessment includes:

- Reviewed the Surficial Geological Map from The Geological Survey of Canada (see Figure 2 – Geological Map)
- Reviewed available aerial photo for Port Moody (see Figure 3 – Aerial Photo).
- Evaluate anticipated subsurface soil conditions on site and from our previous experience in the near vicinity
- Conducted a site reconnaissance by our site staff at the subject site and surroundings
- Conducted subsurface investigation by Auger Drilling and DCPT Probing on March 7, 2018
- Assessed the available subsurface soil conditions and profile based on previous experience as well as our local experience within the close vicinity of the subject site (Figure 1A)
- Utilized our previous experience with similar projects.
- Communicated with Architect, Designers, owner representatives and/or construction team members, as required.

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1.3 OBJECTIVE

This Geotechnical Report summarizes our findings and provides Geotechnical Engineering Comments and Recommendations for the foundation design and construction of the proposed Townhouse

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development based on the latest Architectural Plan as required by BC Building Code (2012).

1.4 DESIGN DRAWING

Architectural Plan dated July 2018 prepared by DF Architecture for the Construction of a 3 storey building with a total of 12 units Townhouses including a common underground basement parking. Any further update of the Architectural Plan which may affect the Geotechnical recommendations in this report must be notified to JCI, as such this report can further be updated if required.

2.0 PREVIOUS GEOTECHNICAL ENGINEERING EXPERIENCE

JCI is a firm specializing in Geotechnical Engineering including foundation investigation and design, and design of temporary excavation shoring and underpinning systems. JCI staff members have extensive knowledge and experience in Geotechnical Engineering design and construction for Industrial, Commercial, Institutional, and Residential Project.

JCI's staffs have been retained as Geotechnical Engineer Consultant since 1978. In fact, JCI was retained as Geotechnical Engineer for similar nature near the vicinity of the subject site. (see Figure 1A)

3.0 SITE CONDITIONS AND PROPOSED DEVELOPMENT

3.1 SITE CONDITION

The site is located along the north side of Clarke Street between Douglas Street (to the west) and Elgin Street (to the East), Port Moody, BC, and is bounded by residential properties to the east and west as well as Vintner Street to the north.

The site is rectangular in shape, with approximate dimensions of about 66 ft. ± (east-west) by 132 ft. ± (north-south).

In general, the site slopes down from the South to the North from Clarke Street at about EL. 44.95 ft. ± (EL. 13.7 m. ±) to the northwest corner of the site at about EL. 32.80 ft. ± (EL. 10.0 m. ±) , with a total change in existing grade of about 13 ft. ± (average slope gradient of 10 % ±).

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3.2 PROPOSED DEVELOPMENT

Based on the provided drawings dated June, 2018 by DF Architecture, the proposed development will include a 3 levels Townhouse complex with north and south buildings and one level of underground parking.

According to the design plan, the lowest level underground parking will have a slab elevation at EL. 10.46 m. and therefore general excavation for foundation construction will be at about elevation EL. 9.86 m. ±. Anticipated excavation along the south building perimeter will likely be up to about 3.5 m. ± for underground parking. For the north building perimeter, the depth of excavation will likely be up to about 1 m. ± for underground parking.

For the foundation excavation, it is anticipated that vertical shoring will be required due to minimal off-set distance for the north, east and west property lines to proposed building lines. Encroachment to the site perimeter properties will not be required if Temporary Excavation Shoring method of using Helical Piles Shoring is implemented.

4.0 FIELD WORK

4.1 SITE EXPLORATION

A subsurface soil field exploration was carried out at the subject site on March 7, 2018, to explore subsurface soil and groundwater condition. The exploration was consisted of:

- A total of two (2) Auger Drillholes, DH-1 and DH-2 were extended to a maximum depth of 30.0 ft. ± from existing site grade. (For obtaining subsurface soil profile and collecting subsurface Soil samples for laboratory testing).
- Two (2) Dynamic Cone Penetration Test (DCPT) probe holes to a maximum depth of 30.0 ft. ±. (For evaluating the density, compressibility and stiffness of subsurface soil encountered).

Both DCPT and auger drilling were carried out using a truck mounted drill rig. The approximate locations of the DCPT and auger drillholes are shown in Figure 3 – Aerial Photo.

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4.2 SOIL LOGS AND LIMITATIONS

All field work was performed under the full-time supervision of our technical staff who selected the auger hole locations to provide overall site coverage with minimum disruption of the property; all drillholes are logged with samples collected for further identification and for laboratory test. Generally, observations of groundwater levels are at the auger stems obtained during drilling.

The DCPT tests use a dropping weight from a constant height to drive a cone and rod into the ground. The number of blows for each foot of penetration is recorded. It provides general penetration resistance versus depth. The above data was used to identify he inferred soil stratigraphy and to assess various engineering properties and parameters of the subsurface soil encountered.

Subsurface Soil Logs of the auger holes including moisture contents and graphical representations of DCPT data are shown in Appendix "A".

The auger-hole logs and observations indicate subsurface conditions only at the locations of the auger holes. The precision of the subsurface conditions indicated will depend on the methods used, sampling frequency, and uniformity of the subsurface conditions. The methods and sampling frequencies have been selected to meet the needs of this project within the constraints of the budget and schedule.

5.0 ANTICIPATED SUBSURFACE SOIL CONDITIONS

5.1 GEOLOGICAL MAP

According to the available Surficial Geological Survey map prepared by the Geological Survey of Canada, the subject site is located between (i) Capilano sediments which consist of raised marine, deltaic and fluvial raised marine beach, spit, bar, and lag veneer, poorly sorted sand to gravel (except in bar deposits) normally less than 1 m. thick but up to 8 m. thick, and (ii) postglacial and pleistocene which consists of marine shore and fluvial sand up to 8 m. thick.

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5.2 PREVIOUS EXPERIENCE

According to our experience in the vicinity area, previous creeks and streams might be located at the vicinity of the subject site. It is, therefore, a possibility that debris wash out by stream such as tree trunks might be encountered at the subject site. If encountered, this debris must be excavated and removed from the foundation subgrade. Groundwater table is usually shallow and located at about 5 ft. ± below existing grade.

5.3 SUBSURFACE SOIL CONDITIONS BY SITE EXPLORATION

The following table summarizes the findings of the subsurface soil profile observed from the site exploration by the drilling records at the subject site:

Depth from Existing site Grade	Soil Description	Remark
0 to 2.0 ft. ± (4 ft. of Fill @ DH #2)	**FILL / Top Soil** Dark brown, loose, moist, Organic Soil, with coarse SAND and GRAVEL	Avg. DCPT=7
2.0 to 11 ft. ±	**Silty SAND and GRAVEL with Silt** Grey, medium loose to compact SAND and GRAVEL with SILT	Avg. DCPT=12 Min. 4
11 to 30 ft. ±	**Silty SAND and SAND (With Silt)** Grey with brownish stain, compact dense, wet, with some Gravel and Silt (Silt Pocket - encountered)	Avg. DCPT=25 Min. 7

Based on the Drillhole logs, the findings are confirmed to the prediction of geological map and our experience in vicinity area. A native soil composed of grey, medium loose compact, wet, rounded and medium to coarse Silty SAND and GRAVEL, SAND with some SILT.

Auger Drillhole Logs are enclosed in Appendix "A" – Drillhole Log for reference.

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5.4 GROUNDWATER CONDITIONS

Based on the Drillhole logs – DH-1 and DH-2, the groundwater level generally is located below 3 to 5 ft. ± below the existing grade. During completion of drilling, the groundwater was measured by tape at about 3.5 ft ± depth at auger drillhole DH-1 location and about 5 ft. ± depth at auger drillholes DH-2.

6.0 CONVENTIONAL SHALLOW FOUNDATION

Convention shallow foundation system will be considered feasible with the following recommendations:

6.1 ALLOWABLE BEARING CAPACITY

Conventional shallow foundations such as stripped and pad footings is recommended to be found on the SAND and Gravel with SILT.

An Allowable Bearing Capacity of 1,500 psf for SLS design and Ultimate Bearing Capacity of 2,250 psf for ULS design can be implemented to the foundation design for footings.

The minimum footing size should be 24 in. for stripped footing and 36 in. for Pad footing. Perimeter footing should be located at least 18 in. below outside grade for confinement and frost protection.

6.2 POTENTIAL LONG-TERM SETTLEMENT

According to the anticipated subsurface soil profile and typical loading schedule of a 3-storey Townhouse at-grade building found on compact SAND and Gravel with SILT or Structural FILL restoring grade, the Potential long-term post-construction settlement is anticipated to be minimal (in the order of 1" total and 0.5" differential settlement across building span). To avoid differential settlement, concentrated load should be avoided and distribution of the building load should be as uniform as possible.

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The above settlement analysis is based on assumed typical loading schedule for a typical 3 - Storey townhouse with a basement. Additional settlement assessment must be conducted by JCI to confirm the values when Structural Plan and detail loading schedules are available for review.

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6.3 SEISMIC CONSIDERATION

6.3.1 SITE CLASS

The proposed development is located within Seismic Zone 4 of the National and B.C. Building Codes of Canada. It is recommended that the structure should be designed using site **Class D** for stiff soil for footing found on SAND and Gravel at vicinity depth of footing as recommended by the 2012 BC Building code.

6.3.2 SPECTRAL ACCELERATION

The design earthquake motions considered in BCBC 2012 has a 2% probability of exceedance in 50 years, or a return period of 2475 year. The BCBC 2012 recommends the use of Peak Ground Acceleration (PGA), Site Classification and the 5% damped spectral response acceleration value Sa (T) for interpretation of acceleration and velocity based site coefficients (Fa and Fv) in Structural Design.

The following tables are obtained from Seismic Hazard values for a **Class C** site by Natural Resource Canada for the subject site Area. (Latitude 49.2779° North, Longitude 122.8626° West) – Details see Appendix "B" – Seismic Design Criteria.

Sa (0.2)	Sa (0.5)	Sa (1.0)	Sa (2.0)	PGA
0.935 g	0.627 g	0.322 g	0.169 g	0.464 g

The above value may be used as a general reference for interpretation of **Class D** for stiff soil in 2012 Building Code Table 4.1.8.4 b and c to obtain Fa and Fv value appropriately for design purpose. Search result print out for the seismic hazard values is shown in Appendix "B" – Seismic Design Criteria.

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A linear interpretation of Table 4.1.8.4 for Fa value and Table 4.1.8.4c under a PGA of 0.464 g. are presented as follows:

	Sa (0.2)	Sa (0.2)	Sa (0.2)
	0.75 g.	1.0 g.	0.935 g.
Fa	1.1	1.1	**1.1**

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	Sa (1.0)	Sa (1.0)	Sa (1.0)
	0.3 g	0.4 g	0.322 g.
Fv	1.2	1.1	**1.18**

Based on the linear interpretation, of the obtained Fa and Fv respectively are **1.1** and **1.18** for **Class D** site.

6.3.3 LIQUEFACTION POTENTIAL

Subsurface soil liquefaction potential of the site is considered to be low and unlikely to occur due to the presence of non-liquefiable Sand and gravel at vicinity depth below footings.

6.3.4 SEISMIC BEARING CAPACITY

The Allowable Bearing Capacity can increase $^1/_3$ for seismic design under a short term seismic event.

7.0 LATERAL PRESSURE

7.1 STATIC DESIGN -BASEMENT WALL

For foundation wall (assume Rigid) of the proposed semi-basement, a triangle lateral earth pressure of 0.4γH (lb/ft) as base of the triangular force distribution (γ: bulk density of soil; H: earth retaining wall height in ft.) should be used at the below grade structural wall under static design condition. Alternatively, a 24H equivalent rectangular lateral pressure can be applied with resultant force locate at $^1/_3$ height of wall.

7.2 SEISMIC DESIGN – BASEMENT WALL

Under seismic design conditions, foundation walls should be designed for an additional horizontal invert triangular dynamic pressure (KaγH). It is recommended to use the active earth pressure coefficient (Ka = 0.3) since the building and surrounding soil will be moved together in seismic condition and not as rigid in the static case. A total, 40H equivalent rectangular lateral pressure can be applied in seismic design condition with result locate at ½ height of wall.

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7.3 HYDROSTATIC DESIGN

It is assumed that drain conditions will be applied to the underground parking basement wall at the subject site by provision of granular backfill and foundation drainage. As such, hydrostatic pressure will not be required to implement into the design. Also, foundation perimeter drainage system must be implemented to the foundation system of all basement walls.

8.0 FOUNDATION SUBGRADE PREPARATION

8.1 TEMPORARY DE-WATERING

Perch groundwater seepage will likely encounter during foundation excavation for removal of the poorly graded SAND and Gravel with Silt Pocket. Quantity of groundwater removal should not be substantial as perched water can be dried out in the process. It is estimated that temporary de-watering can be achieved by 1 or 2 nos. of construction sump pump.

All seepage water must be collected and removed by pumping during construction stage. Temporary de-watering the site can be achieved by intermediate stages as excavation advancing. Water removed from the excavation will require to divert into a temporary sump protected with gravel, and subsequently filtered by sediment trap or sedimentation tank before discharge into public storm water system.

The requirement of sedimentation control is outside the scope of this report. JCI can provide a sedimentation control upon the request by the owner's representative.

8.2 FOUNDATION SUBGRADE PROTECTION

The native foundation subgrade of native Sand and gravel can be disturbed by moisture and construction traffic. It is, therefore, recommended that the exposed subgrade surface must be protected by a minimum of 4 to 6 in. thick of ¾ in. minus clear crushed gravel for protection against moisture and construction traffic.

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9.0 FOUNDATION DRAINAGE SYSTEM

9.1 SITE RECONNAISSANCE

According to the available information, the site is within a sloping topography. It is anticipated that both surface and subsurface runoff might migrate to the Foundation System of the proposed building.

9.2 GROUNDWATER CONDITION IN LONG TERM

Since part of the site at South property line will likely excavate into the SAND and Gravel water bearing soil stratum, groundwater will likely draw down by foundation drainage locally near basement wall.

9.3 SUBSURFACE DRAINAGE

Foundation drainage will be required for the common underground parking floor to protect the foundation as well as to prevent moisture migrates to the underground parking floor slab. A perimeter drainage system is recommended at approximate footing level along the exterior basement wall.

The perimeter drainage system consists of a 6 in. diameter Perforated PVC pipe (with a minimum 2 in. of crushed gravel bedding) and protect with minimum 6 in. of crushed gravel around the pipe. The drain pipe must be connected to the City's storm drainage system by gravity fall. In the case that connection to the City's storm system is located higher than the foundation drainage system, sump pump design will be required by Mechanical Engineer.

Underslab Drainage system will be required if excessive groundwater is encountered at the subject site. This will be confirmed during site review and inspection. The amount of seepage will be estimated during construction for underslab drainage design (if required).

All finished site grade around the building perimeter must be sloped down and away from the proposed building perimeter footprint as such run-off water can flow away from building. This will avoid excessive surface water to migrate to foundation drainage system.

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10.0 SLAB-ON-GRADE

For the Slab-On-Grade for underground parking floor, Underslab FILL will be required. Prior to placement of Underslab FILL, all unsuitable soil (Silt pocket, if any) or construction debris should be removed from the base of the excavation. Underslab FILL must consist of a minimum of 6 in. thick of Sand and Gravel which must compact to a minimum of 100 % of Standard Proctor Maximum Dry Density laboratory and field density test must be conducted by Certificated Testing Company.

Polyethylene sheet (Poly sheet) must be provided to minimize moisture migration to the parking floor slab.

11.0 STRUCTURAL FILL

Structural FILL, if required to restore foundation grade due to over excavation or removal of unsuitable soil, must consist of pit run Sand and Gravel with less than 5% silt (or material approved by Geotechnical Engineer in record) placed and compacted to a minimum of 100% of Standard Proctor Maximum Dry Density.

Structural FILL must be placed in maximum 12 in. loose lifts. Prior to placement of the Structural FILL, all topsoil, organic, random FILL, and other unsuitable material etc. should be removed.

A density-testing program must be carried out by certified laboratory and JCI will review the result to ensure that compaction requirements are satisfied. **The native Silty soil excavated during foundation construction will not be suitable as Structural FILL.**

12.0 TEMPORARY SHORING AND EXCAVATION

Excavation for the proposed underground parking will involve possible vertical shoring along all site perimeters except at the north site perimeter. It is anticipated that up to maximum excavation depth of 12 ft. ± will be excavated in the Silty SAND and Gravel with Silt.

Open excavation, if applicable, should have temporary excavation slope not steeper than with 1.5H:1V at the Silty SAND and Gravel and the underlain compact Silty SAND and SAND.

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As reviewed with the owner representative and the construction team, it is understood that the temporary Vertical Shoring with non-encroachment Helical Pile method will be implemented along the site perimeters.

Details of the temporary shoring and excavation is beyond the scope of this report. JCI will prepare the Excavation and Shoring Drawing if requested.

13.0 BURIED UTILITIES

Excavations for newly installed utilities such as storm and sanitary sewer, telephone line, gas line and electrical cable etc., will likely encounter poorly graded SAND and Gravel near ground surface. Excavation side slopes must be sloped back no steeper than 1.5H:1V or suitable trench shields should be provided for protection of the workmen in the trench.

Backfill for utility trenches should consist of clean, well-graded sand and gravel compacted to at least 100 % of its Standard Proctor Maximum Dry Density.

Utilities should stay away from a 1H:1V stress zone if install below footing elevation of near-by footing to avoid undermine of adjacent foundation footing. This is to avoid disturbance and de-stabilize the footing in long term.

14.0 GEOTECHNICAL ENGINEERING FIELD REVIEW

JCI will provide Field Review (Geotechnical Engineering) according to the 2012 BC Building Code and Letter of Assurance (Schedule "B" –BCBC 2012). A Standard Geotechnical Field Inspection Requirement is attached in Appendix "C" as a guideline for Field Review. In addition, Work Safe requirements will be followed for temporary excavation requirements.

The following general field reviews (Require 48-hour notification) are required prior to and during construction stage:

- Temporary Excavation and stability at proposed site perimeter area.
- Shoring stability review on site
- Work Safe Inspection for excavation as required by the City
- Foundation Bearing Capacity (confirmation and Certification)
- Temporary Dewatering (Perched water occur between different type of soil and temp sedimentation control)
- Compaction of Structural FILL (FILL under Building Foundation and proposed roadway)

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JECTH Consultants Inc.
Geotechnical & Environmental Engineers

Client: Nu-Gen Projects Ltd.
Date: July 14, 2018
Our File No.: 218N551

- Compaction of Underslab FILL (FILL under Slab and Driveway pavement)
- Perimeter backfill (Material requirements, compaction and Drainage)
- Others site specified as specified in BC Building Code
- Unforeseen subsurface soil and groundwater conditions as encountered prior to, during and after construction stage.
- Other Geotechnical Related Issues.

Other Geotechnical Engineering technical requirements and in-situ testing will be performed by certified laboratory/testing company and will be reviewed by JCI during construction stage.

Specific Site Geotechnical Engineering and/or other geotechnical related issues must be addressed by JCI prior to and during construction stage.

15.0 FINAL FOUNDATION DESIGN REVIEW

JCI should be given an opportunity to review.

1. The detail and final Architectural, Structural Engineering Drawing must be reviewed by JCI prior to Building Permit Application such that the above comments and recommendations can be confirmed and modified.

2. Any other Electrical and Mechanical as well as Civil Engineering and Landscape Architect Drawings, which will likely affect the foundation design and construction, must be reviewed and approved by JCI.

3. A consultant coordination meeting must be arranged prior to Building Permit Application or prior to construction start such that all design team members can confirm all design parameters for the project.

4. JCI will review the exposed subsurface soil and groundwater conditions prior to and during construction stage. It is possible that the Geotechnical recommendations provided in this report be modified due to unforeseen circumstances and change in subsurface soil as well as groundwater condition.

This will allow JCI to confirm the comments and recommendations in this report.

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16.0 FIELD INSPECTIONS AND PRE-CONSTRUCTION MEETING

A pre-construction meeting must be organized between the site superintendent/contractor representatives and JCI at a minimum of two weeks before **any site construction activities**. A list of inspection requirement is shown in Appendix "C" – Standard Field Inspection Requirements.

JCI must be notified (24 hours) of all fieldwork **prior to any site work** in particular before site clearing, stripping and preparation. This will allow JCI to provide final comments for the project with respect to Geotechnical Engineering.

17.0 CLOSURE

We trust that this report should satisfy the immediate requirements. If you have any questions, please contact the undersigned at (604) 299-6617.

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA H. K. K. MAK

July 19, 2018

JECTH Consultants Inc.

Harrison Mak, M.Eng., P.Eng.

Attachments:

List of Figures

Figure 1 – Site Location Plan
Figure 1A – Previous Project Location Plan
Figure 2 – Geological Map
Figure 3 – Aerial Photo
Figure 4 – GIS- View Port: Location Map
Figure 4A – Survey Plan
Figure 5 – Architectural Site Plan
Figure 6 – Building Layout Plan
Figure 7 – Basement Plan
Figure 8 – Building Elevation (East and South)

List of Appendixes

Appendix "A" – Soil Logs and Moisture Content
Appendix "B" – Seismic Design Criteria
Appendix "C" – Standard Field Inspection Requirements

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JECTH Consultants Inc.
Geotechnical & Environmental Engineers

Client: Nu-Gen Projects Ltd.
Date: July 14, 2018
Our File No.: 218N551

FIGURES

PROPOSED TOWNHOUSE DEVELOPMENT
2222 CLARKE STREET,
PORT MOODY, BC

LIST OF FIGURES

122-3823 Henning Dr.
Burnaby, B.C. V5C 6P3
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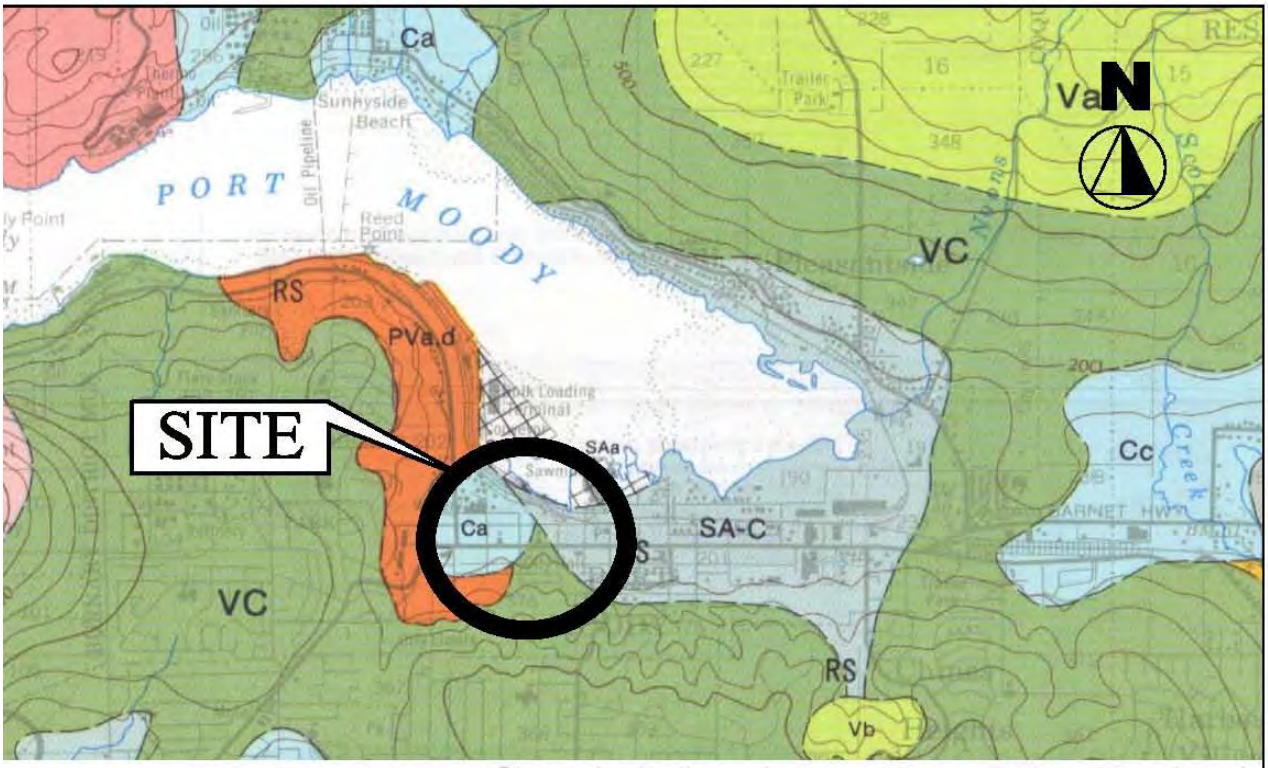
JECTH Consultants Inc. Suite 122-3823 Henning Drive Burnaby, B.C. Phone: (604) 299-6617	**Site Location Plan** **Proposed Residential Development** **2222 Clarke Street** **Port Moody, BC** **Client: Nu-Gen Projects Ltd.**	Pre. FC	SCALE Not to scale
		Chk. IC	Date: July 2018
		Dwg. No: 218N551 – Fig. 1	

JECTH Consultants Inc. Suite 122-3823 Henning Drive Burnaby, B.C. Phone: (604) 299-6617	**JECTH's Previous Projects Location Plan** **Proposed Townhouse Development** **2222 Clarke Street** **Port Moody, BC** **Client: Nu-Gen Projects Ltd.**	Pre. KW	SCALE Not to scale
		Chk. HKM	Date: July 2018
		Dwg. No:218N551 – Fig. 1A	



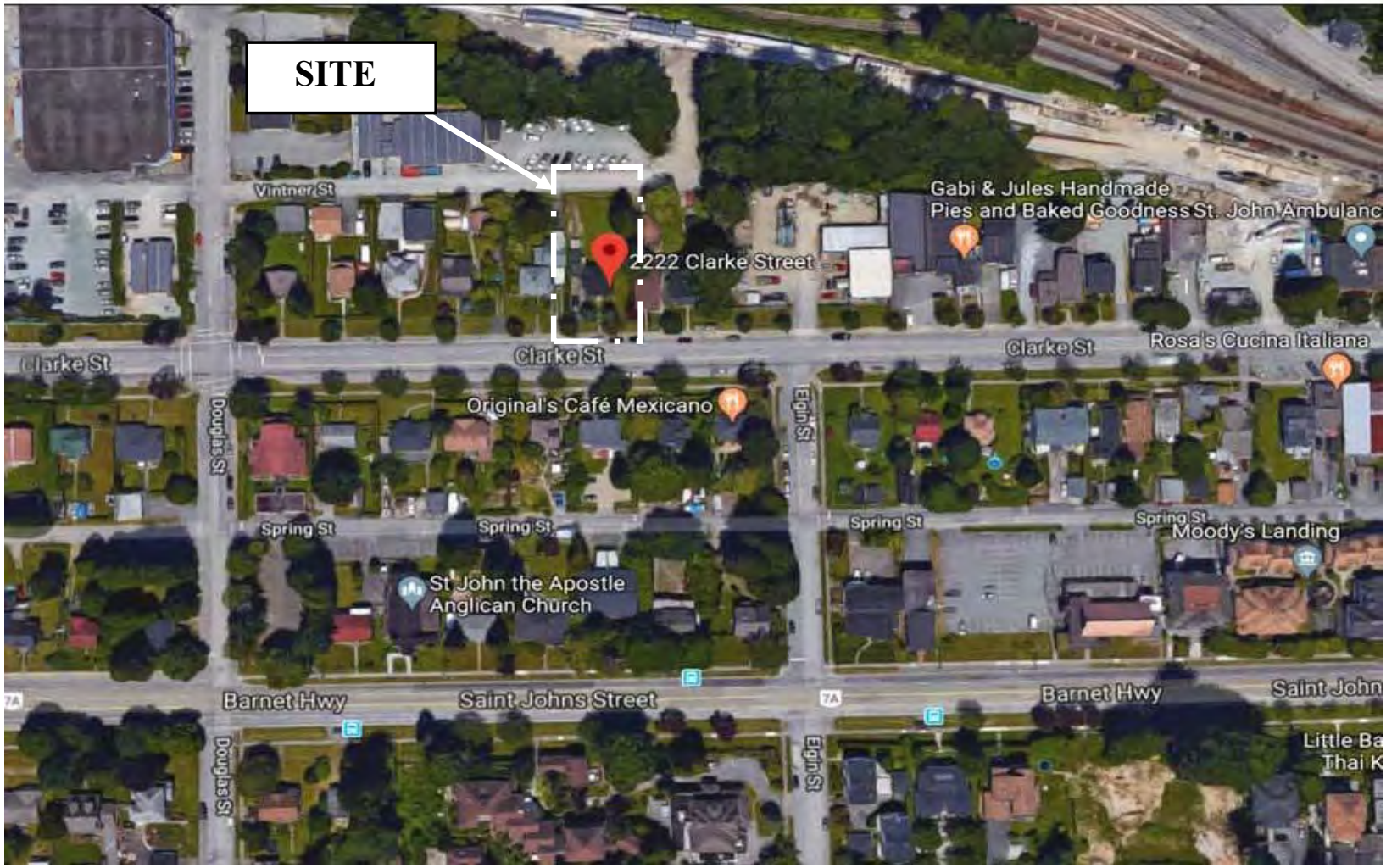
CAPILANO SEDIMENTS *(Chronologically equivalent to Sumas Drift and Fort Langley Formation, see Lithologic Units and Environments of Deposition)*

Ca-e — *Raised marine, deltaic, and fluvial deposits:* Ca, *raised marine beach, spit, bar, and lag veneer, poorly sorted sand to gravel (except in bar deposits) normally less than 1 m thick but up to 8 m thick, mantling older sediments and containing fossil marine shell casts up to 175 m above sea level;* Cb, *raised beach medium to coarse sand 1 to 5 m thick containing fossil marine shell casts;* Cc, *raised deltaic and channel fill medium sand to cobble gravel up to 15 m thick deposited by proglacial streams and commonly underlain by silty to silty clay loam;* Cd, *marine and glaciomarine stony (including till-like deposits) to stoneless silt loam to clay loam with minor sand and silt normally less than 3 m thick but up to 30 m thick, containing marine shells. These deposits thicken from west to east.* Ce, *mainly marine silt loam to clay loam with minor sand, silt, and stony glacio-marine material (see* Cd*), up to 60+m thick. In many of the upland areas sediments mapped as* Cc *and* Cd *are mantled by a thin veneer (less than 1 m) of* Ca

POSTGLACIAL AND PLEISTOCENE

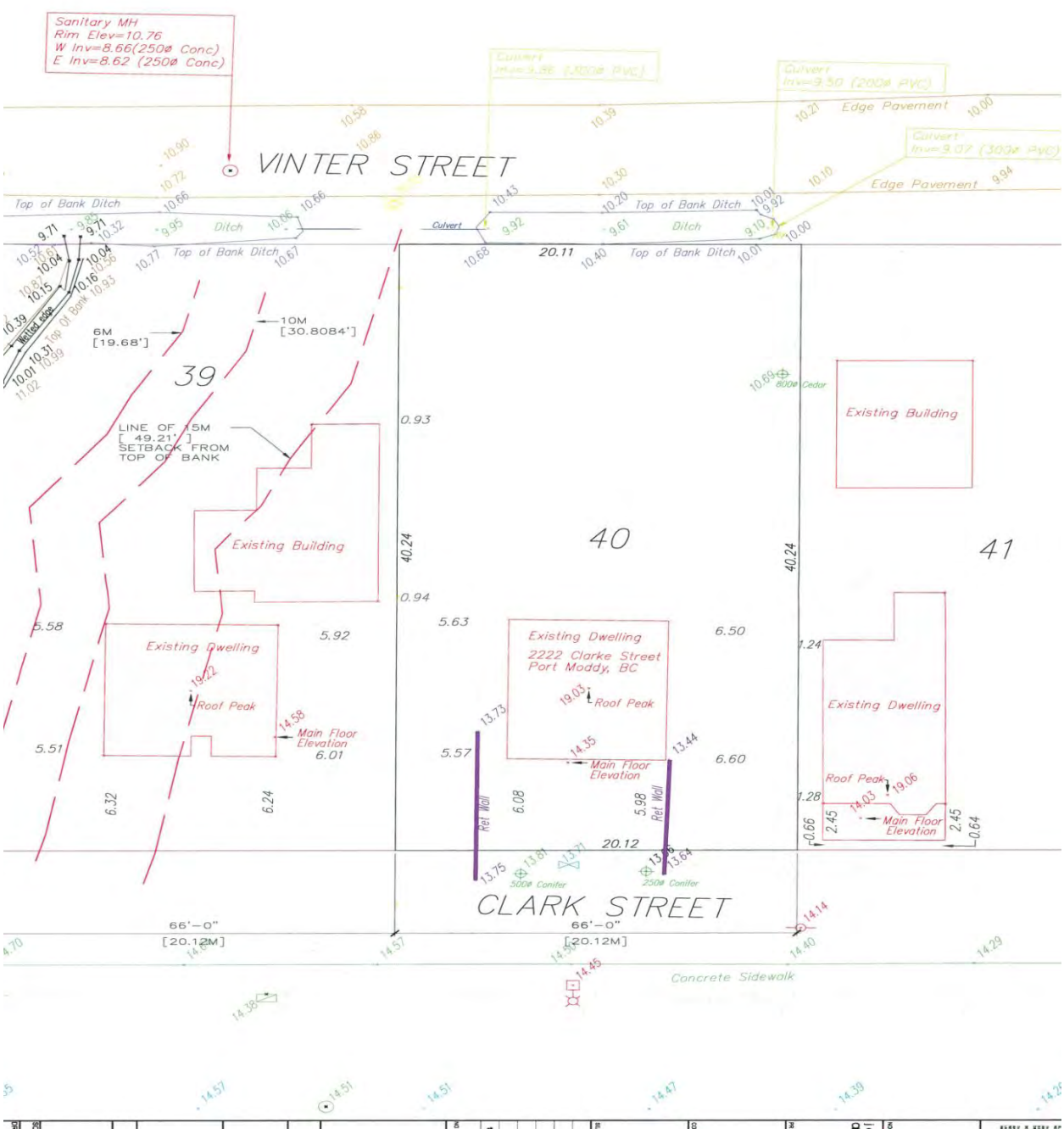
SA-C — *Marine shore and fluvial sand up to 8 m thick,* Cb *in part has been reworked and redeposited by lowland streams* (SAh)

JECTH Consultants Inc. Suite 122-3823 Henning Drive Burnaby, B.C. Phone: (604) 299-6617	**Geological Map** **Proposed Townhouse Development** **2222 Clarke Street** **Port Moody, BC** **Client: Nu-Gen Projects Ltd.**	Pre. FC	SCALE Not to scale
		Chk. IC	Date: July 2018
		Dwg. No: 218N551 – Fig. 2	

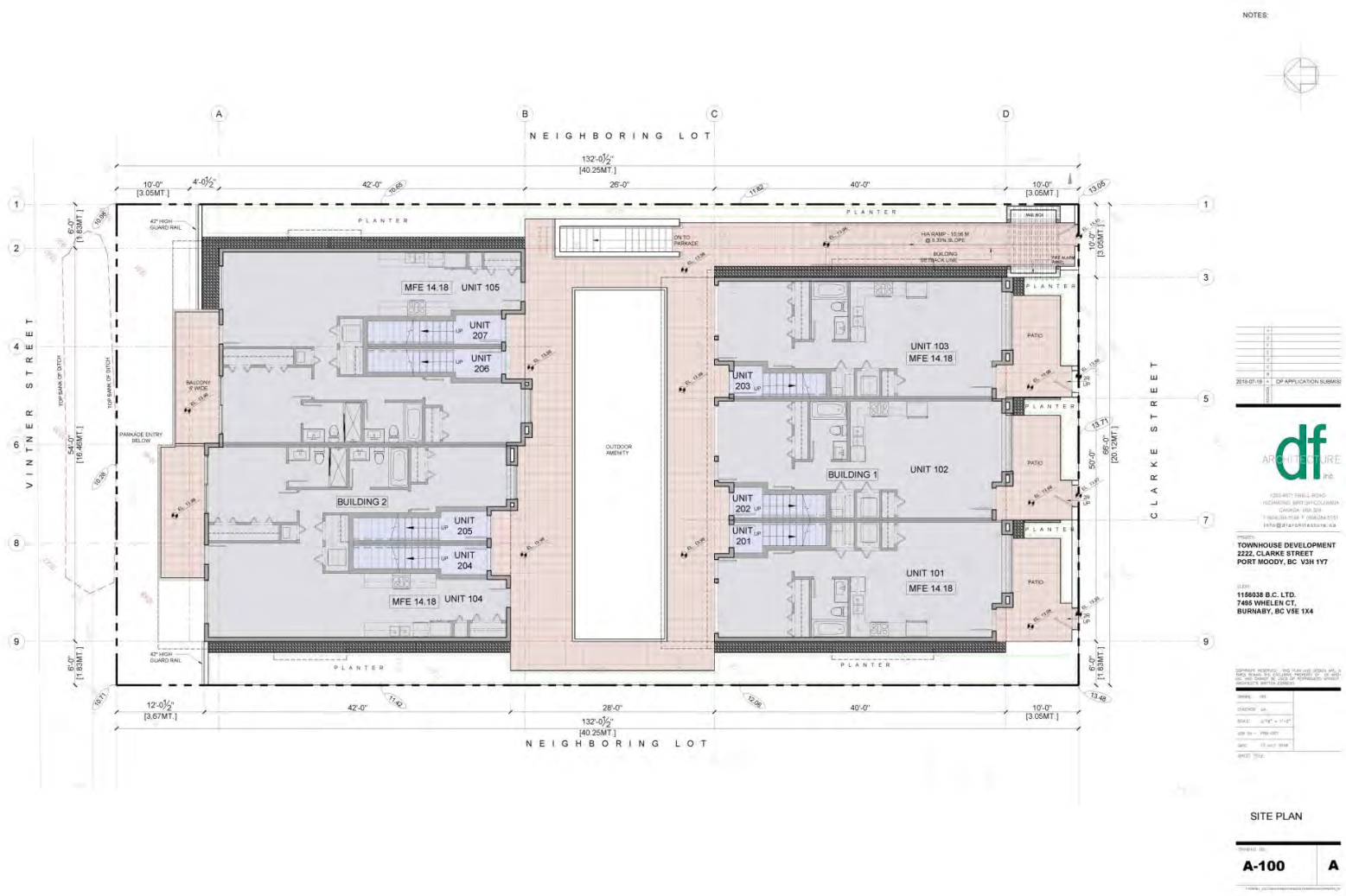


JECTH Consultants Inc. Suite 122, 3823 Henning Drive Burnaby, B.C. V5C 6P3 Phone: (604) 299-6617	**Aerial Photo** **Proposed Residential Development** **2222 Clarke Street, Port Moody, BC** **Client: Nu-Gen Projects Ltd.**	Prepared by: FC	SCALE Not to scale
		Chk. HKM	Date: July 2018
		Dwg. No.: 218N551 – Figure 3	

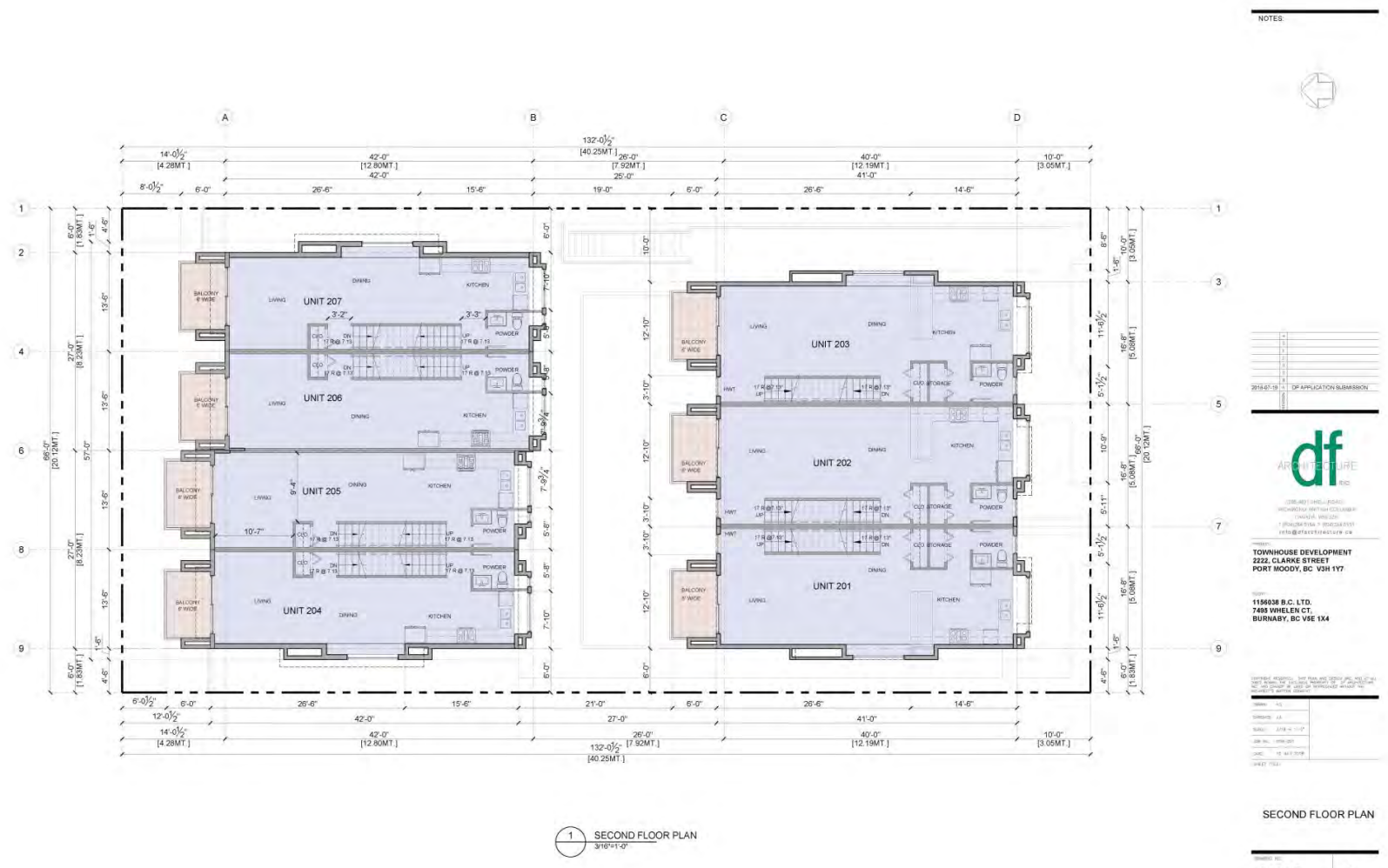
JECTH Consultants Inc. Suite 122, 3823 Henning Drive Burnaby, B.C. V5C 6P3 Phone: (604) 299-6617	**City Of Port Moody GIS Map** **Proposed Townhouse Development** **2222 Clarke Street, Port Moody, BC** **Client: Nu-Gen Projects Ltd.**	Prepared by: FC	SCALE Not to scale
		Chk. HKM	Date: July 2018
		Dwg. No.: 218N551 – Figure 4	



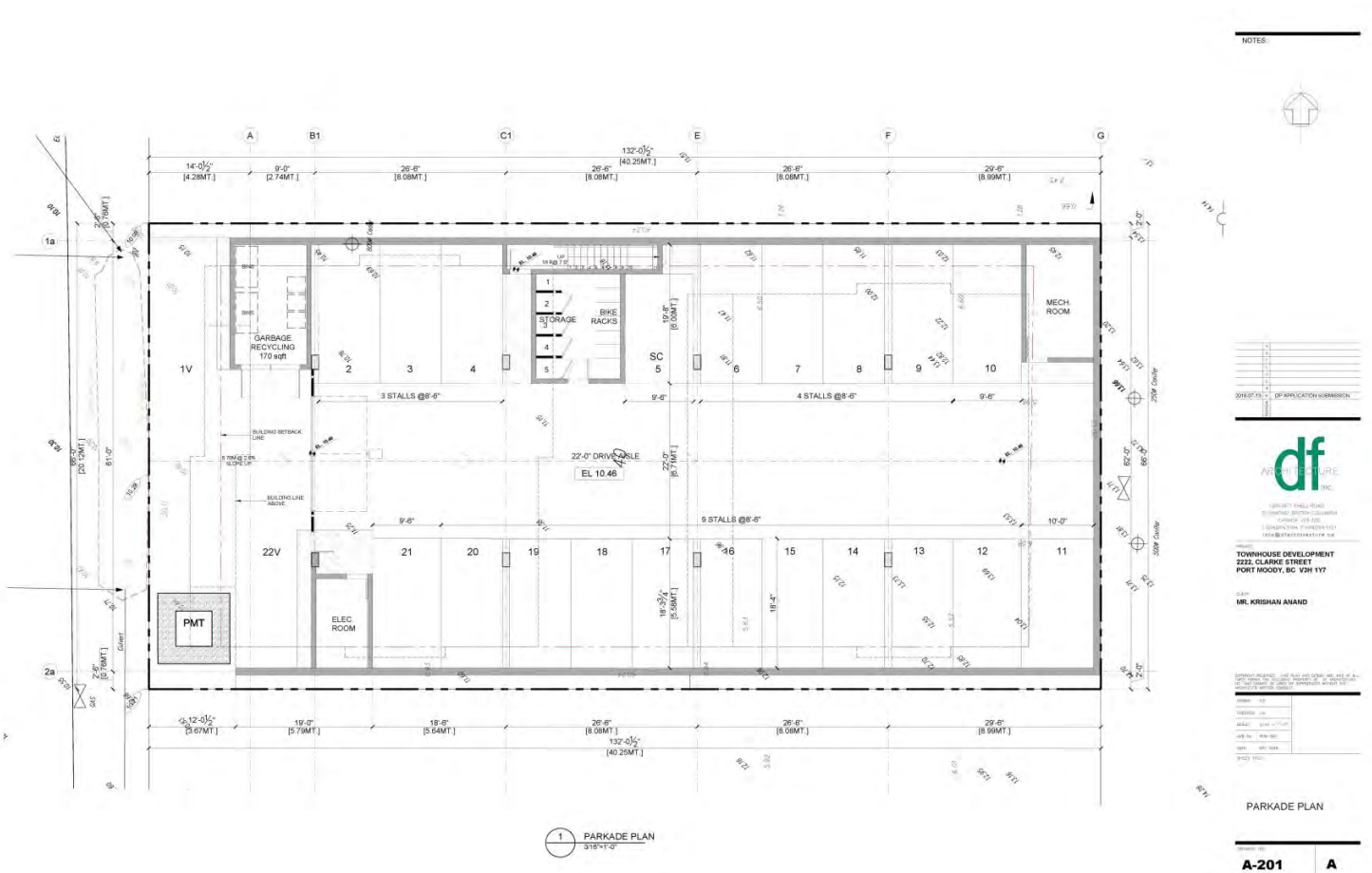
JECTH Consultants Inc. Suite 122-3823 Henning Drive Burnaby, B.C. Phone: (604) 299-6617	**Survey Plan** **Proposed Townhouse Development** **2222 Clarke Street** **Port Moody, BC** **Client: Nu-Gen Projects Ltd.**	Pre. FC	SCALE Not to scale
		Chk. IC	Date: July 2018
		Dwg. No: 218N551 – Fig. 4A	



JECTH Consultants Inc. Suite 122, 3823 Henning Drive Burnaby, B.C. V5C 6P3 Phone: (604) 299-6617	**Architectural Site Plan** **Proposed Townhouse Development** **2222 Clarke Street, Port Moody, BC** **Client: Nu-Gen Projects Ltd.**	Prepared by: FC	SCALE Not to scale
		Chk. HKM	Date: July 2018
		Dwg. No.: 218N551 – Figure 5	



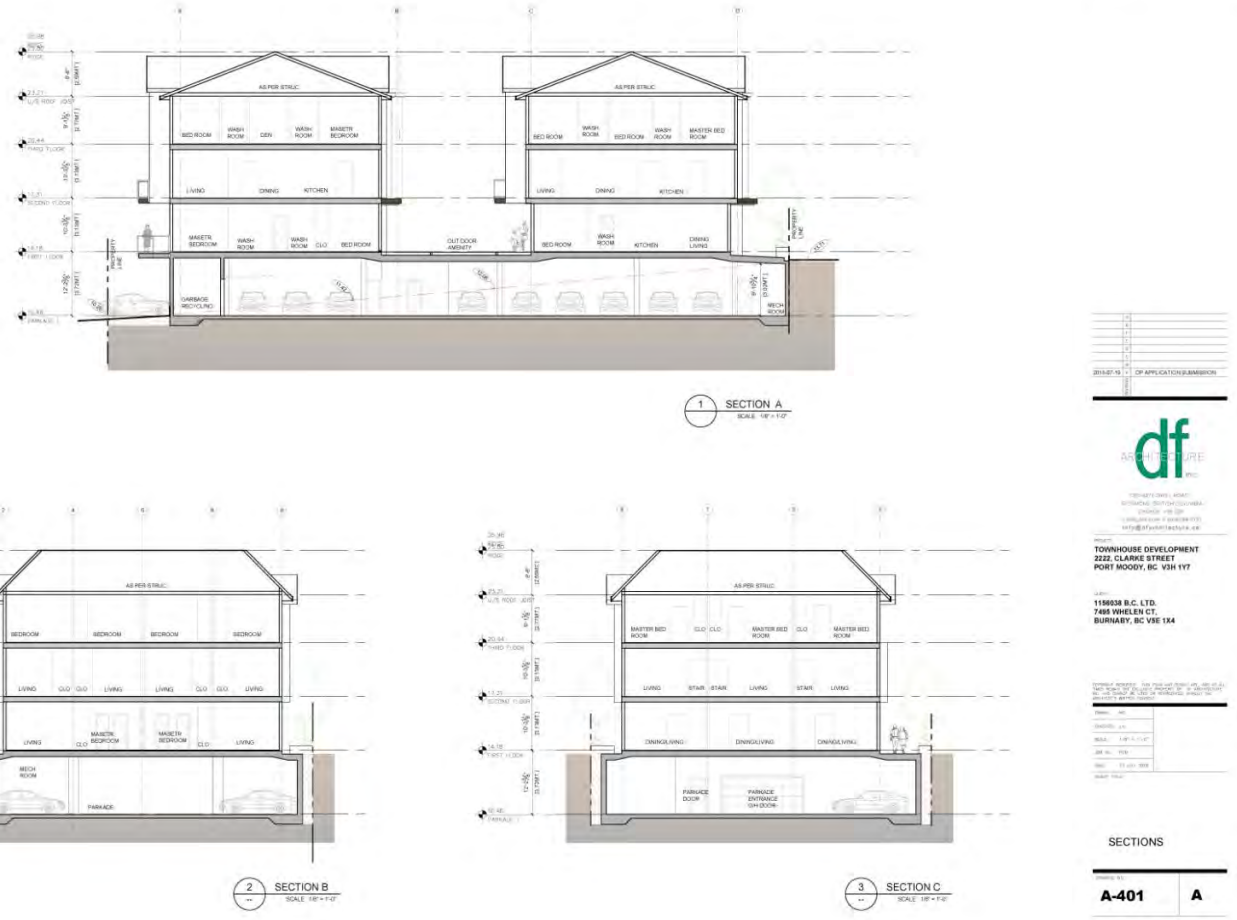
JECTH Consultants Inc. Suite 122, 3823 Henning Drive Burnaby, B.C. V5C 6P3 Phone: (604) 299-6617	**Building Plan (Second Floor)** **Proposed Townhouse Development** **2222 Clarke Street, Port Moody, BC** **Client: Nu-Gen Projects Ltd.**	Prepared by: FC	SCALE Not to scale
		Chk. HKM	Date: July 2018
		Dwg. No.: 218N551 – Figure 6	



JECTH Consultants Inc. Suite 122, 3823 Henning Drive Burnaby, B.C. V5C 6P3 Phone: (604) 299-6617	**Basement Plan** **Proposed Townhouse Development** **2222 Clarke Street, Port Moody, BC** **Client: Nu-Gen Projects Ltd.**	Prepared by: FC	SCALE Not to scale
		Chk. HKM	Date: July 2018
		Dwg. No.: 218N551 – Figure 7	

JECTH Consultants Inc. Suite 122, 3823 Henning Drive Burnaby, B.C. V5C 6P3 Phone: (604) 299-6617	**Building Elevation (East)** **Proposed Townhouse Development** **2222 Clarke Street, Port Moody, BC** **Client: Nu-Gen Projects Ltd.**	Prepared by: FC	SCALE Not to scale
		Chk. HKM	Date: July 2018
		Dwg. No.: 218N551 – Figure 8	

JECTH Consultants Inc. Suite 122, 3823 Henning Drive Burnaby, B.C. V5C 6P3 Phone: (604) 299-6617	**Building Elevation (South and North)** **Proposed Townhouse Development** **2222 Clarke Street, Port Moody, BC** **Client: Nu-Gen Projects Ltd.**	Prepared by: FC	SCALE Not to scale
		Chk. HKM	Date: July 2018
		Dwg. No.: 218N551 – Figure 9	



JECTH Consultants Inc. Suite 122, 3823 Henning Drive Burnaby, B.C. V5C 6P3 Phone: (604) 299-6617	**Typical Section (North-South and East-West)** **Proposed Townhouse Development** **2222 Clarke Street, Port Moody, BC** **Client: Nu-Gen Projects Ltd.**	Prepared by: FC	SCALE Not to scale
		Chk. HKM	Date: July 2018
		Dwg. No.: 218N551 – Figure 10	

JECTH Consultants Inc.
Geotechnical & Environmental Engineers

Client: Nu-Gen Projects Ltd.
Date: July 14, 2018
Our File No.: 218N551

APPENDIX "A"

PROPOSED TOWNHOUSE DEVELOPMENT
2222 CLARKE STREET
PORT MOODY, BC

SOIL LOGS & MOISTURE CONTENT

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JECTH Consultants Inc. **TEST HOLE LOG** **DCPT NO.: DCPT-1**

Job No.:	218N551	Ground Elevation:	EL. 1.3 m ±		
Location:	2222 Clarke Street, Port Moody, BC	Driller/Excavator:	Southland Drilling Co. Ltd.		
Drilling Date:	March-07-18	Equipment:	Truck Mounted Auger		
Weather:	Cloudy	Engineer:	IC	Logged	IC
				Page:	2 of 2

DEPTH (ft)	SYMBOL	SOIL PROFILE DESCRIPTION	WATER LEVEL	SAMPLE TYPE	SAMPLE NO.	DCPT BLOWS / FEET	DCPT BLOW COUNT (NO.) 0 50 100
20							
21		Greyish brown, dense, wet fine to medium SAND with gravel, occasional pebbles, trace of SILT				31	
22						19	
23				G	1-22.5	9	
24						38	
25		25.0'				34	
26		Greyish brown, dense, wet fine to medium SAND with gravel, occasional pebbles, trace of SILT				40	
27							
28				G	1-27.5		
29							
30		30.0'					
31		Drillhole end at 30 ft. GWT measured at 3.5 ft. by tape					
32							
33							
34							
35							
36							
37							
38							
39							
40							

Legend:
- G - Soil log obtained from DH1
- G - Grab soil sample
- DCPT - Dynamic Cone Penetration Test
- ∇ - Water level

JECTH Consultants Inc. **TEST HOLE LOG** **Drill Hole No.: DH-1**

Job No.:	218N551	Ground Elevation:	EL. 1.3 m ±
Location:	2222 Clarke Street, Port Moody, BC	Driller/Excavator:	Southland Drilling Co. Ltd.
Drilling Date:	March-07-18	Equipment:	Truck Mounted Auger
Weather:	Cloudy	Engineer:	IC
		Logged Staff:	IC
		Page:	1 of 2

DEPTH (ft)	SYMBOL	SOIL PROFILE DESCRIPTION	WATER LEVEL	SAMPLE TYPE	SAMPLE NO.	DCPT BLOWS / FEET	MOISTURE CONTENT (%) 0 50 100
0		**Surface**					
1		Brown, medium loose, dry Silt, Sand and trace of gravel, trace of organics (FILL)				7	
				G	1-1.5		38.0%
2		2.0'		G	1-2	7	31.0%
		Greyish brown, medium loose, moist to wet, fine to medium SAND 2.5'	WL 3.5' ▽			4	
3							
4		Greyish brown, compact, wet silty SAND with gravel, trace of pebble		G	1-4	10	22.2%
5		5.0'				15	
6		Greyish brown, compact, wet silty SAND and gravel, some pebbles				17	
7						21	
				G	1-7.5		70.0%
8						14	
9						4	
10		10.0'				7	
11		Greyish brown, compact, wet silty SAND and gravel, some pebbles 11.0'				8	
12		Greyish brown, compact, wet, fine to medium SAND with trace of gravel, trace of SILT				8	
				G	1-12.5		25.9%
13						16	
14						26	
15		15.0'				29	
16		Greyish brown, dense, wet fine to medium SAND with gravel, occasional pebbles, trace of SILT				32	
17						28	
				G	1-17.5		25.8%
18						32	
19						30	
20		20.0'				32	
		To be continued					

Legend:
- DCPT Log obtained from DCPT-1
- G - Grab soil sample
- DCPT - Dynamic Cone Penetration Test
- ▽ - Water level

JECTH Consultants Inc. **TEST HOLE LOG** **Drill Hole No.: DH-1**

Job No.:	218N551	Ground Elevation:	EL. 1.3 m ±
Location:	2222 Clarke Street, Port Moody, BC	Driller/Excavator:	Southland Drilling Co. Ltd.
Drilling Date:	March-07-18	Equipment:	Truck Mounted Auger
Weather:	Cloudy	Engineer:	IC
		Logged Staff:	IC
		Page:	2 of 2

DEPTH (ft)	SYMBOL	SOIL PROFILE DESCRIPTION	WATER LEVEL	SAMPLE TYPE	SAMPLE NO.	DCPT BLOWS / FEET	MOISTURE CONTENT (%) 0 50 100
20							
21		Greyish brown, dense, wet fine to medium SAND with gravel, occasional pebbles, trace of SILT				31	
22						19	
23				G	1-22.5	9	19.1%
24						38	
25		25.0'				34	
26		Greyish brown, dense, wet fine to medium SAND with gravel, occasional pebbles, trace of SILT				40	
27							
28				G	1-27.5		18.6%
29							
30		30.0'					
31		Drillhole end at 30 ft. GWT measured at 3.5 ft. by tape					
32							
33							
34							
35							
36							
37							
38							
39							
40							

Legend:
- DCPT Log obtained from DCPT-1
- G - Grab soil sample
- DCPT - Dynamic Cone Penetration Test
- ∇ - Water level

JECTH Consultants Inc. **TEST HOLE LOG** **DCPT NO.: DCPT-2**

Job No.:	218N551	Ground Elevation:	EL. 1.3 m ±
Location:	2222 Clarke Street, Port Moody, BC	Driller/Excavator:	Southland Drilling Co. Ltd.
Drilling Date:	March-07-18	Equipment:	Truck Mounted Auger
Weather:	Cloudy	Engineer:	IC Logged IC
			Page: 1 of 2

DEPTH (ft)	SYMBOL	SOIL PROFILE DESCRIPTION	WATER LEVEL	SAMPLE TYPE	SAMPLE NO.	DCPT BLOWS / FEET	DCPT BLOW COUNT (NO.) 0 50 100
0		**Surface (asphalt surface 3.5 in. ±)**					
1		Yellowish brown, dry, Sand and gravel (Road base - FILL)				4	
2		2.0'				3	
3		Brown and darkish brown, dry to moist, SILT, SAND, organic soil, trace of garbage (FILL)		G	1-2.5	1	
4		4.0'	WL	G	1-4	2	
5		Greyish brown, loose, moist to wet, silty SAND with gravel (native) 5.0'	5.0' ▽			5	
6		Greyish brown, compact to medium dense, wet silty SAND and gravel, trace of pebbles				8	
7						20	
8				G	1-7.5	25	
9						29	
10		10.0'				23	
11		Greyish brown, compact to medium dense, wet silty SAND and gravel, trace of pebbles, but medium loose				7	
12		12.0'		G	1-11.5	7	
13		Yellowish to greyish brown, medium loose to compact, wet silty SAND, trace of gravel		G	1-13	23	
14		Silt pocket at 14' (6 in. ± thick)				15	
15		15.0'				11	
16		Yellowish to greyish brown, medium loose to compact, wet silty SAND, trace of gravel, but compact				19	
17						20	
18				G	1-17.5	14	
19						16	
20		20.0'				24	
		To be continued					

Legend:
- G - Soil log obtained from DH2
- G - Grab soil sample
- DCPT - Dynamic Cone Penetration Test
- ▽ - Water level

JECTH Consultants Inc. **TEST HOLE LOG** **DCPT NO.: DCPT-2**

Job No.:	218N551	Ground Elevation:	EL. 1.3 m ±		
Location:	2222 Clarke Street, Port Moody, BC	Driller/Excavator:	Southland Drilling Co. Ltd.		
Drilling Date:	March-07-18	Equipment:	Truck Mounted Auger		
Weather:	Cloudy	Engineer:	IC	Logged	IC
				Page:	2 of 2

DEPTH (ft)	SYMBOL	SOIL PROFILE DESCRIPTION	WATER LEVEL	SAMPLE TYPE	SAMPLE NO.	DCPT BLOWS / FEET	DCPT BLOW COUNT (NO.) 0 50 100
20							
21		Greyish brown, dense, wet fine to medium SAND, trace of gravel, trace of SILT				15	
22						35	
23				G	1-22.5	36	
24						28	
25		25.0'				28	
26		Greyish brown, dense, wet fine to medium SAND, trace of gravel, trace of SILT		G	1-26	22	
27		27.0'				17	
28		Yellowish brown, dense, wet SAND with gravel, trace of SILT		G	1-28	37	
29						47	
30		30.0'					
31		Drillhole end at 30 ft. GWT at 5 ft. ± as observed in auger stem					
32							
33							
34							
35							
36							
37							
38							
39							
40							

Legend:
- G - Soil log obtained from DH2
- G - Grab soil sample
- DCPT - Dynamic Cone Penetration Test
- ∇ - Water level

JECTH Consultants Inc. **TEST HOLE LOG** **Drill Hole No.: DH-2**

Job No.:	218N551	Ground Elevation:	EL. 1.3 m ±
Location:	2222 Clarke Street, Port Moody, BC	Driller/Excavator:	Southland Drilling Co. Ltd.
Drilling Date:	March-07-18	Equipment:	Truck Mounted Auger
Weather:	Cloudy	Engineer:	IC
		Logged Staff:	IC
		Page:	1 of 2

DEPTH (ft)	SYMBOL	SOIL PROFILE DESCRIPTION	WATER LEVEL	SAMPLE TYPE	SAMPLE NO.	DCPT BLOWS / FEET	MOISTURE CONTENT (%) 0 50 100
0		**Surface (asphalt surface 3.5 in. ±)**					
1		Yellowish brown, dry, Sand and gravel (Road base - FILL)				4	
2		2.0'				3	
3		Brown and darkish brown, dry to moist, SILT, SAND, organic soil, trace of garbage (FILL)		G	1-2.5	1	120.0%
4		4.0'	WL	G	1-4	2	50.0%
5		Greyish brown, loose, moist to wet, silty SAND with gravel (native) 5.0'	5.0' ▽			5	
6		Greyish brown, compact to medium dense, wet silty SAND and gravel, trace of pebbles				8	
7						20	
8				G	1-7.5	25	20.3%
9						29	
10		10.0'				23	
11		Greyish brown, compact to medium dense, wet silty SAND and gravel, trace of pebbles, but medium loose				7	
12		12.0'		G	1-11.5	7	20.7%
13		Yellowish to greyish brown, medium loose to compact, wet silty SAND, trace of gravel		G	1-13	23	28.8%
14		Silt pocket at 14' (6 in. ± thick)				15	
15		15.0'				11	
16		Yellowish to greyish brown, medium loose to compact, wet silty SAND, trace of gravel, but compact				19	
17						20	
18				G	1-17.5	14	25.0%
19						16	
20		20.0'				24	
		To be continued					

Legend:
- DCPT Log obtained from DCPT-2
- G - Grab soil sample
- DCPT - Dynamic Cone Penetration Test
- ▽ - Water level

JECTH Consultants Inc. **TEST HOLE LOG** **Drill Hole No.: DH-2**

Job No.:	218N551	Ground Elevation:	EL. 1.3 m ±
Location:	2222 Clarke Street, Port Moody, BC	Driller/Excavator:	Southland Drilling Co. Ltd.
Drilling Date:	March-07-18	Equipment:	Truck Mounted Auger
Weather:	Cloudy	Engineer:	IC
		Logged Staff:	IC
		Page:	2 of 2

DEPTH (ft)	SYMBOL	SOIL PROFILE DESCRIPTION	WATER LEVEL	SAMPLE TYPE	SAMPLE NO.	DCPT BLOWS / FEET	MOISTURE CONTENT (%) 0 50 100
20							
21		Greyish brown, dense, wet fine to medium SAND, trace of gravel, trace of SILT				15	
22						35	
23				G	1-22.5	36	21.9%
24						28	
25		25.0'				28	
26		Greyish brown, dense, wet fine to medium SAND, trace of gravel, trace of SILT		G	1-26	22	22.4%
27		27.0'				17	
28		Yellowish brown, dense, wet SAND with gravel, trace of SILT		G	1-28	37	16.9%
29						47	
30		30.0'					
31		Drillhole end at 30 ft. GWT at 5 ft. ± as observed in auger stem					
32							
33							
34							
35							
36							
37							
38							
39							
40							

Legend:
- DCPT Log obtained from DCPT-2
- G - Grab soil sample
- DCPT - Dynamic Cone Penetration Test
- ∇ - Water level

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MOISTURE CONTENT

PROJECT NO:	218N551		
LOCATION:	Clarke St, Port Moody		
STATION	OFFSET		
GROUND ELEV.			
BORING No DH-1	METHOD	Drilling	
TESTED BY KW	DATE	Mar7 2018	

Hole No.	DH1	DH1	DH1	DH1	DH1	DH1
Depth (ft)	1.5	2	4	7.5	12.5	17.5
Sample No.	1-1.5	1-2	1-4	1-7.5	1-12.5	1-17.5
Container No.						
Mass of Wet Sample + Tare (g)	69	76	77	68	68	83
Mass of Dry Sample + Tare (g)	50	58	63	40	54	66
Tare of Container						
Mass of Water	19	18	14	28	14	17
Mass of Dry Soil	50	58	63	40	54	66
MOISTURE CONTENT	**38.0%**	**31.0%**	**22.2%**	**70.0%**	**25.9%**	**25.8%**

Hole No.	DH1	DH1				
Depth (ft)	22.5	27.5				
Sample No.	1-22.5	1-27.5				
Container No.						
Mass of Wet Sample + Tare (g)	81	70				
Mass of Dry Sample + Tare (g)	68	59				
Tare of Container						
Mass of Water	13	11				
Mass of Dry Soil	68	59				
MOISTURE CONTENT	**19.1%**	**18.6%**				

Hole No.						
Depth (ft)						
Sample No.						
Container No.						
Mass of Wet Sample + Tare (g)						
Mass of Dry Sample + Tare (g)						
Tare of Container						
Mass of Water						
Mass of Dry Soil						
MOISTURE CONTENT						

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MOISTURE CONTENT

PROJECT NO:	218N551		
LOCATION:	Clarke St, Port Moody		
STATION	OFFSET		
GROUND ELEV.			
BORING No DH-2	METHOD	Drilling	
TESTED BY KW	DATE	Mar7 2018	

Hole No.	DH2	DH2	DH2	DH2	DH2	DH2
Depth (ft)	2.5	4	7.5	11.5	13	17.5
Sample No.	2-2.5	2-4	2-7.5	2-11.5	2-13	2-17.5
Container No.						
Mass of Wet Sample + Tare (g)	66	69	71	70	76	70
Mass of Dry Sample + Tare (g)	30	46	59	58	59	56
Tare of Container						
Mass of Water	36	23	12	12	17	14
Mass of Dry Soil	30	46	59	58	59	56
MOISTURE CONTENT	**120.0%**	**50.0%**	**20.3%**	**20.7%**	**28.8%**	**25.0%**

Hole No.	DH2	DH2	DH2			
Depth (ft)	22.5	26	28			
Sample No.	2-22.5	2-26	2-28			
Container No.						
Mass of Wet Sample + Tare (g)	78	71	69			
Mass of Dry Sample + Tare (g)	64	58	59			
Tare of Container						
Mass of Water	14	13	10			
Mass of Dry Soil	64	58	59			
MOISTURE CONTENT	**21.9%**	**22.4%**	**16.9%**			

Hole No.						
Depth (ft)						
Sample No.						
Container No.						
Mass of Wet Sample + Tare (g)						
Mass of Dry Sample + Tare (g)						
Tare of Container						
Mass of Water						
Mass of Dry Soil						
MOISTURE CONTENT						

JECTH Consultants Inc.
Geotechnical & Environmental Engineers

Client: Nu-Gen Projects Ltd.
Date: July 14, 2018
Our File No.: 218N551

APPENDIX "B"

PROPOSED TOWNHOUSE DEVELOPMENT
2222 CLARKE STREET
PORT MOODY, BC

SEISMIC DESIGN CRITERIA

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504

2010 National Building Code Seismic Hazard Calculation

INFORMATION: Eastern Canada English (613) 995-5548 franç ais (613) 995-0600 Facsimile (613) 992-8836
Western Canada English (250) 363-6500 Facsimile (250) 363-6565

Requested by: , JECTH Consultants Inc. July 19, 2018

Site Coordinates: 49.2779 North 122.8626 West

User File Reference: 2222 Clarke Street, Port Moody, BC

National Building Code ground motions:
2% probability of exceedance in 50 years (0.000404 per annum)

Sa(0.2)	Sa(0.5)	Sa(1.0)	Sa(2.0)	PGA (g)
0.935	0.627	0.322	0.169	0.464

Notes. Spectral and peak hazard values are determined for firm ground (NBCC 2010 soil class C - average shear wave velocity 360-750 m/s). Median (50th percentile) values are given in units of g. 5% damped spectral acceleration (Sa(T), where T is the period in seconds) and peak ground acceleration (PGA) values are tabulated. Only 2 significant figures are to be used. ***These values have been interpolated from a 10 km spaced grid of points. Depending on the gradient of the nearby points, values at this location calculated directly from the hazard program may vary. More than 95 percent of interpolated values are within 2 percent of the calculated values.*** Warning: You are in a region which considers the hazard from a deterministic Cascadia subduction event for the National Building Code. Values determined for high probabilities (0.01 per annum) in this region do not consider the hazard from this type of earthquake.

Ground motions for other probabilities:

Probability of exceedance per annum	0.010	0.0021	0.001
Probability of exceedance in 50 years	40%	10%	5%
Sa(0.2)	0.217	0.486	0.667
Sa(0.5)	0.148	0.321	0.443
Sa(1.0)	0.077	0.166	0.226
Sa(2.0)	0.039	0.085	0.118
PGA	0.112	0.245	0.332

References

National Building Code of Canada 2010 NRCC no. 53301; sections 4.1.8, 9.20.1.2, 9.23.10.2, 9.31.6.2, and 6.2.1.3
Appendix C: Climatic Information for Building Design in Canada - table in Appendix C starting on page C-11 of Division B, volume 2

User's Guide - NBC 2010, Structural Commentaries NRCC no. 53543 (in preparation)
Commentary J: Design for Seismic Effects

Geological Survey of Canada Open File xxxx
Fourth generation seismic hazard maps of Canada: Maps and grid values to be used with the 2010 National Building Code of Canada (in preparation)

See the websites *www.EarthquakesCanada.ca* and *www.nationalcodes.ca* for more information

Aussi disponible en français

JECTH Consultants Inc.
Geotechnical & Environmental Engineers

Client: Nu-Gen Projects Ltd.
Date: July 14, 2018
Our File No.: 218N551

APPENDIX "C"

PROPOSED TOWNHOUSE DEVELOPMENT
2222 CLARKE STREET
PORT MOODY, BC

STANDARD FIELD INSPECTION REQUIREMENTS

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Geotechnical & Environmental Engineers

Client: Nu-Gen Projects Ltd.
Date: July 14, 2018
Our File No.: 218N551

Geotechnical Engineering Field Review and Inspection Requirements
BC Building Code 2012

Based on the BC Building Code 2012, the following Design and field review must be completed by JECTH Consultants Inc. (Geotechnical in Record, **GIR)** such that Letter of Compliance (Schedule "C") required by local municipality for Occupancy Permit can be issued.

7.0 Geotechnical - Temporary

7.1 Excavation

7.1.1 Foundation

Excavation depth more than 4 ft. must be certified by GIR as required by WorkSafe BC ☐

7.1.2 Buildings and Structures

Buildings and Structures within the 1H:1V stress influence line from the bottom of Excavation must be reviewed and approved by GIR ☐

7.1.3 Trench

Excavation for underground utilities for depth more than 4 ft. must be reviewed and approved by GIR ☐

7.1.4 Underground Utilities

All underground utilities (both on-site and off-site) within and along the site perimeter must be identified both on drawing and physical on site prior to any foundation excavation and slope excavation. ☐

7.2 Shoring

7.2.1 Vertical Shoring

Vertical Shoring must be design by GIR to ensure excavation perimeter is stable during foundation excavation before placement of perimeter backfill. ☐

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7.2.2 Temporary Shoring

Temporary Shoring such as sheetpile and shotcrete with tie back anchors or other vertical features must be inspected by GIR ☐

7.2.3 Shoring Method

Shoring method such as sheetpile and shotcrete with tie-back anchors wall must be carried out under the supervision of GIR ☐

7.2.4 Underground Utilities

All underground utilities (both on-site and off-site) within and along the site perimeter must be identified both on drawing and physical on site prior to any foundation excavation and shoring work. ☐

7.3 Underpinning

7.3.1 Pre-Excavation

Pre-excavation inspection and Review must be conducted by both Structural and Geotechnical Engineers (both Geotechnical Engineers from the adjacent structures and GIR) prior to underpinning excavation. ☐

7.3.2 Monitoring Survey

Survey monitoring points must be installed at the underpinning building(s) and/any movement sensitive Structural Component before foundation excavation. The survey monitoring system must be conducted prior to any site activities and submit to GIR. ☐

7.3.3 Structural Inspection

Structural Inspection and photographs must be carried out prior to foundation excavation for future records and reference by Structural Engineer retained by either owner of adjacent property or subject property owner. ☐

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7.4 Temporary Construction Dewatering

7.4.1 Perched groundwater and Surface Drainage

For perched groundwater and surface Drainage by precipitation, conventional pump can be used to maintain the site in relatively dry condition. ☐

7.4.2 Well point

Well point and other measure of temporary dewatering will be required if high groundwater level (actual ground water table) is encountered ☐

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Date: July 14, 2018
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8.0 Geotechnical - Permanent

8.1 Bearing Capacity of Foundation Subgrade Soil ☐

8.1.1 Foundation Subgrade Excavation

Review exposed foundation subgrade excavation and ensure that all remove all unsuitable soil/material until suitable bearing subgrade is exposed ☐

8.1.2 Foundation Subgrade Protection

In the event that the exposed foundation subgrade soil is sensitive to moisture, foundation subgrade might be protected by a layer granular soil such as crushed gravel due to wet condition and construction traffic. A lean concrete can be used instead of crushed gravel. ☐

8.1.3 Structural FILL

Review Structural Fill if over-excavated or raise of grade is required. Compaction Density test must be conducted by Certified Laboratory and submit to GIR. ☐

8.2 Geotechnical - Deep Foundation

8.2.1 Piling Inspection

Full time piling inspection such as timber and steel pile etc must be conducted by GIR. All piling record for refusal must be available to review such that the pile capacity can be certified. ☐

8.2.2 Sheetpile Installation

Sheetpile installation as temporary / permanent support must be installed and inspected by Geotechnical Engineer ☐

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8.3 Engineering FILL

8.3.1 Structural FILL

Structural Fill (imported or non-native material) at and below the proposed foundation elevation must be compacted to density as specified by GIR and must be certified by qualified soil laboratory / testing company ☐

8.3.2 Underslab FILL

Underslab fill density must also be tested prior to placement of slab-on-grade concrete to the specified density as required by GIR. ☐

8.4 Slope Stability and Seismic Load

8.4.1 Slope Stability

Evaluate the slope stability along the site and building perimeter for both seismic and static design conditions according to APEBC Guidelines dated November 2010. ☐

8.4.2 Subsurface Stability

Subsurface stability under seismic condition such as densification specified by GIR and tieing of footing structurally must be accommodated by Structural Engineer in Record ☐

8.4.3 Seismic Design Criteria

The acceleration velocity design must be based on Nation Resources of Canada Seismic Hazard Criteria. ☐

8.5 Backfill

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8.5.1 Backfill Material

Backfill material for foundation perimeter must be well drained granular soil, such as crushed gravel with waterproof membrance for below grade structure ☐

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8.5.2 Sensitive Structure

If sensitive structure is founded on the Backfill material such as Sand and Gravel compaction density as specified by GIR of the backfill material must be tested by certified testing company ☐

8.6 Permanent Dewatering

8.6.1 Foundation Drainage

For convention foundation drainage, perforated PVC pipe will be used to collect any surface gravity drained to city's storm system migrated and natural groundwater to a sump then ☐

8.6.2 Storm System

If City's storm system is higher than the sump elevation, pumping system must be installed with dual-pump and alarm system and may be with back up generator when power is unavailable during adverse conditions. Mechanical and Civil Engineer must be retained to design the system. ☐

8.6.3 Perforated Drainage

Underslab perforated drainage perforated PVC will be installed to improve the foundation drainage if groundwater table is higher than the slab elevation either seasonally or permanently ☐

8.6.4 Tanking

Tanking is also an option when the pumping system might not be capable to drain all below groundwater or foundation drainage system is not installed. Envelop Consultants must be retained for this option ☐

8.6.5 Retention Tank

Retention Tank with control valve may be required due to City's storm system limitation. Civil Engineer must be retained. ☐

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8.7 Permanent Underpinning

8.7.1 Underpinning Loading

All underpinning loading must be reviewed and approved by Structural Engineer and GIR. ☐

8.7.2 Separation and Drainage

Bond separation and drainage (above and below grade) at the interface of the underpinning area must be reviewed to ensure no water migrate to the underpinning structure. Envelop Consultant must be retained. ☐

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Technical Memorandum

BARSANTI
Environmental Services Ltd.

April 3, 2020
Rev. September 1, 2020
Rev. January 20, 2021
Project No. 19.0047

To: Krishan Anand
1156038 BC Ltd.
7495 Whelen Court
Burnaby BC V5E 1X4
By Email: NuGenprojects@gmail.com

From: Jason Barsanti, R.P.Bio.
Barsanti Environmental Services Ltd.
jason@barsantienviro.ca
778-908-9711

Re: REVISED: Watercourse Classification at 2222 Clarke St, Port Moody BC

1 Introduction

NuGen Projects, 1156038 BC Ltd. (the Client) has retained Barsanti Environmental Services Ltd. (Barsanti Environmental) to prepare a watercourse classification report on their project site at 2222 Clark St, Port Moody BC (the Site, Figure 1).

This January 20, 2021 revision supplies revised drawings in Appendix 1 and 2. It is understood that no changes to the RPEA resulted from the revised Stormwater Management Plan and Culvert Crossing designs supplied by Core Concept (pers. comm. Anthony Read, 2021-01-20)

This report provides the opinion of a Qualified Environmental Professional (QEP) on watercourse classification and habitat enhancement measures.

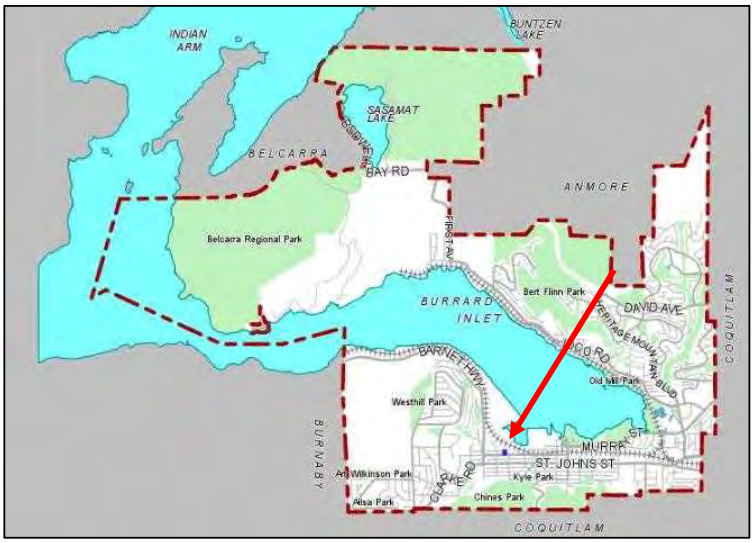


Figure 1. Location of 2222 Clarke St, the subject property, in Port Moody BC.

2 Limits of Assignment

- Our investigation is limited to ecological conditions – fish and wildlife habitat assessment.
- Our investigation is based on our visual inspection of the site and the surrounding area and from information obtained in publicly available resources. No sampling was conducted for this report.
- No design or review of proposed civil infrastructure works is within our scope or capacity.

3 Methods

Barsanti Environmental reviewed Client supplied architectural drawings, a previously prepared watercourse classification report[1] and Port Moody staff comments on the Client's proposal. Watercourse mapping, available on Port Moody GIS Webmap, and Moody Centre Stormwater Management Servicing Plan[2] (referred to here as, KWL-10-19) were reviewed. The project was discussed with Karen Devitt, Environmental Coordinator, City of Port Moody. Port Moody's streamside protection bylaw was reviewed. I attended the site on December 17, 2019. Observations were recorded with notes and pictures.

4 Observations

4.1 Desktop Analysis

Two watercourses are mapped within 30 m of the project site. Ottley Creek and an unnamed Ditch (Figures 2 and 3).

The headwaters of Ottley Creek occur in Chines Park, a large natural area approximately 1.6 km south of the site. Ottley Creek bifurcates in an urbanized part of Port Moody on its course north towards Burrard Inlet. The west fork, the smaller of the two branches of Ottley Creek, continues north and flows through 2214 Clarke St., the second lot west of the subject property. At Vintner Street, Ottley Creek crosses under Vintner Street through a pipe and continues flowing south.

A roadside ditch on the north side of Vintner Street is the second watercourse encumbering the subject property. It flows east adjacent to the subject property and eventually through a designated Environmentally Sensitive Area (ESA) and into Burrard Inlet. The ditch length across the site is approximately 20 m of which approximately 4.5 m is conveyed through a pipe. The ditch was assessed in KWL-10-19 and described as, "providing groundwater interception, surface water capture from the adjacent road and driveways, storage, and infiltration of stormwater".

[1] SER Environmental Management, Technical Report. April 13, 2018.
[2] Kerr Wood Leidal. Technical Report. KWL Project No. 0310.055. October 2019.

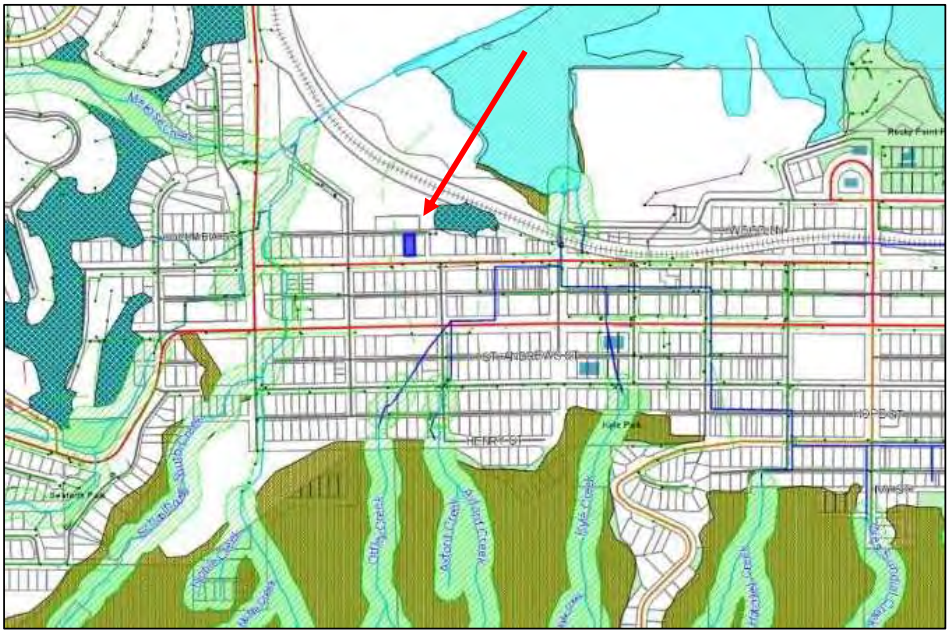


Figure 2. Watercourse map illustrating Ottley Creek. Image obtained from Port Moody webmap, 2020-01-14.

Figure 3. Watercourse maping in the neighbourhood of the subject property. Image obtained from KWL-10-19.

Ottley Creek is a Class B watercourse; class B watercourses convey food and nutrients but fish presence is not known. The unnamed ditch is a Class B Ditch.

4.2 Site Visit

The subject property occurs within a residential / commercial area. The unnamed ditch was flowing during the site visit. The ditch daylights from underground storm water infrastructure at the corner of Vintner and Douglas Street, five lots to the west of the site. It flows east and collects water from Ottley Creek before flowing past the site. The ditch profile is relatively small at approximately 1.5 m or less width.

A culvert is present in the ditch at the site to provide vehicle access from Vintner Street. The culvert is on the west side of the lot; it appears to be approximately 4.5 m long and 300 mm diameter.

On the site, herbaceous weed and lawn species are the only plants in the ditch and its' riparian area. Please refer to selected site photos in Appendix 1.

5 Discussion

Recommendations in SER for Ottley Creek called for a 10.0 m Streamside Protection and Enhancement Area (SPEA) on Ottley Creek per terms of the detailed methodology in the Riparian Areas Regulation (RAR, now called RAPR). I agree with that assessment. At 10.0 m the SPEA does not encumber the subject property.

The roadside ditch conveys groundwater interception and surface water from roads and driveways, it has no natural headwaters or springs, there are no fish present in the ditch, but the ditch conveys food and nutrients downstream. It is described as a Class B Ditch by Port Mood and per Port Moody streamside protection policy, a 5.0 m Riparian Protection and Enhancement Area (RPEA) from top-of-bank (TOB) applies to this ditch. According to methodology in the RAPR the SPEA on this ditch 2.0 m from TOB.

It is understood that the Client is proposing to remove the existing culvert to relocate the driveway access to the center point of the lot. The Client is proposing to use an open bottom culvert for the crossing. The Client supplied the proposed culvert design, please see Appendix 2. The Client will make an application for Notification of instream works under Section 11 of the *Water Sustainability Act* (WSA) to Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD) upon approval of the proposed crossing design and specs by Port Moody.

6 Proposed Works

The Client is proposing to remove the existing culvert and replace it with a 6.5 m, open bottom crossing centered on the lot. Please see the Client supplied design drawing in Appendix 2.

7 Habitat Balance

Streamside Regulations on Ditches in Port Moody: ditches in Port Moody require a 5.0 m Riparian Protection and Enhancement Area (RPEA).

Existing conditions: the ditch on the subject property consists of 15.5 m open channel and 4.5 m piped channel which corresponds to a RPEA of 77.5 m^2. Vegetation in the RPEA is currently lawn.

Proposed conditions: Remove the existing 4.5 m pipe culvert and replace it with a 6.5 m open bottom culvert centered on the lot plant native species throughout the RPEA and below TOB.

Proposed Mitigation Works: The Client is proposing habitat enhancement planting throughout the RPEA for a planted area of 67.5 m^2. Additional planting is proposed on the north side of the ditch if accepted by Port Moody. Enhancement planting is proposed through the restoration works area in the ditch amounting to approximately 45.5 m^2 planting. Please refer to the landscape plan Appendix 3 for an illustrative description of these measures.

Result:

- The driveway crossing is wider by 2.0 m which translates into a loss of 10 m^2 RPEA, an impact.
- 4.5 m closed pipe culvert is removed and replaced with an open bottom crossing, a benefit.
- 67.5 m^2 RPEA that is currently lawn is improved with native herb, shrub, and tree species, a benefit.
- 45.5 m^2 habitat below TOB is improved with native hydrophytic species, a benefit.
- Additional planting is proposed on the north bank if accepted by Port Moody, a benefit.

8 Proposed Mitigation and SPEA Enhancement Measures

8.1 Planting

Riparian planting at the ditch bank will help to enhance water quality through shading and insect and litter drop.

Riparian enhancement planting is recommended to occur in the following manner.

Shrubs: Red-osier Dogwood (*Cornus sericea*), Oregon Grape (*Mahonia aquifolium*), Red-flowering Currant (*Ribes sanguineum*), Baldhip Rose (*Rosa gymnocarpa*), Salal (*Gaultheria shallon*), Western Sword Fern (*Polystichum munitum*), Evergreen Huckleberry (*Vaccinium ovatum*).

Shrubs need to be obtained in 1-gallon pots and planted at 0.5 m on-center spacing.

Trees: Species in the tree layer should be selected from: Vine Maple (*Acer circinatum*), Pacific Willow (*Salix lucida spp. lasiandra*), Pussy Willow (*Salix discolor*), Casacara (*Rhamnus purshiana*) Pacific Crabapple (*Malus diversifolia*) and Choke Cherry (*Prunus virginiana*). A minimum of three different species should be planted at 1.5 m spacing on-center. Tree stock must be a minimum of 1.5 m height at first branch.

All plants must be certified native BC species and must retain a Nursery attached identification label after planting.

As these plants mature, they will provide water quality enhancement through temperature modulation by shading in the summer as well as nutrients through litter and insect drop. A secondary benefit of the plants in this list is the development of food and nesting opportunities for songbirds.

It is recommended that planting occur in the early spring or autumn months to help prevent desiccation from drying out. Irrigation is recommended during the dry summer months.

A thick layer of bark mulch is recommended over the entire area to help suppress herbaceous weeds. Weeds are fast growing and, if not kept in check, commonly overgrow, and suffocate young woody species.

One-hundred percent survival of plant stock over three years is commonly mandated. Any losses should be replaced with a like species.

Fencing is recommended to help ensure the planted area is protected from human encroachment and trampling.

8.2 Instream

The watercourse is not a fish bearing stream therefore the instream works may occur outside of the fish window, on the condition that the channel is dry during the construction works.

The following erosion and sediment control (ESC) measures are required.

- The works should be scheduled to occur during an extended period of dry weather.
- Disturbance of existing vegetation should be as small as possible while allowing the works to be completed safely.
- Lining the ditch bed with clean, washed river rock and sand will help control sediment transport.
- Ditch banks should be seeded with a seed mix that is certified all-native species and then, covered with wood-fibre roll matting.

Additional Terms and Conditions may be ordered by FLNRORD through the approval of Notification of instream works under Section 11 of the WSA.

9 Limitations

Barsanti Environmental Services Ltd. will conduct this project and prepare our reports in a manner consistent with the level of care normally exercised by environmental professionals currently practicing in the area under similar conditions and budgetary constraints. Barsanti Environmental Services Ltd. offers no other warranties, either expressed or implied. Barsanti Environmental Services Ltd. will prepare our reports for your use for the purposes for which they are commissioned and for use by government agencies regulating the specific activities to which they pertain. It will not be reasonable for other parties to rely on the observations or conclusions of the reports and you may not give, lend, sell, or otherwise make available the report or any portion to any other party without Barsanti Environmental Services Ltd. express written consent. The information supplied will provide guidance and recommendations in accordance with the most current guidelines and best management practices but ultimately it is up to the Client to apply them.

10 Closing

We trust that the information supplied in this document meets your needs. Should more information or clarification on any part of this report be required please feel free to contact me.

BARSANTI ENVIRONMENTAL SERVICES LTD.

This document is a digital copy. A hardcopy of this document, with official signature and stamp will be provided immediately upon request to the author.

Jason Barsanti. R.P.Bio.
Principal Biologist

11 Appendix 1: Site Photos

The following site photos were obtained on December 17, 2019.

Photo 1. Viewing south at 2222 Clark Street from the north verge of Vintner Street. Not existing driveway on west side of the lot and absence of riparian vegetation.

Photo 2. Viewing east at the ditch adjacent to the subject property.

Photo 3. Viewing pipe inlet for conveying Ottley Creek under Vintner Road, and roadside ditch beside Vintner Street.

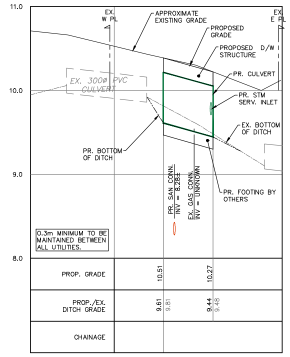
12 Appendix 2: Proposed Driveway Crossing

Culvert design plan. Supplied by Client.

Please see next page.

STORM SEWER NOTES:

1. ALL WORKS SHALL BE IN ACCORDANCE WITH THE MASTER MUNICIPAL CONSTRUCTION DOCUMENTS (MMCD) AND THE CITY OF PORT MOODY'S SUBDIVISION AND DEVELOPMENT SERVICING BYLAW (LATEST EDITIONS), UNLESS OTHERWISE NOTED.
2. PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS, THE CONTRACTOR SHALL EXPOSE AND VERIFY THE EXISTING STORM SEWER MAIN AT THE POINT OF TIE-IN AND AT UTILITY CROSSINGS IDENTIFIED ON THE STORM SEWER SERVICE CONNECTION PROFILE DETAIL AND SHALL REPORT ANY DISCREPANCIES IMMEDIATELY TO CORE CONCEPT CONSULTING LTD.
3. STORM SEWER SERVICE CONNECTION SHALL CONFORM TO CITY OF PORT MOODY'S STANDARDS AND TO MMCD STANDARD DRAWING NUMBER S8, UNLESS OTHERWISE NOTED.
4. PIPE BEDDING AND PIPE SURROUND SHALL BE 19.0mm GRANULAR AS PER MMCD CL-2.7 SECTION 02226 – TYPE "1" AND AS PER THE UTILITY TRENCH DETAIL ON THIS SHEET.
5. STORM SEWER SERVICE CONNECTION SHALL BE 150mm PVC SDR35.
6. STORM SEWER INSPECTION CHAMBER SHALL BE A 200mm PVC SDR35 RISER PIPE TO MMCD STANDARD DRAWING NUMBER S9 COMPLETE WITH A GREEN INTEGRAL TOP LID.
7. ALL JOINTS SHALL BE CLOSED.
8. TRENCH BACKFILL UNDER ROADWAYS AND SIDEWALKS SHALL BE 100mm IMPORTED GRANULAR MATERIAL AS PER MMCD CL-2.3 SECTION 02226 COMPACTED TO 95% MPMDD AND AS PER THE UTILITY TRENCH DETAIL ON THIS SHEET.



PROFILE: CULVERT
SCALE: 1:250 HOR., 1:25 VERT.

STORM WATER DETENTION CALCULATIONS

Client: Nu-Gen Projects Ltd.
Project Location: 2222 Clarke Street
Project No.: 18026
Type of Analysis: 2-yr Post Development Release Rate Vs. 2-yr Pre-development Release Rate
Date of Analysis: July 24, 2018
IDF Curve Used: Rain Gauge PT11- Port Moody Pump Station

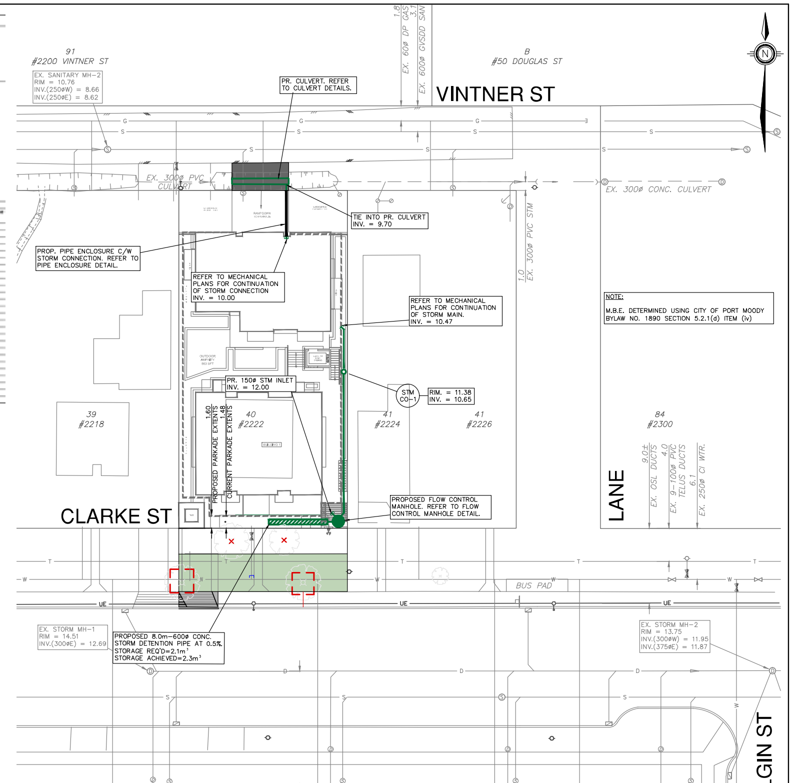
2-yr Post-development Parameters:
R (Runoff Coeff.) 0.65
A (ha) 0.081 Ha
N 0.00278

I=aT^b, where I (mm/hr), T (hr), a & b are constants
a = 11.400
b = -0.371

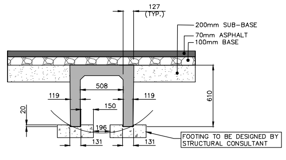
2-yr Pre-development Parameters:
R (Runoff Coeff.) 0.40 (Single Family Residential)
A (ha) 0.081 Ha
N 0.00278
L Overland (m) 43.5
L Ditch (m)
S Overland (%) 8.08
S Ditch (%)

Tc = (3.26(1.1-R)L^0.5/S^0.33 + 0.04L/(S/100)^0.5
Tc (min) 8.0
I=aT^b, where I (mm/hr), T (hr), a & b are constants
a = 11.400
b = -0.371
I (mm/hr) 24.1
Q = RAIN (m³/s) 0.00108 [Maximum allowable release rate limited to pre-development conditions]

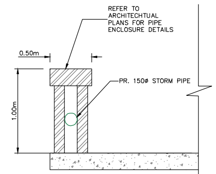
Duration (min)	Intensity (mm/hr)	Peak Inflow (m³/s)	Inflow Volume (m³)	Release Rate (m³/s)	Outflow Volume (m³)	Storage Volume (m³)
5	28.7	0.00419	1.3	0.00108	0.3	0.9
10	22.2	0.00324	1.9	0.00108	0.7	1.3
15	19.1	0.00279	2.5	0.00108	1.0	1.5
20	17.1	0.00251	3.0	0.00108	1.3	1.7
30	14.7	0.00216	3.9	0.00108	2.0	1.9
40	13.3	0.00194	4.6	0.00108	2.6	2.0
50	12.2	0.00178	5.3	0.00108	3.3	2.1
60	11.4	0.00167	6.0	0.00108	3.9	2.1
120	8.8	0.00129	9.3	0.00108	7.8	1.5
180	7.6	0.00111	12.0	0.00108	11.7	0.3
240	6.8	0.00100	14.3	0.00108	15.6	
360	5.9	0.00086	18.5	0.00108	23.4	
480	5.3	0.00077	22.2	0.00108	31.2	
600	4.9	0.00071	25.5	0.00108	39.0	
720	4.5	0.00066	28.6	0.00108	46.8	
1440	3.5	0.00051	44.3	0.00108	93.7	
2000	3.1	0.00045	54.5	0.00108	130.1	
3000	2.7	0.00039	70.3	0.00108	195.2	
4000	2.4	0.00035	84.2	0.00108	260.2	
5000	2.2	0.00032	96.9	0.00108	325.3	
6000	2.1	0.00030	108.7	0.00108	390.3	
7200	1.9	0.00028	121.9	0.00108	468.4	
8400	1.8	0.00027	134.3	0.00108	546.4	
10000	1.7	0.00025	149.9	0.00108	650.5	
					DETENTION VOLUME =	2.10



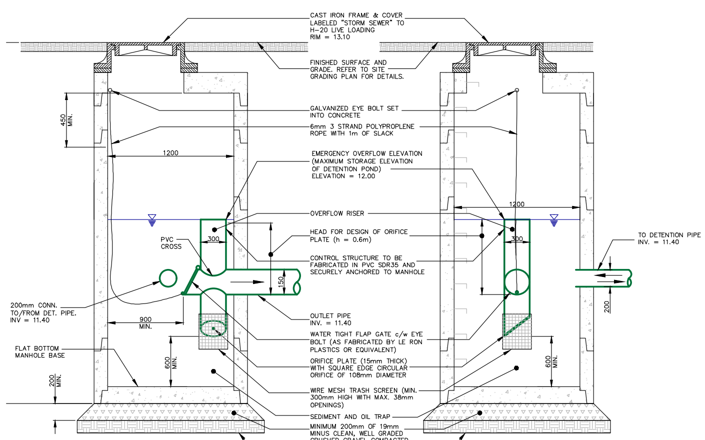
PLAN
SCALE: 1:250



CULVERT DETAIL
N.T.S.



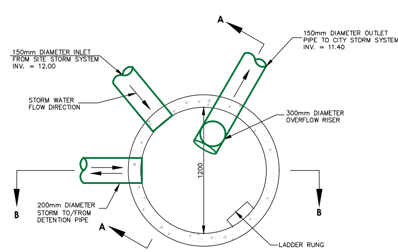
PIPE ENCLOSURE DETAIL
N.T.S.



SECTION A-A

SECTION B-B

STORM WATER FLOW CONTROL MANHOLE DETAIL
NTS



PLAN VIEW
NTS

STORM WATER DETENTION DATA

DEVELOPMENT SITE AREA: = 0.08 Ha.

MAXIMUM 5-YEAR PRE-DEVELOPMENT RELEASE RATE (UNDEVELOPED SITE): = 0.0011m³/s

REQUIRED STORM WATER DETENTION VOLUME BASED ON 5-YEAR POST DEVELOPMENT STORM EVENT VERSUS 5-YEAR PRE-DEVELOPMENT RELEASE RATE: = 2.1m³

STORM WATER LIVE DETENTION VOLUME PROVIDED: = 2.3m³

ORIFICE CALCULATION

$Q = 0.6 * A * \sqrt{2*g*h}$
$Q = 0.00079 m^3/s$
$g = 9.81 m/s^2$
$h = 0.69m$
d = X.XX

0m 10m 20m 30m 40m 50m
SCALE: 1:500

BENCHMARK	
BENCHMARK	ALL ELEVATIONS ARE GEODETIC AND REFER TO SURVEY MONUMENT NUMBER: 80H3249 LOCATED AT: ELEVATION ARE GEODETIC, SHOWN IN METRES, DERIVED FROM CONTROL MONUMENT 80H3249 DATUM: CVD28GVRD, 2005. AND HAVING ELEVATION OF: 22.608M
LEGAL	LOT 40, BLOCK2, PLAN NWP55 DISTRICT LOT 202, NEW WEST DISTRICT

No.	DATE	REVISIONS / SUBMISSIONS
1.	12 DEC 2020	FOR DISCUSSION
0.	24 SEP 2020	FOR DISCUSSION

ENGINEER
CoreConcept CONSULTING LTD.
#220-2639 Viking Way,
Richmond, BC, V6V 3B7
tel: 604.249.5040 fax: 604.249.5041
www.coreconceptconsulting.com

DEVELOPER
NU-GEN PROJECTS LTD.
TEL: FAX:

PROJECT
PROPOSED RESIDENTIAL BUILDING
SITE ADDRESS
2222 CLARKE STREET
PORT MOODY, BC

SEAL
NOT FOR CONSTRUCTION
December 10, 2020

CITY OF PORT MOODY
STORM WATER MANAGEMENT PLAN
DESIGN:
DRAWN: HH
CHECKED:
ENGINEER: RF
DRAWING NUMBER 18026-5
SCALE
REV. 0
DESTROY ALL PRINTS BEARING PREVIOUS REVISION NUMBER

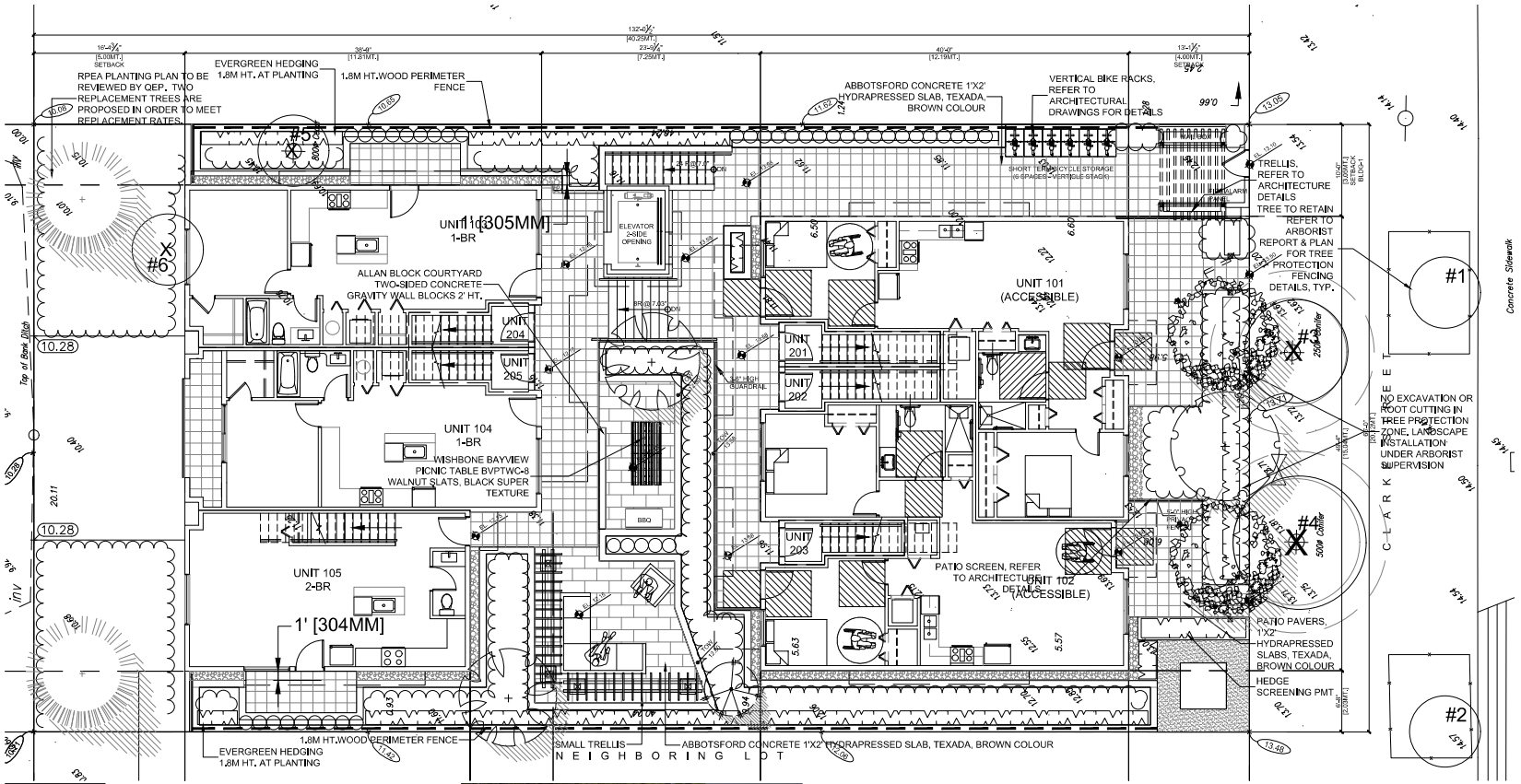
R:\Projects\18026 – Nugen Projects Ltd. (2222 Clarke St, Port Moody)\Design\Drawings\18026 – Working.dwg [SERVICING] 12/10/2020 1:40PM

13 Appendix 3: Proposed Restoration Area Planting

Design plan supplied by PMG Landscape Architects through the Client.

Please refer to Drawing L3.

Please see next page.




ACER 'ARMSTRONG'


CAREX 'ICE DANCE'


LONICERA PILEATA


EXPOCRETE ZEN WALL - 2-SIDED GRAVITY WALL UNIT


OSMANTHUS BURKWOODII


POLYSTICHUM MUNITUM


WISHBONE INDUSTRIES BAYVIEW PICNIC TABLE, WALNUT SLATS & BLACK POWDERCOAT 'BVPTWC-8'

PLANT SCHEDULE - MAIN LEVEL

PMG PROJECT NUMBER: 18-121

KEY	QTY	BOTANICAL NAME	COMMON NAME	PLANTED SIZE / REMARKS
TREE				
	2	ACER CIRCINATUM	VINE MAPLE	7CM CAL; B&B
	2	ACER RUBRUM 'ARMSTRONG'	COLUMNAR ARMSTRONG MAPLE	7.0CM CAL; 2M STD; B&B
	2	CORNUS KOUSA 'SATOMI'	PINK KOUSA DOGWOOD	7CM CAL; B&B
	7	PICEA OMORIKA 'BRUNS PENDULA'	WEEPING BRUNS SERBIAN SPRUCE	1.5M HT; B&B
SHRUB				
B1	18	BUXUS MICROPHYLLA 'WINTER GEM'	LITTLE-LEAF BOX	#3 POT; 40CM
L1	43	LONICERA PILEATA	BOXLEAF HONEYSUCKLE	#2 POT; 30CM
O	2	OSMANTHUS X BURKWOODII	BURKWOOD OSMANTHUS	#3 POT; 50CM
SA	93	SARCOCOCCA HOOKERANA VAR. HUMILIS	HIMALAYAN SWEET BOX	#2 POT; 25CM
SK	31	SKIMMIA REEVESIANA	DWARF SKIMMIA	#2 POT; 25CM
T	76	THUJA OCCIDENTALIS 'SMARAGD'	EMERALD GREEN CEDAR	1.8M HT; B&B
GRASS				
C	61	CAREX OSHIMENSIS 'EVERGOLD'	EVERGOLD JAPANESE SEDGE	#1 POT
PERENNIAL				
HA	24	HEUCHERA MACRANTHA 'PALACE PURPLE'	CORAL BELLS; PURPLE-RED	15CM POT
GC				
D	8	ATHYRIUM NIPONICUM PICTUM 'REGAL RED'	REGAL RED JAPANESE PAINTED FERN	#1 POT; 30CM
PO	34	POLYSTICHUM MUNITUM	WESTERN SWORD FERN	#1 POT; 20CM

NOTES: * PLANT SIZES IN THIS LIST ARE SPECIFIED ACCORDING TO THE BC LANDSCAPE STANDARD AND CANADIAN LANDSCAPE STANDARD, LATEST EDITION. CONTAINER SIZES SPECIFIED AS PER CNLA STANDARD. BOTH PLANT SIZE AND CONTAINER SIZE ARE THE MINIMUM ACCEPTABLE SIZES. * REFER TO SPECIFICATIONS FOR DEFINED CONTAINER MEASUREMENTS AND OTHER PLANT MATERIAL REQUIREMENTS. * SEARCH AND REVIEW: MAKE PLANT MATERIAL AVAILABLE FOR OPTIONAL REVIEW BY LANDSCAPE ARCHITECT AT SOURCE OF SUPPLY. AREA OF SEARCH TO INCLUDE LOWER MAINLAND AND FRASER VALLEY. * SUBSTITUTIONS: OBTAIN WRITTEN APPROVAL FROM THE LANDSCAPE ARCHITECT PRIOR TO MAKING ANY SUBSTITUTIONS TO THE SPECIFIED MATERIAL. UNAPPROVED SUBSTITUTIONS WILL BE REJECTED. ALLOW A MINIMUM OF FIVE DAYS PRIOR TO DELIVERY FOR REQUEST TO SUBSTITUTE. SUBSTITUTIONS ARE SUBJECT TO BC LANDSCAPE STANDARD AND CANADIAN LANDSCAPE STANDARD - DEFINITION OF CONDITIONS OF AVAILABILITY. * ALL LANDSCAPE MATERIAL AND WORKMANSHIP MUST MEET OR EXCEED BC LANDSCAPE STANDARD AND CANADIAN LANDSCAPE STANDARD LATEST EDITION. * ALL PLANT MATERIAL MUST BE PROVIDED FROM CERTIFIED DISEASE FREE NURSERY. * BIO-SOLIDS NOT PERMITTED IN GROWING MEDIUM UNLESS AUTHORIZED BY LANDSCAPE ARCHITECT.

18121-6.ZIP

pmg LANDSCAPE ARCHITECTS
Suite C100 - 4185 Still Creek Drive
Burnaby, British Columbia, V5C 6G9
p: 604 294-0011 ; f: 604 294-0022

SEAL:

NO.	DATE	REVISION DESCRIPTION	DR.
9	21.JAN.21	UPDATE RPEA DIMENSIONS	CLG
8	20.MAR.20	UPDATE PER NEW ARBORIST REPORT	CLG
7	20.MAR.19	UPDATE RPEA PER COMMENTS	CLG
6	20.MAR.05	UPDATE TREE/TREE REPLACEMENT	CLG
5	20.FEB.20	UPDATE PER NEW SITE PLAN	CLG
4	19.JUN.07	UPDATE DRAWN STRIP DETAIL	CLG
3	19.MAR.11	UPDATE AND REISSUE	CLG
2	18.JUL.12	NEW SITE PLAN	RJ
1	18.JUN.18	DESIGN CONCEPT	CLG

CLIENT:

PROJECT:
10 UNIT TOWNHOUSE DEVELOPMENT

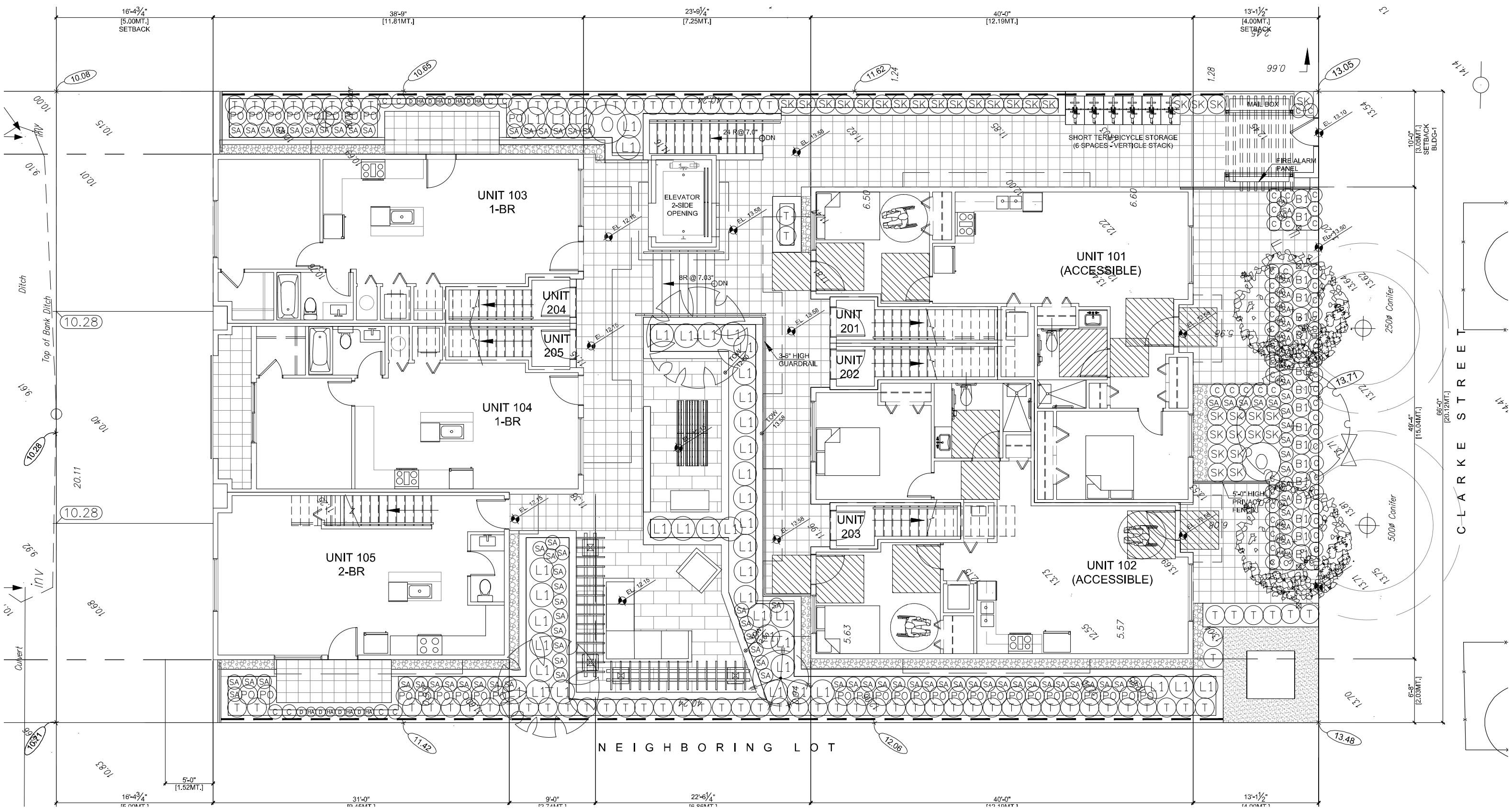
2222 CLARKE STREET
PORT MOODY

DRAWING TITLE:
LANDSCAPE PLAN

DATE: 18.FEB.21
SCALE: 3/16" = 1'-0"
DRAWN:
DESIGN:
CHKD: PCM

DRAWING NUMBER: **L1**
OF 4

PMG PROJECT NUMBER: **18-121**



PLANT SCHEDULE - MAIN LEVEL

PMG PROJECT NUMBER: 18-121

KEY	QTY	BOTANICAL NAME	COMMON NAME	PLANTED SIZE / REMARKS
TREE				
	2	ACER CIRCINATUM	VINE MAPLE	7CM CAL; B&B
	1	ACER RUBRUM 'ARMSTRONG'	COLUMNAR ARMSTRONG MAPLE	7.0CM CAL; 2M STD; B&B
	2	CORNUS KOUSA 'SATOMI'	PINK KOUSA DOGWOOD	7CM CAL; B&B
	1	PICEA OMORIKA 'BRUNS PENDULA'	WEEPING BRUNS SERBIAN SPRUCE	1.5M HT; B&B
SHRUB				
B1	18	BUXUS MICROPHYLLA 'WINTER GEM'	LITTLE-LEAF BOX	#3 POT; 40CM
L1	43	LONICERA PILEATA	BOXLEAF HONEYSUCKLE	#2 POT; 30CM
O	2	OSMANTHUS X BURKWOODII	BURKWOOD OSMANTHUS	#3 POT; 50CM
SA	93	SARCOCOCCA HOOKERANA VAR. HUMILIS	HIMALAYAN SWEET BOX	#2 POT; 25CM
SK	31	SKIMMIA REEVESIANA	DWARF SKIMMIA	#2 POT; 25CM
T	76	THUJA OCCIDENTALIS 'SMARAGD'	EMERALD GREEN CEDAR	1.8M HT; B&B
GRASS				
C	61	CAREX OSHIMENSIS 'EVERGOLD'	EVERGOLD JAPANESE SEDGE	#1 POT
PERENNIAL				
HA	24	HEUCHERA MACRANTHA `PALACE PURPLE'	CORAL BELLS; PURPLE-RED	15CM POT
GC				
D	8	ATHYRIUM NIPONICUM PICTUM 'REGAL RED'	REGAL RED JAPANESE PAINTED FERN	#1 POT; 30CM
PO	34	POLYSTICHUM MUNITUM	WESTERN SWORD FERN	#1 POT; 20CM

NOTES: * PLANT SIZES IN THIS LIST ARE SPECIFIED ACCORDING TO THE BC LANDSCAPE STANDARD AND CANADIAN LANDSCAPE STANDARD, LATEST EDITION. CONTAINER SIZES SPECIFIED AS PER CNLA STANDARD. BOTH PLANT SIZE AND CONTAINER SIZE ARE THE MINIMUM ACCEPTABLE SIZES. * REFER TO SPECIFICATIONS FOR DEFINED CONTAINER MEASUREMENTS AND OTHER PLANT MATERIAL REQUIREMENTS. * SEARCH AND REVIEW: MAKE PLANT MATERIAL AVAILABLE FOR OPTIONAL REVIEW BY LANDSCAPE ARCHITECT AT SOURCE OF SUPPLY. AREA OF SEARCH TO INCLUDE LOWER MAINLAND AND FRASER VALLEY. * SUBSTITUTIONS: OBTAIN WRITTEN APPROVAL FROM THE LANDSCAPE ARCHITECT PRIOR TO MAKING ANY SUBSTITUTIONS TO THE SPECIFIED MATERIAL. UNAPPROVED SUBSTITUTIONS WILL BE REJECTED. ALLOW A MINIMUM OF FIVE DAYS PRIOR TO DELIVERY FOR REQUEST TO SUBSTITUTE. SUBSTITUTIONS ARE SUBJECT TO BC LANDSCAPE STANDARD AND CANADIAN LANDSCAPE STANDARD - DEFINITION OF CONDITIONS OF AVAILABILITY. * ALL LANDSCAPE MATERIAL AND WORKMANSHIP MUST MEET OR EXCEED BC LANDSCAPE STANDARD AND CANADIAN LANDSCAPE STANDARD LATEST EDITION. * ALL PLANT MATERIAL MUST BE PROVIDED FROM CERTIFIED DISEASE FREE NURSERY. * BIO-SOLIDS NOT PERMITTED IN GROWING MEDIUM UNLESS AUTHORIZED BY LANDSCAPE ARCHITECT.

18121-6.ZIP

pmg LANDSCAPE ARCHITECTS
Suite C100 - 4185 Still Creek Drive
Burnaby, British Columbia, V5C 6G9
p: 604 294-0011 ; f: 604 294-0022

SEAL:

NO.	DATE	REVISION DESCRIPTION	DR.
9	21.JAN.21	UPDATE RPEA DIMENSIONS	CLG
8	20.MAR.20	UPDATE PER NEW ARBORIST REPORT	CLG
7	20.MAR.19	UPDATE RPEA PER COMMENTS	CLG
6	20.MAR.05	UPDATE RPEA/TREE REPLACEMENT	CLG
5	20.FEB.20	UPDATE PER NEW SITE PLAN	CLG
4	19.JUN.07	UPDATE DRAIN STRIP DETAIL	CLG
3	19.MAR.11	UPDATE AND REISSUE	CLG
2	18.JUL.12	NEW SITE PLAN	RJ
1	18.JUN.18	DESIGN CONCEPT	CLG

CLIENT:

PROJECT:
10 UNIT TOWNHOUSE DEVELOPMENT

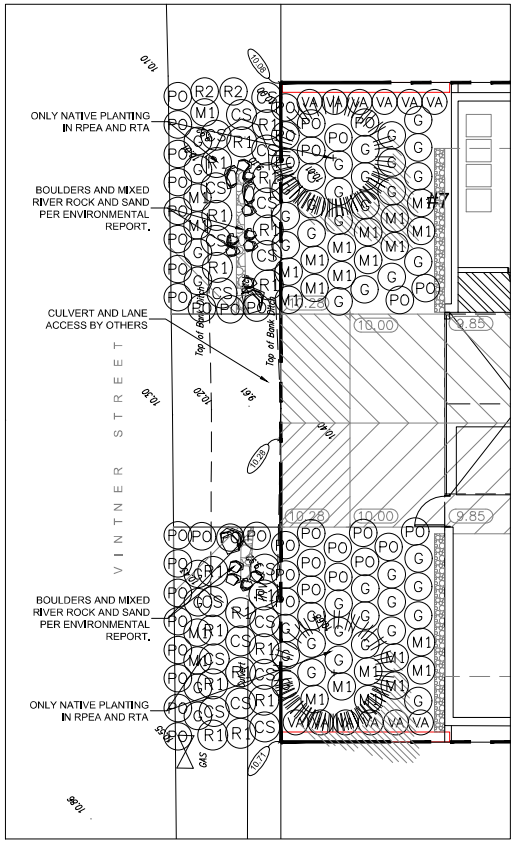
**2222 CLARKE STREET
PORT MOODY**

DRAWING TITLE:
**SHRUB PLAN
MAIN LEVEL**

DATE: 18.FEB.21
SCALE: 3/16" = 1'-0"
DRAWN:
DESIGN:
CHK'D: PCM

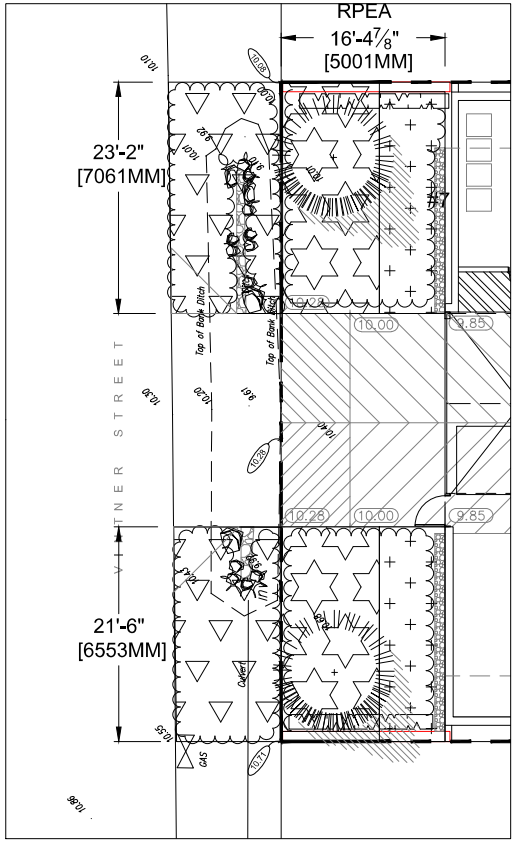
DRAWING NUMBER: **L2** OF 4

PMG PROJECT NUMBER: 18-121



LEGEND

KEY	QTY
	DITCH RESTORATION PLANTING = 45.9M2
	RPEA PLANTING = 39.9M2
	RTA PLANTING = 26.6M2



ENVIRONMENTAL AREA PLANT SCHEDULE - OFFSITE ON LANE

PMG PROJECT NUMBER: 18-121

KEY	QTY	BOTANICAL NAME	COMMON NAME	PLANTED SIZE / REMARKS
SHRUB				
CS	18	CORNUS SERICEA	RED OSIER DOGWOOD	#3 POT; 80CM
M1	5	MAHONIA AQUIFOLIUM	OREGON GRAPE	#3 POT; 50CM
R1	18	RIBES SANGUINEUM	RED FLOWERING CURRANT	#3 POT; 80CM
R2	2	ROSA GYMNOCARPA	BALDHIP ROSE	#2 POT; 40CM
GC				
G	8	GAULTHERIA SHALLON	SALAL	#1 POT; 20CM; 100CM O.C.
PM	22	POLYSTICHUM MUNITUM	WESTERN SWORD FERN	#1 POT; 20CM

NOTES: * PLANT SIZES IN THIS LIST ARE SPECIFIED ACCORDING TO THE BC LANDSCAPE STANDARD AND CANADIAN LANDSCAPE STANDARD, LATEST EDITION. CONTAINER SIZES SPECIFIED AS PER CNLA STANDARD. BOTH PLANT SIZE AND CONTAINER SIZE ARE THE MINIMUM ACCEPTABLE SIZES. * REFER TO SPECIFICATIONS FOR DEFINED CONTAINER MEASUREMENTS AND OTHER PLANT MATERIAL REQUIREMENTS. * SEARCH AND REVIEW: MAKE PLANT MATERIAL AVAILABLE FOR OPTIONAL REVIEW BY LANDSCAPE ARCHITECT AT SOURCE OF SUPPLY. AREA OF SEARCH TO INCLUDE LOWER MAINLAND AND FRASER VALLEY. * SUBSTITUTIONS: OBTAIN WRITTEN APPROVAL FROM THE LANDSCAPE ARCHITECT PRIOR TO MAKING ANY SUBSTITUTIONS TO THE SPECIFIED MATERIAL. UNAPPROVED SUBSTITUTIONS WILL BE REJECTED. ALLOW A MINIMUM OF FIVE DAYS PRIOR TO DELIVERY FOR REQUEST TO SUBSTITUTE. SUBSTITUTIONS ARE SUBJECT TO BC LANDSCAPE STANDARD AND CANADIAN LANDSCAPE STANDARD - DEFINITION OF CONDITIONS OF AVAILABILITY. * ALL LANDSCAPE MATERIAL AND WORKMANSHIP MUST MEET OR EXCEED BC LANDSCAPE STANDARD AND CANADIAN LANDSCAPE STANDARD LATEST EDITION. * ALL PLANT MATERIAL MUST BE PROVIDED FROM CERTIFIED DISEASE FREE NURSERY. * BIO-SOLIDS NOT PERMITTED IN GROWING MEDIUM UNLESS AUTHORIZED BY LANDSCAPE ARCHITECT.

PARKADE LEVEL PLANT SCHEDULE

PMG PROJECT NUMBER: 18-121

KEY	QTY	BOTANICAL NAME	COMMON NAME	PLANTED SIZE / REMARKS
TREE				
Q	2	THUJA PLICATA	WESTERN RED CEDAR	1.5M HT; B&B
SHRUB				
MI	20	MAHONIA AQUIFOLIUM	OREGON GRAPE	#3 POT; 50CM
VA	12	VACCINIUM OVATUM	EVERGREEN HUCKLEBERRY	#3 POT; 60CM
GC				
G	41	GAULTHERIA SHALLON	SALAL	#1 POT; 20CM; 100CM O.C.
PO	21	POLYSTICHUM MUNITUM	WESTERN SWORD FERN	#1 POT; 20CM

NOTES: * PLANT SIZES IN THIS LIST ARE SPECIFIED ACCORDING TO THE BC LANDSCAPE STANDARD AND CANADIAN LANDSCAPE STANDARD, LATEST EDITION. CONTAINER SIZES SPECIFIED AS PER CNLA STANDARD. BOTH PLANT SIZE AND CONTAINER SIZE ARE THE MINIMUM ACCEPTABLE SIZES. * REFER TO SPECIFICATIONS FOR DEFINED CONTAINER MEASUREMENTS AND OTHER PLANT MATERIAL REQUIREMENTS. * SEARCH AND REVIEW: MAKE PLANT MATERIAL AVAILABLE FOR OPTIONAL REVIEW BY LANDSCAPE ARCHITECT AT SOURCE OF SUPPLY. AREA OF SEARCH TO INCLUDE LOWER MAINLAND AND FRASER VALLEY. * SUBSTITUTIONS: OBTAIN WRITTEN APPROVAL FROM THE LANDSCAPE ARCHITECT PRIOR TO MAKING ANY SUBSTITUTIONS TO THE SPECIFIED MATERIAL. UNAPPROVED SUBSTITUTIONS WILL BE REJECTED. ALLOW A MINIMUM OF FIVE DAYS PRIOR TO DELIVERY FOR REQUEST TO SUBSTITUTE. SUBSTITUTIONS ARE SUBJECT TO BC LANDSCAPE STANDARD AND CANADIAN LANDSCAPE STANDARD - DEFINITION OF CONDITIONS OF AVAILABILITY. * ALL LANDSCAPE MATERIAL AND WORKMANSHIP MUST MEET OR EXCEED BC LANDSCAPE STANDARD AND CANADIAN LANDSCAPE STANDARD LATEST EDITION. * ALL PLANT MATERIAL MUST BE PROVIDED FROM CERTIFIED DISEASE FREE NURSERY. * BIO-SOLIDS NOT PERMITTED IN GROWING MEDIUM UNLESS AUTHORIZED BY LANDSCAPE ARCHITECT.

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4	19.JUN.07	UPDATE DRAWN STRIP DETAIL	CLG
3	19.MAR.11	UPDATE AND REISSUE	CLG
2	18.JUL.12	NEW SITE PLAN	RL
1	18.JUN.18	DESIGN CONCEPT	CLG

CLIENT:

PROJECT:
10 UNIT TOWNHOUSE DEVELOPMENT

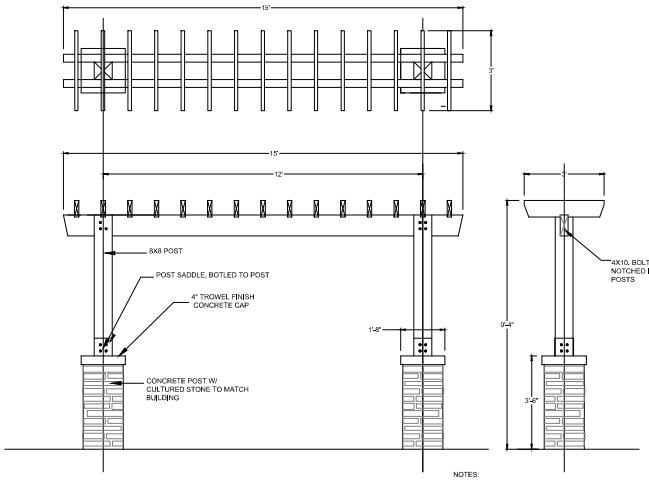
2222 CLARKE STREET
PORT MOODY

DRAWING TITLE:
ENVIRONMENTAL AREA SHRUB PLAN

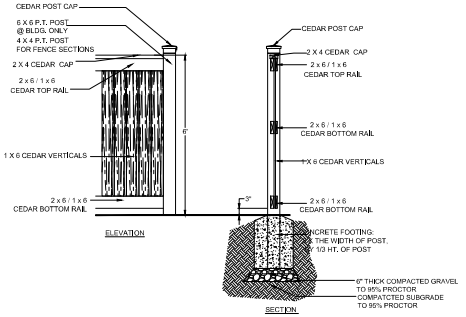
DATE:	18.FEB.21	DRAWING NUMBER:	
SCALE:	3/16" = 1'-0"		L3
DRAWN:			
DESIGN:			
CHKD:	PCM		OF 4

18121-6.ZIP

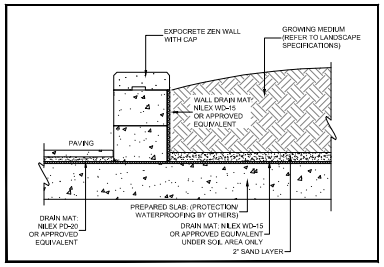
PMG PROJECT NUMBER: 18-121



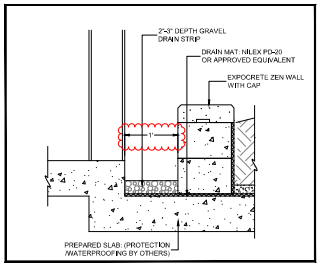
1 SMALL TRELLIS
SCALE: 1/2"=1'-0"



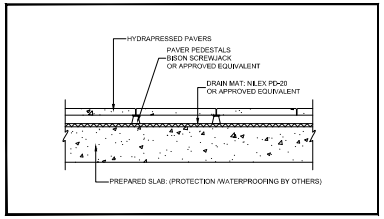
2 6' HT. PRIVACY FENCE - BETWEEN UNITS
SCALE: 1/2"=1'-0"



4 PLANTER WALL ON SLAB
1"=1'-0"



3 DRAIN ROCK STRIP AT BUILDING ON SLAB
1"=1'-0"



5 HYDRAPRESSED PAVERS ON SLAB
1"=1'-0"

pmg LANDSCAPE ARCHITECTS
Suite C100 - 4185 Still Creek Drive
Burnaby, British Columbia, V5C 6G9
p: 604 294-0011 ; f: 604 294-0022

SEAL:

NO.	DATE	REVISION DESCRIPTION	DR.
9	21.JAN.21	UPDATE AREA DIMENSIONS	CLG
8	20.MAR.20	UPDATE PER NEW ARBORIST REPORT	CLG
7	20.MAR.19	UPDATE AREA PER COMMENTS	CLG
6	20.MAR.05	UPDATE SPRAYTREE REPLACEMENT	CLG
5	20.FEB.20	UPDATE PER NEW SITE PLAN	CLG
4	19.JUN.07	UPDATE DRAIN STRIP DETAIL	CLG
3	19.MAR.11	UPDATE AND REISSUE	CLG
2	18.JUL.12	NEW SITE PLAN	RL
1	18.JUN.18	DESIGN CONCEPT	CLG

CLIENT:

PROJECT:
10 UNIT TOWNHOUSE DEVELOPMENT

2222 CLARKE STREET
PORT MOODY

DRAWING TITLE:
LANDSCAPE DETAILS

DATE:	18.FEB.21	DRAWING NUMBER:
SCALE:	1:500	**L4**
DRAWN:		
DESIGN:		
CHKD:	PCM	**OF 4**

18121-6.ZIP

PMG PROJECT NUMBER: **18-121**

Multi-Family Sustainability Report Card

Purpose

The Sustainability Report Card recognizes that developers, builders, designers, and others proposing changes to the built environment have an important role in creating a sustainable community. Sustainability involves stewardship of land and environmental resources, as well as green building and a focus on design elements that bring people together and help communities flourish economically, socially, and culturally. Port Moody encourages innovative thinking in community design to achieve a more sustainable community.

To this end, the Report Card is a requirement for rezoning, development permit, and heritage alteration permit applications. The Report Card identifies performance measures based on community sustainability values: these measures are used to evaluate development proposals. The Report Card is intended to be a summary of overall project sustainability. It is a tool to be integrated with all other development approval requirements.

Process

There are six steps to follow in completing the Sustainability Report Card process:

1. Make a development inquiry to Development Services regarding your proposed rezoning, development permit, or heritage alteration permit. Staff will provide you with a hard copy of the Sustainability Report Card and provide a weblink to portmoody.ca/SRC where you can find a fillable PDF version of the Report Card.
2. Attend a pre-application meeting with City staff to discuss your proposal. The Planner will determine if the Sustainability Report Card is a document that must be submitted with your application.
3. If required, complete a Report Card by filling in the appropriate information that applies to your particular application and submit the completed Report Card (saved version of online fillable PDF or hard copy) to the appropriate City staff (sustainabilityreportcard@portmoody.ca or deliver to City Hall Planning Department at 100 Newport Drive), along with a completed land use application.
4. The Planner will review the Report Card for completeness and accuracy and forward to staff in various departments for feedback. The Planner will determine your preliminary score and discuss the results of the staff review with you. You will then have an opportunity to improve your score with respect to the sustainability of your proposal and resubmit an updated Report Card.
5. The Planner will make comments, determine your final score, and prepare the Project Report Card Summary. The Summary will be included in the land use reports that are distributed to the Advisory Design Panel, Community Planning Advisory Committee, and Council.
6. If your application is approved by Council, your final Report Card is maintained in the development file and a copy is provided to the City's Building Division.

Instructions

- Your Report Card must contain sufficient detail to ensure each measure can be evaluated. To do this, make reference to the appropriate plans, drawings, and reports that demonstrate how the performance measure is met.
- The relevance of the questions will depend on the nature and scope of your project, so not all questions will be applicable to all projects.
- Some measures are marked 'EARLY STAGE'. This indicates that these measures must be considered in the design phase as it is unlikely they can be added to a proposal later on.

Italicized words are in the Glossary at the back of this document.

- Similarly, some measures are marked 'BASELINE'. Although the Report Card is not a pass or fail test of development applications, it does set a minimum score to indicate the City's minimum expectations. Items labelled 'BASELINE' count toward a minimum score as they are considered to be low cost and readily achievable.
- Italicized terms are defined in the Glossary at the end of the Report Card document.
- Refer to the Resources section for links to Internet resources relevant to measures in the Report Card.

Scoring

- Performance measures are assigned weighted scores from 1 to 10 to indicate their significance based on: (1) level of difficulty to integrate into project design; (2) order-of-magnitude cost added to the project; (3) degree of effectiveness for increasing the overall project sustainability; (4) identified community priority in the Official Community Plan; and (5) level of urgency for Port Moody in terms of achieving community sustainability goals.
- City staff score the completed Report Card based on the principle of best achievable on each site for each performance measure. Where possible, points for achieving various means are indicated. In other cases, the number of means to achieve a performance measure may exceed the total points possible for an item. In this case, the Planner will make a fair assessment of the project's performance for this measure with respect to the conditions of the site as a percentage and translate this to the possible score.
- Only whole number scores will be assigned. This will be achieved by rounding to the nearest whole number. For example, if overall performance for a measure is deemed to be about 80 per cent and the possible score is out of 4, then a score of 3 points out of 4 will be assigned.
- The Report Card is an iterative process with the applicant. The applicant has an opportunity to comment and make changes to their proposal before the scores are considered final and shared with public advisory bodies and Council.
- Additional space is provided for the applicant to address innovations and constraints not captured elsewhere in the Report Card. These items are not scored, but are given specific mention on the Project Report Card Summary.
- Staff will review your completed Report Card and provide feedback before your project is scored to give you the opportunity to achieve the highest score possible.

Monitoring

In general, the information required from the applicant for the Sustainability Report Card is similar to the kind of information required for a typical development application. However, to ensure accountability, you can expect the City to request additional information, such as: photos of installed systems or products, design drawings, professional reports, copies of receipts, or other records that can be used to verify the implementation of the selected sustainability measures. We encourage you to provide as much information as possible to assist City staff in their review of your development proposal.

Public Information

The public may request a review of any completed Report Card related to a development application. Copies of the Report Card are maintained by the Planning Division. The Development Services Department makes Report Cards available following completion of the project.

Property and Applicant Information

Applicant	Telephone	Email
Jason Yoo	604-420-2233 ext.423	jason@maraarch.com
Registered Owner	Project Address	
1156038 B.C. Ltd.	2222 Clarke Street, Port Moody	
Proposed Use		
Multi Family Stacked Townhome		

Total Floorspace 912.4 m^2

CULTURAL SUSTAINABILITY SECTION *How will the project contribute to Port Moody's status as 'City of the Arts'?*

BASELINE + EARLY STAGE

Arts

Performance Measure Description and Scoring

C1 Project includes public art in publicly accessible or publicly owned space (3 points, +1 bonus point if a Public Art Consultant is used).

OR Project provides an in lieu financial contribution to the City's Public Art Reserve Fund (3 points).

See links in Resources under "Examples of Good Public Art".

Applicant Explanation and Reference to Plans, Drawings, and Reports

If **yes**, describe: Project provides an in lieu financial contribution to the city's Art Revenue Fund	**Staff Comments**
Public Art Consultant:	
Plan reference:	

Bonus Score 0 /1 **Score** 3 /3

CULTURAL SUSTAINABILITY SECTION *How will the project contribute to Port Moody's status as 'City of the Arts'?*

BASELINE

Arts

Performance Measure Description and Scoring

C2 Project supports Port Moody's desire to be a "City of the Arts" by integrating artistic design into the site or building form or functionality (2 points).

Examples:

- Creative stormwater management features.
- Creative interaction of the project with the public.
- Artistic panels in entry foyer.

Applicant Explanation and Reference to Plans, Drawings, and Reports

Describe: REFER TO NEXT PAGE FOR COMMENT.	**Staff Comments**
Plan reference: A100/A102	

Score 1 /2

C2 Arts Performance Measure Description and Scoring

Ground level, street oriented patio that is designed to be interactive with Clarke street.

Building Form is inspired the 2 architectural styles, Arts and Craft and Tudor' that are prevalent in Port Moody. Exterior colours are chosen to compliment neighbouring properties. 2units are adaptable to increase functionality for growing generation.

Entryway 'hut' structure is artistic and eye catching.

Project is designed to Chines Integrated Storm Water Management.
Creative Storm Water features include reviving the ditch with new plantation, over 400 sf of native shrub and flower planting, and an open-bottom culvert at greater expense.

CULTURAL SUSTAINABILITY SECTION *How will the project contribute to Port Moody's status as 'City of the Arts'?*

BASELINE FOR HRA + EARLY STAGE

Heritage

Performance Measure Description and Scoring

C3 Project includes reusing an existing heritage structure with heritage value through *heritage restoration* or *heritage rehabilitation* (4 points).

Where the preservation of a heritage structure in its original location cannot be accommodated, this may include re-location.

See Standards and Guidelines for the Conservation of Historic Places in Canada: historicplaces.ca

Applicant Explanation and Reference to Plans, Drawings, and Reports

Describe: N/A	**Staff Comments**
Plan reference:	

Score N/A **/4**

CULTURAL SUSTAINABILITY SECTION *How will the project contribute to Port Moody's status as 'City of the Arts'?*

EARLY STAGE

Heritage

Performance Measure Description and Scoring

C4 Project includes a *statement of significance* prepared by a heritage conservation specialist where potential heritage value is observed (2 points). Where warranted, project includes a heritage conservation plan prepared by a heritage conservation professional (+2 bonus points, where applicable).

See Standards and Guidelines for the Conservation of Historic Places in Canada: historicplaces.ca

Applicant Explanation and Reference to Plans, Drawings, and Reports

Report title: N/A	**Staff Comments**
Heritage Consultant:	

Bonus Score ____ **/2** **Score** N/A **/2**

CULTURAL SUSTAINABILITY SECTION *How will the project contribute to Port Moody's status as 'City of the Arts'?*

EARLY STAGE

Heritage

Performance Measure Description and Scoring

C5 Project salvages materials or artefacts from a historic place, or reuses materials or artefacts from architectural/landscape salvage in a manner which supports the authenticity of the site's *character-defining elements.*

Applicant Explanation and Reference to Plans, Drawings, and Reports

Details: N/A	**Staff Comments**
Plan reference:	

Score N/A **/3**

CULTURAL SUSTAINABILITY SECTION *How will the project contribute to Port Moody's status as 'City of the Arts'?*

EARLY STAGE

Arts

Performance Measure Description and Scoring

C6 Project designates space for the arts or creative enterprise to be retained for the lifetime of the project.
Ex. artist studio, gallery space, dance studio, indoor/outdoor theatre, live-work units, plaza, etc.

Applicant Explanation and Reference to Plans, Drawings, and Reports

100.8 (meters2) meters^2/ 1085 (feet2) feet^2	**Staff Comments**
Description of space: Units are designed with large dens or open space to allow 'Work from home ' and city's newly proposed zoning (in progress) for multi family units called 'Home based business with low impact' similar to 'Live-Work' concept. Covered amenity space is provided below Unit 104 which allows residents to utilize the amenity space even during rainy winter seasons. Also, Monetary Contribution to City's Artwork Reserve per 2015 Public Artwork Policy will be made.	

Score 2 **/4**

CULTURAL SUSTAINABILITY SECTION *How will the project contribute to Port Moody's status as 'City of the Arts'?*

Complete Community Elements

Performance Measure Description and Scoring

C7 Project improves the *streetscape* beyond minimum City requirements by integrating lasting creative elements and demonstrating effort to optimize the project's *beautification* impact.

Examples:

- Restores the frontage of an existing building in Historic Moody Centre.
- Proposes artistic paving treatments in the public realm.
- Adds creativity to functional elements of the *streetscape*.
- Benches, bike rack, planter, lighting, etc. upgrades.

Applicant Explanation and Reference to Plans, Drawings, and Reports

Details: REFER TO NEXT PAGE FOR COMMENT.	**Staff Comments**
Plan reference: A112 & Landscape set L1-L4	

Score 2 **/2**

CULTURAL SUSTAINABILITY SECTION *How will the project contribute to Port Moody's status as 'City of the Arts'?*

Heritage

Performance Measure Description and Scoring

C8 Project will apply to be added to the City's Heritage Register.

Applicant Explanation and Reference to Plans, Drawings, and Reports

◯ Yes ◯ No ◉ N/A	**Staff Comments**
Details:	

Score N/A **/3**

C7 Performance Measure Description and Scoring

The building concept relates closely to Port Moody's heritage Tudor and Arts&Crafts style to create harmonious street scape with existing heritage buildings nearby.

Street scape is further upgraded with planters and low shrubs that provides level of privacy for users yet still offer visual connection and interest to the city street. In addition, streets light will be replaced with L.E.D., existing driveway letdown with be replaced with sidewalk & curb/gutter, 3m wide cast concrete sidewalk for future bike lane, 1.5m wide sodded front boulevard with street trees, and traffic on Clark street will be improved as vehicle entrance is moved to Vintner Street.

On Vintner street, new paving, curb gutter will be proposed and new landscape in the ditch, for much better street appeal.

Two units at ground level have been designed as adaptable suites.

These units could be used for Work and Live.

CULTURAL SUSTAINABILITY SECTION *How will the project contribute to Port Moody's status as 'City of the Arts'?*

Innovation

Performance Measure Description and Scoring

C9 Cultural sustainability aspects not captured above.

Applicant Explanation and Reference to Plans, Drawings, and Reports

Innovative design captures higher density, keeping heritage building facade and added street appeal.	**Staff Comments**

CULTURAL SUSTAINABILITY SECTION *How will the project contribute to Port Moody's status as 'City of the Arts'?*

Constraints

Performance Measure Description and Scoring

C10 Unique site aspects that limit cultural sustainability achievement.

Applicant Explanation and Reference to Plans, Drawings, and Reports

Site has size limitations as it can not be combined with neighbouring. properties, which have a heritage status or a creek. There is a ditch on north side of the property, that requires Riparian set back of 5m. Inspire of these, the innovative stack home design will provide more affordable homes with great design.	**Staff Comments**

Cultural Sustainability Score Summary

	Score
Total Cultural Pillar Points (Total Points Available – Not Including Bonus Points)	23 Total
Total Cultural Points Not Applicable (Total Points for Items Not Relevant to this Application)	12 n/a
Maximum Achievable Score (Total Cultural Pillar Points Minus Total Cultural Points Not Applicable)	11 Maximum
Cultural Pillar Minimum Score (Sum of Applicable Baseline Items)	5 Cultural Baseline
Total Points Achieved (Total Points Achieved for Applicable Items for this Application)	8 Total Cultural Points
Cultural Pillar Score (Total Points Achieved/Maximum Achievable Score)	8 Total Cultural Points / 11 Max — 73 % Percent

ECONOMIC SUSTAINABILITY SECTION *How will the project contribute to a stronger local economy?*

BASELINE

Land Use/Employment

Performance Measure Description and Scoring

EC1 Supports walking to shops and services by improving the circulation and connectivity of the site to the retail shops and services of the relevant neighbourhood centre.

See Map 1: Overall Land Use in the City's Official Community Plan: Map 1: Overall Land Use Plan

Applicant Explanation and Reference to Plans, Drawings, and Reports

Existing:	**Staff Comments**
Use(s): Residential	
Number of jobs on-site relating to this use in operation: 0	
Proposed:	
Use(s): Multi Family with potential of 'Work from Home' and 'Home based business with low impact'	
Number of jobs estimate: 8	
Assumptions: City will pass the new zoning for 'home based business with low impact'	

Score 2 **/3**

ECONOMIC SUSTAINABILITY SECTION *How will the project contribute to a stronger local economy?*

BASELINE + EARLY STAGE

Land Use

Performance Measure Description and Scoring

EC2 Provides more intensive use of land to the allowable housing density that supports local businesses.

Applicant Explanation and Reference to Plans, Drawings, and Reports

Describe the diversification and how it is appropriate to this particular location:	**Staff Comments**
More number of units are proposed on a single family lot, creating a sustainable living and the increase density will allow increased customer flow at local businesses. The project also satiesfy the need of ever increasing housing demand.	

Score 1 **/1**

ECONOMIC SUSTAINABILITY SECTION *How will the project contribute to a stronger local economy?*

Land Use/Employment

Performance Measure Description and Scoring

BASELINE + EARLY STAGE

EC3 Results in net increase in the City's property tax base.

See Map 1: Overall Land Use in the City's Official Community Plan: Map 1: Overall Land Use Plan

Applicant Explanation and Reference to Plans, Drawings, and Reports

Existing:	**Staff Comments**
Building type: Single Family Dwelling	
FSR: NA	
Proposed:	
Building type: Multi Family Stacked Townhome	
FSR: 1.24	

Score 3 /3

ECONOMIC SUSTAINABILITY SECTION *How will the project contribute to a stronger local economy?*

Land Use

Performance Measure Description and Scoring

EARLY STAGE

EC4 Project redevelops and rehabilitates a *brownfield* site.

Applicant Explanation and Reference to Plans, Drawings, and Reports

Describe:	**Staff Comments**
N/A	

Score N/A /3

ECONOMIC SUSTAINABILITY SECTION *How will the project contribute to a stronger local economy?*

Innovation

Performance Measure Description and Scoring

EC5 Economic sustainability aspects not captured above.

Applicant Explanation and Reference to Plans, Drawings, and Reports

Increased taxes for overall development. Increased revenue to City due to business licenses needed by home based businesses. Affordable housing due to smaller foot print of units. Accessible units for growing-older population	**Staff Comments**

ECONOMIC SUSTAINABILITY SECTION *How will the project contribute to a stronger local economy?*

Constraints

Performance Measure Description and Scoring

EC6 Unique site aspects that limit economic sustainability achievement.

Applicant Explanation and Reference to Plans, Drawings, and Reports

In spite of size limitations, property will be developed to full sustainability achievement allowed by the OCP.	**Staff Comments**

Economic Sustainability Score Summary

	Score
Total Economic Pillar Points (Total Points Available – Not Including Bonus Points)	10 Total
Total Economic Points Not Applicable (Total Points for Items Not Relevant to this Application)	3 n/a
Maximum Achievable Score (Total Economic Pillar Points Minus Total Economic Points Not Applicable)	7 Maximum
Economic Pillar Minimum Score (Sum of Applicable Baseline Items)	7 Economic Baseline
Total Points Achieved (Total Points Achieved for Applicable Items for this Application)	6 Total Economic Points
Economic Pillar Score (Total Points Achieved/Maximum Achievable Score)	6 Total Economic Points / 7 Max — 86 % Percent

ENVIRONMENTAL SUSTAINABILITY SECTION *How well does the project minimize the demands on the environment?*

BASELINE + EARLY STAGE

Site Context | Ecology

Performance Measure Description and Scoring

EN1 Project protects and enhances an Environmentally Sensitive Area (ESA) as designated on Map 13 in the City's Official Community Plan, i.e. provides positive net benefit.

See Map 13: Environmentally Sensitive Areas and Appendix 2: Development Permit Area Guidelines in the Official Community Plan.

Applicant Explanation and Reference to Plans, Drawings, and Reports

Type of ESA:	**Staff Comments**
◯ High ESA ◯ Medium ESA ◯ Low ESA ◯ 30m Stream Buffer (High Value) ◯ Special Feature (High Value)	
Features/Species of Value: N/A	
Means of Protection: ◯ Covenant ◯ Dedication ◯ Monitoring	
◯ Other:	
Means of Improvement of ESA: N/A	

Score N/A **/4**

ENVIRONMENTAL SUSTAINABILITY SECTION *How well does the project minimize the demands on the environment?*

Site Context | Ecology

Performance Measure Description and Scoring

BASELINE

EN2 Project provides bird-friendly development through landscaping that provides habitat to native species and building design that reduces bird collisions.

See Vancouver Bird Strategy

Applicant Explanation and Reference to Plans, Drawings, and Reports

List all elements that reduce the impact that urbanization has on birds for this project:	**Staff Comments**
Landscaping finish includes assortment of shrubs that support bird life with persistent winter fruits such as : Oregon Grape, Currant, Rose Hips, Salal and Huckleberry. Existing trees on Clarke Street, and added new tall trees on Vintner Street will provide hindrance for bird-window collisions. Lawn on north side near ditch on property will be replaced by native trees, shrubs, plants and flowers, removing any need for pesticides and chemicals for betterment of wildlife. Rooftop patios will encourage residents to create garden for wild life	

Score 2 **/3**

ENVIRONMENTAL SUSTAINABILITY SECTION *How well does the project minimize the demands on the environment?*

Site Context | Ecology

Performance Measure Description and Scoring

BASELINE

EN3 Design of outdoor lighting minimizes the harmful effects of *light pollution* with technology that ensures lighting is:

- Only on when needed
- Only lights the area that needs it
- No brighter than necessary
- Minimizes blue light emissions
- Fully shielded (pointing downward)

See International Dark Sky Association for Dark Sky Friendly Lighting.

Applicant Explanation and Reference to Plans, Drawings, and Reports

Describe the lighting plan for the site and its dark sky friendly features:	**Staff Comments**
Outdoor lighting design will include criterias below: 1. Lights up only when it's dark 2. Lights are provided only where it's necessary (walkways and amenity) 3. Lights are downward direction with fully shielded from sides to avoid light pollution. 4. All lights will be LED for energy rating and minimize blue light emissions.	

Score 2 **/3**

ENVIRONMENTAL SUSTAINABILITY SECTION *How well does the project minimize the demands on the environment?*

Site | Air Quality – Alternative Transportation

Performance Measure Description and Scoring

BASELINE + EARLY STAGE

EN4 Project provides alternative transportation facilities for user groups of each land use type, which contributes to reducing Greenhouse Gas Emissions from this development.

Applicant Explanation and Reference to Plans, Drawings, and Reports

Check all that apply:	Staff Comments
☑ Short-Term Bicycle parking ☑ Long-Term Bicycle parking	
☐ End-of-Trip Bicycle Facilities:	
☐ Bike share and assigned parking ☐ Co-op vehicle and assigned parking space provision ☑ *Electric Vehicle* plug-ins and designated spaces[1]	
Plan references: A117	

Score 2 /3

ENVIRONMENTAL SUSTAINABILITY SECTION *How well does the project minimize the demands on the environment?*

Site | Air Quality – Alternative Transportation

Performance Measure Description and Scoring

BASELINE + EARLY STAGE

EN5 Project incorporates measures to support pedestrians and cyclists.

Applicant Explanation and Reference to Plans, Drawings, and Reports

Check all that apply:	Staff Comments
☑ Connects to existing pedestrian/cycling routes and priority destinations ☑ Improves local pedestrian routes, local bike networks/trails ☑ Safe, secure, accessible, and sustainable footpaths ☑ Pedestrian clearway sufficient to accommodate pedestrian flow ☑ Covered outdoor waiting areas, overhangs, or awnings ☑ Pedestrian scale lighting ☑ Pedestrian/bike-only zones	
☑ Other:	
Site circulation plan: A112	
Other plan references: Landscape L1-L4	

Developer will be paying to city for 3m wide bike lane construction, 1.5 m wide sodded front boulevard with street trees. Developer is required to replace the existing driveway letdown with sidewalk and curb & gutter.

Score 3 /3

1 See BC Hydro's *Electric Vehicle* Charging Infrastructure Deployment Guidelines.

ENVIRONMENTAL SUSTAINABILITY SECTION *How well does the project minimize the demands on the environment?*

BASELINE + EARLY STAGE

Building | Waste Storage Space

Performance Measure Description and Scoring

EN6 Project allocates sufficient and accessible recycling and garbage storage space in multi-family and commercial buildings and complexes compatible with City of Port Moody recycling, green waste, and garbage services.

Target 1: Metro Vancouver's Technical Specifications for Recycling and Garbage Amenities in Multi-family and Commercial Developments.

Target 2: Design provides safe and universally accessible access in a secure common area.

Applicant Explanation and Reference to Plans, Drawings, and Reports

Total residential recycling, garbage, and green waste space proposed: Recycling: 5.05 m^2 Garbage: 5.05 m^2 Green Waste: 5.04 m^2	**Staff Comments**
Total commercial recycling, garbage, and green waste space proposed: Recycling: m^2 Garbage: m^2 Green Waste: m^2	
Details regarding design for safety, security, and accessibility: Garbage enclosure is fully within the secured underground parking lot. Enclosure will have all the bins for recycling, green waste and garbage.	

Score 2 **/2**

ENVIRONMENTAL SUSTAINABILITY SECTION *How well does the project minimize the demands on the environment?*

BASELINE

Site | Sustainable Landscaping – *Urban Forestry*

Performance Measure Description and Scoring

EN7 Project protects and enhances the *urban forest*, prioritizing native tree species.

See City of Port Moody Tree Protection Bylaw

Applicant Explanation and Reference to Plans, Drawings, and Reports

Check all that apply: ☑ Existing mature trees protected (# 2) ☑ Replacement tree ratio (2 : 1) • Native tree species planted on site (# 6) • Native tree species planted off site (# 2) ☑ Protected/natural park areas added on site (% of total site area: 11 %)	**Staff Comments** No on-site trees being protected. Existing trees that are to be protected are City trees.
Arborist report: Provided.	

Score 2 **/3**

ENVIRONMENTAL SUSTAINABILITY SECTION *How well does the project minimize the demands on the environment?*

BASELINE

Site | Sustainable Landscaping – Habitat

Performance Measure Description and Scoring

EN8 Project preserves, enhances, and/or compensates for site ecology on site (4 points). Off-site compensation may be considered in some cases, in accordance with all other City regulations and supported by staff (3 points).

Compensation in the form of a financial contribution to the City toward approved public restoration, rehabilitation, or enhancement projects may be considered (2 points).

See City of Port Moody Naturescape Policy 13-6410-03.

See also Invasive Plant Council of BC

Applicant Explanation and Reference to Plans, Drawings, and Reports

Check all that apply:	Staff Comments
☐ Salvage replanting ☐ Reduction to existing impervious area ____ m^2	
☐ Removal of *invasive plant species* Names:	
☑ Native/"naturescape" landscaping ☑ Watercourse daylighting ☑ Riparian area restoration	
☑ Other measures taken to enhance habitat or to compensate for habitat loss: REFER TO NEXT PAGE FOR COMMENT.	

Score 4 **/4**

EN8 Site | Sustainable Landscaping – Habitat

Performance Measure Description and Scoring

Barsanti Environmental Services, QP, were retained to design the Riparian planting for SPEA enhancement. Their claim in their report which was given to the city is that, “Riparian planting at ditch and bank will help to enhance water quality through shading and insect and litter drop”. and “” As these plants mature, they will provide water quality enhancement through temperature modulation by shading in summer as well as nutrients through litter and insect drop. A secondary benefit of the plants in this list is the development of food and nesting opportunities for song birds” . Proposed landscape will add 8 trees and 500 shrubs.

Water course will be day-lit by replacing existing steel pipe culvert with an open bottom concrete culvert for enhanced in-stream nutrients

Added Storm Detention Tank will also enhance ecology.

ENVIRONMENTAL SUSTAINABILITY SECTION *How well does the project minimize the demands on the environment?*

BASELINE

Site | Sustainable Landscaping – Stormwater

Performance Measure Description and Scoring

EN9 Project provides for stormwater retention and evaporation, and groundwater protection in the site stormwater management plan.

Targets:

1. Stormwater retained on-site to the same level of annual volume allowable under pre-development conditions.
2. Maximum allowable annual run-off volume is no more than 50% of the total average annual rainfall depth.
3. Remove 80% of total suspended solids based on the post-development imperviousness.

(3 points if all three targets are achieved)

See link in References to Metro Vancouver's Stormwater Source Control Guidelines

Applicant Explanation and Reference to Plans, Drawings, and Reports

Target(s) reached: **1** **2** **(3)**	**Staff Comments**
Means of achieving (check all that apply): ☑ Absorbent landscape ☐ Roof downspout disconnection ☑ Infiltration swales and/or trenches ☑ Sub-surface chambers/detention tanks ☑ Rain gardens with native plantings ☐ Rainwater harvesting ☐ Tree well structures ☐ Green roof/wall ☐ Water quality structures ☑ Pervious paving ☑ Daylighted streams ☐ Constructed wetlands	
☑ Other: Max.Allowable runoff is no more than 50%. Storm discharge point is secured within the culvert to ensure ground water protection	
References to plans and documents: L1/ Target reached 3 Suspended solids will be removed as water travels to or through ditch, and through Riparian Planting	

Score 2 **/3**

ENVIRONMENTAL SUSTAINABILITY SECTION *How well does the project minimize the demands on the environment?*

Site | Sustainable Landscaping – Water Conservation

Performance Measure Description and Scoring

BASELINE

EN10 Project reduces potable water use for irrigation.

2 points = 5 actions (from "check all that apply" list)

1 point = 3 actions (from "check all that apply" list)

Applicant Explanation and Reference to Plans, Drawings, and Reports

Check all that apply:	**Staff Comments**
☑ Drought-tolerant landscaping *(xeriscaping)* with native species ☑ Low-maintenance lawn alternatives ☐ Non-water dependent materials/features for ground cover treatment ☑ Irrigation system with central control and rain sensors ☐ Captured rainwater irrigation system, e.g. using cisterns/rain barrels	
☐ Other:	
Plan reference:	

Score 1 **/2**

ENVIRONMENTAL SUSTAINABILITY SECTION *How well does the project minimize the demands on the environment?*

Site Context | Ecology

Performance Measure Description and Scoring

EARLY STAGE

EN11 Project is sited and designed in order to facilitate and improve wildlife movement and access, particularly within known and suspected *habitat corridors.*

Ex. Deer, bears, frogs, salmon, etc. (depending on site location).

Applicant Explanation and Reference to Plans, Drawings, and Reports

Species supported: Birds, Fish	**Staff Comments**
Means of supporting: Native plants and shrubs, suggested by the QP, in Ditch and RPEA will help in the development of food and nesting opportunities for song birds" These plants will also help to enhance water quality through shading (temperature modulation) and insect and litter drop, as instream nutrients.	
Environmental assessment or site plan reference:	

Score 2 **/2**

ENVIRONMENTAL SUSTAINABILITY SECTION *How well does the project minimize the demands on the environment?*

Building | Green Building Rating

Performance Measure Description and Scoring

EARLY STAGE

EN12 Project will achieve a recognized industry standard for sustainable design.

Applicant Explanation and Reference to Plans, Drawings, and Reports

☐ **Built Green Level:** ☐ • Bronze (2 points) • Silver (5 points) • Gold (8 points) • Platinum (10 points) ☐ **LEED Level:** ☐ • Certified (2 points) • Silver (5 points) • Gold (8 points) • Platinum (10 points) ☐ **Canadian Passive House Institute** (10 points) ☐ **Living Future Institute** • Living Building Certification (10 points) • Petal Certification (10 points) • Net Zero Energy Certification (10 points)	**Staff Comments**
☐ Other:	

Score 0 **/10**

ENVIRONMENTAL SUSTAINABILITY SECTION *How well does the project minimize the demands on the environment?*

Building | Alternative/Renewable Energy

Performance Measure Description and Scoring

EARLY STAGE

EN13 Project provides local, low-carbon energy systems, such as geo-exchange, heat recovery ventilation, solar or district energy.

Applicant Explanation and Reference to Plans, Drawings, and Reports

Details: Heat Recover Ventilation will be provided. Windows on south and west sides will be low E and Tinted for lesser heat gain in summer and lesser heat loss in winter. There is no natural gas used in the project for a better carbon print.	**Staff Comments**
Specify % of energy generated:	

Score 3 **/4**

ENVIRONMENTAL SUSTAINABILITY SECTION *How well does the project minimize the demands on the environment?*

Building | Energy Reduction and Indoor Climate

Performance Measure Description and Scoring

EARLY STAGE

EN14 Building architecture employs *passive design* strategies appropriate to the local climate to reduce energy use and enhance occupant comfort.

Examples:

- Site design and building massing minimizes east and west exposures to avoid unwanted solar gains.
- Limit windows to 50% of any façade, taking into account other livability and aesthetic criteria.
- Use heat-recovery ventilation during heating season only, and design for natural ventilation and cooling by natural ventilation throughout the rest of the year.
- See City of Vancouver Passive Design Toolkit for Large Buildings for other examples.

Applicant Explanation and Reference to Plans, Drawings, and Reports

	Staff Comments
(●) Yes ( ) No	
Key *passive design* building elements: Windows on East and West facade are less than 50% of facade to minims heat gain or loss. HRV system in place to natural, heat efficient, ventilation.Windows on south and West face will be Low E and tinted for comfort and heat gain/loss. All heat will be Electrical. All appliances high Energy. Patio deck doors have roof overhang for sun shade. Windows will be provided with interior shades.Owners will have option to get 2 air-conditions (in wall) installed in their choice rooms. Programmable thermostats to reduce heat waste.	

Score 2 **/3**

ENVIRONMENTAL SUSTAINABILITY SECTION *How well does the project minimize the demands on the environment?*

Smart Technology

Performance Measure Description and Scoring

EARLY STAGE

EN15 Project uses *smart technology* to optimize sustainable use of resources.

Ex. Automated lighting, shading, HVAC, energy/water consumption, security, etc.

Applicant Explanation and Reference to Plans, Drawings, and Reports

	Staff Comments
Details: Automated lighting for walkways, unit entrances and outdoor amenity. Automated programmable thermostats will prevent unwanted usage. Motion sensor lights and video monitoring for security. FOB controlled entrances, and common area, elevator for security.	

Score 2 **/2**

ENVIRONMENTAL SUSTAINABILITY SECTION *How well does the project minimize the demands on the environment?*

Site | Sustainable Landscaping

Performance Measure Description and Scoring

EN16 Project provides or designates space for growing food in private or common areas including on-site composting to support the gardening activities.

Applicant Explanation and Reference to Plans, Drawings, and Reports

Details:	Staff Comments
There is a community vegetable and herb garden provided in the court yard. Attention was given to its location for maximum sun exposure. Roof Top patios and large decks will also allow private areas for food growing	
Landscape Plan Reference: L1	

Score 2 **/2**

ENVIRONMENTAL SUSTAINABILITY SECTION *How well does the project minimize the demands on the environment?*

Building Energy Performance

Performance Measure Description and Scoring

EN17 Building design incorporates Port Moody Building Energy Performance Design Guidelines.

Applicant Explanation and Reference to Plans, Drawings, and Reports

BC Energy Step Code:	Staff Comments
○ Tier 1 (1 point) ○ Tier 2 (2 points) ◉ Tier 3 (3 points) ○ Tier 4 (4 points) *Attach a copy of Port Moody Building Energy Performance Design Guidelines Checklist.*	

Score 3 **/4**

ENVIRONMENTAL SUSTAINABILITY SECTION *How well does the project minimize the demands on the environment?*

Stormwater and Ecology/Water Conservation

Performance Measure Description and Scoring

BONUS

EN18 Project incorporates landscaped roofs or living walls that also provide food/habitat for native species.

OR

Project includes on-site grey water reuse.

2 BONUS POINTS EACH

Applicant Explanation and Reference to Plans, Drawings, and Reports

Details:	**Staff Comments**
Landscape includes shrubs that support bird life with persistent fruits such as Oregon grape, currant, rose hips, salad, and huckleberry Barsanti Environmental Services, QP, designed the Riparian planting. They selected all native plants that help development of food and nesting opportunities for song birds". Our proposed landscape will add 8 trees and 500 shrubs.	Question focuses on landscaped roofs and living walls.

Bonus Score 0 **/2**

ENVIRONMENTAL SUSTAINABILITY SECTION *How well does the project minimize the demands on the environment?*

Environmental Monitoring

Performance Measure Description and Scoring

BONUS

EN19 Project contracts with an Environmental Monitor(s) to oversee implementation of environmental sustainability measures, i.e. sustainable landscaping measures.

OR

Project employs an energy efficiency consultant.

2 BONUS POINTS EACH

Applicant Explanation and Reference to Plans, Drawings, and Reports

Details of Work Overseen/Contribution:	**Staff Comments**
Project contracts with landscape architect for sustainable landscaping measures. Project also contracts with e QEP Specialist to oversee environmental measures.	

Bonus Score 2 **/2**

ENVIRONMENTAL SUSTAINABILITY SECTION *How well does the project minimize the demands on the environment?*

Innovation

Performance Measure Description and Scoring

EN20 Environmental sustainability aspects not captured above.

Applicant Explanation and Reference to Plans, Drawings, and Reports

Restoration of Ditch and RPEA area will provide community and environmental benefit.	**Staff Comments**

ENVIRONMENTAL SUSTAINABILITY SECTION *How well does the project minimize the demands on the environment?*

Constraints

Performance Measure Description and Scoring

EN21 Unique site aspects that limit environmental sustainability achievement.

Applicant Explanation and Reference to Plans, Drawings, and Reports

N/A	**Staff Comments**

Environmental Sustainability Score Summary

	Score
Total Environmental Pillar Points (Total Points Available – Not Including Bonus Points)	57 Total
Total Environmental Points Not Applicable (Total Points for Items Not Relevant to this Application)	4 n/a
Maximum Achievable Score (Total Environmental Pillar Points Minus Total Environmental Points Not Applicable)	53 Maximum
Environmental Pillar Minimum Score (Sum of Applicable Baseline Items)	26 Enviro Baseline
Total Points Achieved (Total Points Achieved for Applicable Items for this Application)	36 Total Environmental Points
Environmental Pillar Score (Total Points Achieved/Maximum Achievable Score)	36 Total Environmental Points / 57 Max — 63 % Percent

SOCIAL SUSTAINABILITY SECTION *How well does the project address community health and wellness?*

Accessibility

Performance Measure Description and Scoring

S1 For single-storey units in multi-family residential development:
(a) a minimum of 40% are adaptable units (2 points) and, of those units,
(b) accessible unit(s) providing full wheelchair accessibility are provided (2 points).

Project incorporates adaptable and accessible design features in the site/building circulation and bathrooms in all other uses (2 points).

Applicant Explanation and Reference to Plans, Drawings, and Reports

Residential % of Adaptable Units: 100	**Staff Comments**
Details: 2 of the 2 single storey units have accessible bathroom/circulation design.	
Number of Accessible Units: 2	
Details:	
Residential Site/Common Areas and Commercial/Industrial/ Institutional Uses: Residential	
Details: Project incorporates accessible design features the site/building circulation. Elevator access to parkade and both levels of court yard allows full site circulation for occupants of adaptable units.	

Score 6 **/6**

SOCIAL SUSTAINABILITY SECTION *How well does the project address community health and wellness?*

Complete Community Design

Performance Measure Description and Scoring

BASELINE + EARLY STAGE

S2 Project design is adapted to minimize shadow or privacy impacts to adjacent buildings.

AND/OR

Project design integrates the results of a *viewscape* study with respect to water and mountain views.

Applicant Explanation and Reference to Plans, Drawings, and Reports

Details:	Staff Comments
Project minimizes privacy impacts with minimal use of windows on West & East facade of the building that faces the interior lot line of the property. Proposed roof deck has lower roofline that allows for better views towards the inlet and mountains. Windows for living space on north units are oriented for best view to water, while those on south side are best oriented for mountain view.	
Plan/document references: A118-121	

Score 1 **/1**

SOCIAL SUSTAINABILITY SECTION *How well does the project address community health and wellness?*

Housing Diversity

Performance Measure Description and Scoring

EARLY STAGE

S3 Development includes a mix of housing types.

Applicant Explanation and Reference to Plans, Drawings, and Reports

	Number of Units	Staff Comments
Live-work units	8	Does not propose true live-work units or apartment units.
Ground-oriented units	3	
Apartment units	5	

Score 1 **/3**

SOCIAL SUSTAINABILITY SECTION *How well does the project address community health and wellness?*

EARLY STAGE

Housing Diversity

Performance Measure Description and Scoring

S4 Project includes a range of unit sizes for a variety of household types, and the design is flexible to allow for changes, i.e. den can easily become another bedroom.

Targets:

2-bedroom minimum 25% of units
3-bedroom minimum 10% of units

Applicant Explanation and Reference to Plans, Drawings, and Reports

	Number of Units	% of Units	
Bachelor/1-bedroom			
2-bedroom	7	88	(1 pt)
3+ -bedroom	1	12	(2 pts)

Flexible design features:

3 units have extra den which allows for flexible uses such as home office, media space, extra bedroom.

Units are designed with large dens or open space to allow 'Work from home ' and city's newly proposed zoning (in progress) for multi family units called 'Home based business with low impact' similar to 'Live-Work' concept.

Staff Comments

Score 3 **/3**

SOCIAL SUSTAINABILITY SECTION *How well does the project address community health and wellness?*

EARLY STAGE

Housing Affordability

Performance Measure Description and Scoring

S5 Project provides new purpose-built *market rental housing* (2 points) or affordable *market rental housing* (3 points) or *non-market rental housing* (4 points).

OR

Development contributes to the City's Affordable Housing Reserve Fund in lieu of provision of affordable housing (2 points).

Applicant Explanation and Reference to Plans, Drawings, and Reports

Types: Rental

Description:
REFER TO NEXT PAGE FOR COMMENT.

% of total housing units: 25 %

Plan reference:

Staff Comments

No Housing Agreement for "market rental" units

Score 2 **/4**

S5 Housing Affordability

Developer will keep minimum 2 units for rental purpose.
Project provides opportunity to those who need a town house with direct access to outdoors, but can not afford a regular town house due to cost.
A part of the general amenity fees that the developer pays will be going towards the affordable housing.

SOCIAL SUSTAINABILITY SECTION *How well does the project address community health and wellness?*

EARLY STAGE

Amenities

Performance Measure Description and Scoring

S6 Project provides voluntary public amenities.

Examples:

- Child care facility
- Space for growing food
- Child play areas
- Gathering place/space
- Park/greenspace
- Public contribution in lieu (CACs), i.e., school, library, arts, etc.

(5 Points = any approved option)

Applicant Explanation and Reference to Plans, Drawings, and Reports

Details: 1. Common amenity at ground level 2. Private decks and roof decks 3. Park / Greenscape 4. Public contribution in lieu (CACs) ie. school, library, arts, etc. 5. Community veg and herb garden for growing food. 6. Street Appeal of Riparian planting on Vintner Street and Restoration of the offsite Ditch on North will provide community and Environment Benefit.	**Staff Comments** Project committed to providing CACs
Plan reference: A112, Landscape set.	

Score 5 /5

SOCIAL SUSTAINABILITY SECTION *How well does the project address community health and wellness?*

Amenities

Performance Measure Description and Scoring

EARLY STAGE

S7 Project provides voluntary private amenities.

Examples:

- Accessible green roof
- Communal garden
- Dog runs
- Play areas
- Social gathering place

(1 point per approved amenity item – maximum of 3 points)

Applicant Explanation and Reference to Plans, Drawings, and Reports

Details:	Staff Comments
Common amenity space with seating equipment at ground level. Roof top patios and top floor decks provide green space planting Communal garden, Riparian planting, trees, and Vegetable Garden. Communal covered amenity space for inside/outside use in all seasons for kids play or social gathering. Play area for kids, and social gathering, in court yard is large and much more than that required by code. Affordable home with direct access to outdoors is pet owners dream.	
Plan reference: A112, Landscape set	

Score 2 **/3**

SOCIAL SUSTAINABILITY SECTION *How well does the project address community health and wellness?*

Inclusive Community

Performance Measure Description and Scoring

EARLY STAGE

S8 The proposal supports aging-in-place with adult care, assisted living space, and/or independent senior living space.

Applicant Explanation and Reference to Plans, Drawings, and Reports

Details:	Staff Comments
2 Accessible units are proposed at ground level. Elevator provided for older occupants ease. All units have a 2nd bedroom and bathroom for live-in help Project is ideal for seniors, downsizes, people with pets, young couples and families, as well as ‘‘Home based business with low impact”.	

Score 2 **/4**

SOCIAL SUSTAINABILITY SECTION *How well does the project address community health and wellness?*

EARLY STAGE

Community Building

Performance Measure Description and Scoring

S9 Project provides *urban vitalization* by involving land owners and occupants, community groups, and end user groups who may be affected by the proposal in the planning process to identify and showcase Port Moody's unique assets, i.e. goes above and beyond standard notification and consultation.

Examples:

- Host a community-building workshop with the neighbourhood at the time of a project's inception to determine values and identify unique assets to leverage through design.

Staff will advise on notification requirements and appropriate stakeholder consultation

Applicant Explanation and Reference to Plans, Drawings, and Reports

Please identify stakeholders and explain their involvement: A neighbour consultation meeting was held during previous application with almost identical massing and design and full public support was evident for the project.	**Staff Comments**
Identify actions taken in response to stakeholder input: A website was set up for public input prior to 3rd reading. Comments from neighbourhood were all positive. This can be redone at the advice of city .	
Plan references:	

Score 3 **/4**

SOCIAL SUSTAINABILITY SECTION *How well does the project address community health and wellness?*

Safety

Performance Measure Description and Scoring

S10 The design of the site incorporates *Crime Prevention Through Environmental Design* principles *(CPTED).*

Applicant Explanation and Reference to Plans, Drawings, and Reports

Please explain:	Staff Comments
CPTED principles are incorporated into landscape design. -Shrubs and plants are kept below eye level -Lower branches of trees kept up above the eye level -Site lighting and open sight-lines for pedestrian pathways -Parking is secured with gates at all times -Common amenity is visible from all units and will be well-lit	
Plan references: A-112, Landscape set.	

Score 1 **/1**

SOCIAL SUSTAINABILITY SECTION *How well does the project address community health and wellness?*

Education and Awareness

Performance Measure Description and Scoring

S11 Project provides education and awareness of the sustainable features of the project for owners/occupants.

Examples:

- Document is given to new owners at time of sale, covenant on title, inclusion/protection of features in strata bylaws
- Signage/display/art recognizing design, etc.

Applicant Explanation and Reference to Plans, Drawings, and Reports

Describe:	Staff Comments
Purchases will get a write up on project explaining benefit of building design with sustainability	

Score 1 **/1**

SOCIAL SUSTAINABILITY SECTION *How well does the project address community health and wellness?*

Innovation

Performance Measure Description and Scoring

S12 Social sustainability aspects not captured above.

Applicant Explanation and Reference to Plans, Drawings, and Reports

Street facing units will be ideal for 'Home Base Business with low Impact' eg Massage Therapist, Aqua Puncture, Psycologist, Physio therapist, Hair Stylist, Therapists, Fortune tellers. Project provides more than 2 Bike Storage per unit for health conscious owners.	**Staff Comments**

SOCIAL SUSTAINABILITY SECTION *How well does the project address community health and wellness?*

Constraints

Performance Measure Description and Scoring

S13 Unique site aspects that limit social sustainability achievement.

Applicant Explanation and Reference to Plans, Drawings, and Reports

It is a small site. Site could not be combined with either neighbour as one neighbour has heritage property and other has a creek. Inspire of this limitation, we believe the end product and its design is perfect for the target owner who could a senior, downsizer, a pet lover, young couple , a family, or a person working from home or an owner of 'home based business with low impact'.	**Staff Comments**

Social Sustainability Score Summary

	Score
Total Social Pillar Points (Total Points Available – Not Including Bonus Points)	35 Total
Total Social Points Not Applicable (Total Points for Items Not Relevant to this Application)	0 n/a
Maximum Achievable Score (Total Social Pillar Points Minus Total Social Points Not Applicable)	35 Maximum
Social Pillar Minimum Score (Sum of Applicable Baseline Items)	7 Social Baseline
Total Points Achieved (Total Points Achieved for Applicable Items for this Application)	27 Total Social Points
Social Pillar Score (Total Points Achieved/Maximum Achievable Score)	27 Total Social Points / 35 Max 77 Percent %

Project Report Card Summary
FOR CITY USE ONLY – TO BE FILLED OUT BY THE PLANNER

Project Address/Name:	File No:

PROJECT SCORE SUMMARY	Cultural	Economic	Environmental	Social
Total Pillar Points Available	**23**	10	**57**	**35**
Sum Of Items Not Applicable	Cultural na: 12	Economic na: 3	Enviro na: 4	Social na: 0
Maximum Achievable Score (Total Pillar Points – Sum of Items N/A)	Maximum Cultural Achievable: 11	Maximum Economic Achievable: 7	Maximum Enviro Achievable: 53	Maximum Social Achievable: 35
Minimum Score (Sum of Applicable Baseline Items)	Minimum Cultural Score: 5	Minimum Economic Score: 7	Minimum Enviro Score: 26	Minimum Social Score: 7
Missed Points (Sum of Applicable Items Not Achieved)	Missed Cultural Points: 3	Missed Economic Points: 1	Missed EnviroPoints: 21	Missed Social Points: 8
TOTAL PILLAR SCORE ACHIEVED (Total Points Achieved out of Applicable Items)	8 / 11 (Total Cultural # / Possible Cultural #); 73 % Total Cultural Percent	6 / 7 (Total Economic # / Possible Economic #); 86 % Total Economic Percent	36 / 57 (Total Enviro # / Possible Enviro #); 63 % Total Enviro Percent	27 / 35 (Total Social # / Possible Social #); 77 % Total Social Percent

OVERALL SUSTAINABILITY SCORE (Sum of Four Pillars)	
77 / 106 (Overall # / Overall Possible #)	73 % Overall Percent

SUSTAINABILITY HIGHLIGHTS	Cultural	Economic	Environmental	Social
+ Priority Items (Score ≥3) Achieved and Confirmed Innovations	+ Cultural: Cash-in-lieu to Art Reserve	+ Economic: Increases Tax Base	+ Environmental: Step 3 of BCESC, meets Metro Vancouver Garbage and Recycle Room guidelines for size	+ Social: Adaptable units, Common amenity space, private amenity space
– Priority Items (Score ≥3) Missed and Confirmed Constraints	– Cultural	– Economic	– Environmental: Green Building Rating	– Social

Report Card Glossary

Accessible housing – Housing designed and constructed to be universally accessible to people of diverse ages and abilities.

Adaptable unit – A dwelling unit that provides flexible design features that meet BC Building Code minimum requirements; it can be adapted to meet the changing needs of any occupant for reasons of disability, lack of stamina, and progressing through different life stages to support independent living.

Accessible housing/unit – Housing with fixed design features to enable independent living for persons with disabilities, such as those in wheelchairs.

Affordable market housing – Housing that is affordable to moderate income households achieved through tenure, location, reduced parking, modesty in unit size, level of finishing, and design and durability over time as the buildings age.

BC Energy Step Code – BC Energy Step Code is a voluntary roadmap that establishes progressive performance targets (i.e., steps) that support market transformation from the current energy-efficiency requirements in the BC Building Code to net zero energy ready buildings.

Beautification – The process of making visual improvements appropriate to a specific place, including but not limited to building facades, landscaping, decorative or historic-style street elements, selection of paving/fencing materials and their treatment, etc. Improvements contribute to Port Moody's reputation as City of the Arts in a sustainable manner.

Brownfield – A term used in urban planning to describe land previously used for industrial purposes or some commercial uses where the expansion, redevelopment, or reuse of the property may be complicated by the potential presence of a hazardous substance, pollutant, or contaminant.

Car/Bike share network – Arrangements between two or more persons to share the use of a vehicle or bicycle for a specified cost and period of time.

Character-defining elements – The materials, forms, location, spatial configurations, uses, and cultural associations or meanings that contribute to the heritage value of a historic place, which must be retained to preserve its heritage value.

Crime Prevention Through Environmental Design (CPTED) – The design and effective use of the built environment to reduce the incidence of crime and improve the quality of life.

District energy systems – A system that uses renewable energy to pipe energy to buildings within a specified area for space heating, hot water, and air conditioning.

Ecological inventory – An inventory that identifies the ecological values in a natural habitat, and is usually the first step in an environmental impact assessment.

Electric vehicle (EV) – An automobile that uses one or more electric motors or traction motors for propulsion. An electric vehicle may be powered through a collector system by electricity from off-vehicle sources, or may be self-contained with a battery or generator to convert fuel to electricity.

Environmentally Sensitive Areas – Land designated as areas that need special protection because of its environmental attributes, such as rare ecosystems, habitats for species at risk and areas that are easily disturbed by human activities. Refer to Map 13 of OCP.

Report Card Glossary – continued

Greenfield – Undeveloped land in a city or rural area either used for agriculture or landscape design, or left to evolve naturally. These areas of land are usually agricultural or amenity properties being considered for urban development.

Greyfield – Economically obsolescent, out-dated, declining, and/or underutilized land, often with the presence of abundant surface parking.

Greywater – Wastewater from lavatories, showers, sinks, and washing machines that do not contain food wastes and that can be reused for purposes such as irrigation or flushing toilets.

Habitat corridor – Habitat areas, generally consisting of native vegetation, linking with larger areas of similar wildlife habitat. Corridors are critical for the maintenance of ecological processes, providing food, and allowing for the movement of animals and the continuation of viable populations.

Heat island effect – Heat islands form as vegetation is replaced by hard surfaces to accommodate growing populations. These surfaces absorb, rather than reflect, the sun's heat, causing surface temperatures and overall ambient temperatures to rise.

Heritage rehabilitation – The action or process of making possible a continuing or compatible contemporary use of a historic place through repair, alterations, and/or additions while protecting its heritage value.

Heritage restoration – Returning a historic place back to how it looked at any time in its past.

Invasive plant species – An invasive plant is a non-native species whose interaction causes economic harm, harm to human health, and/or environmental harm.

Light pollution – Brightening of the night sky caused by street lights and other man-made sources, which has a disruptive effect on natural cycles and inhibits the observation of stars and planets.

Market rental housing – Private, market rental rate housing units.

Naturescape planting – Landscaping with species that are naturally adapted to local climate, soils, predators, pollinators, and disease and, once established, require minimal maintenance.

Non-market rental housing – Subsidized rental housing for those unable to pay market-level rents including, but not limited to, public housing owned and operated by government agencies, non-profit housing owned and operated by public and private non-profit groups, and co-operative housing owned and managed by co-operative associations of the residents.

On-site power generation – The ability to generate power without transporting it from its source to where it can be utilized.

On-site renewable energy generation – The generation of naturally replenished sources of energy, such as solar, wind power, falling water, and geothermal energy.

Passive design – An approach to building design that uses the building architecture to minimize energy consumption and improve thermal comfort.

Public space – A social space that is generally open and accessible to people.

Report Card Glossary – continued

R-2000-Certified New Home – Best-in-class, energy-efficient homes with even higher levels of energy efficiency than ENERGY STAR-qualified new homes, as well as clean air and environmental features.

Smart technology – Technologies that allow sensors, databases, and/or wireless access to collaboratively sense, adapt to, and provide for users within the environment.

Statement of significance – The first essential step in any conservation project, which involves identifying and describing the *character-defining elements;* it is important in defining the overall heritage value of the historic place. Refer to the Standards and Guidelines for the Conservation of Historic Places in Canada (see Resources glossary).

Streetscape – The visual elements of a street, including the road, adjoining buildings, sidewalks, street furniture, trees, and open spaces that combine to form the street's character.

Storm water management plan – The management of water occurring as a result of development or precipitation that flows over the surface into a sewer system.

Transit oriented development (TOD) – A mixed-use residential and commercial area designed to maximize access to public transportation; it often incorporates features to encourage transit ridership. A TOD neighbourhood typically has a centre with a transit station or stop (train station, metro station, tram stop, or bus stop), surrounded by relatively high-density development with progressively lower-density development spreading outward from the centre. TODs generally are located within a radius of 400 to 800 metres from a transit stop, as this is considered to be an appropriate distance for *walkability*.

Universal access – This term refers to broad-spectrum ideas meant to produce buildings, products, and environments that are inherently accessible to both people without disabilities and people with disabilities.

Urban infill – An urban planning term that refers to new development that is sited on vacant or undeveloped land within an existing community, and that is enclosed by other types of development.

Urban forest – The total collection of trees and associated plants growing in a city or town. It includes trees in parks and yards, along roadways and paths, and in other areas, both on public and private lands.

Urban vitalization – The urban planning process of rehabilitating a place or "taking a place to a higher level" using a community-building process (early stage community involvement) to define the key characteristics that make a place unique or special; and applying the concepts of urban conservation to leverage a community's assets, most often in accordance with approved City plans.

Viewscape – The natural and built environment that is visible from a viewing point.

Walkability – The extent to which the built environment is friendly to the presence of people living, shopping, visiting, enjoying, or spending time in an area; improvements in walkability lead to health, economic, and environmental benefits.

Xeriscaping – This terms refers to landscaping and gardening in ways that reduce or eliminate the need for supplemental water from irrigation. Xeriscaping refers to a method of landscape design that minimizes water use.

Resources

Access Near Aquatic Areas: A Guide to Sensitive Planning, Design and Management
atfiles.org

BC Climate Exchange
bcclimateexchange.ca

***BC Energy Step Code* Technical Requirements**
bclaws.ca

Best Management Practices for Amphibians and Reptiles in Urban and Rural Environments in British Columbia
env.gov.bc.ca

Bird-Friendly Development Guidelines – City of Toronto
toronto.ca/lightsout/guidelines

Canada Green Building Council
cagbc.org

City of Port Moody: Official Community Plan (2014)
portmoody.ca

Stream and Drainage System Protection Bylaw No. 2470
portmoody.ca

City of Port Moody Waste Management Bylaw No. 2822
portmoody.ca

City of Vancouver *Passive Design* Toolkit for Large Buildings
vancouver.ca

Community Green Ways Linking Communities to Country and People to Nature
evergreen.ca

Design Centre for CPTED *(Crime Prevention Through Environmental Design)*
designcentreforcpted.org

Develop with Care: Environmental Guidelines for Urban and Rural Land Development in British Columbia
env.gov.bc.ca/wld/documents/bmp/devwithcare/

EnerGuide Rating System
nrcan.gc.ca/energy/efficiency/housing/new-homes/5035

Environmentally Sensitive Areas, Best Practices
env.gov.bc.ca

Resources – continued

Examples of Good Public Art
City of Port Moody Public Art

Fatal Light Awareness Program (FLAP)
flap.org

Invasive Species Council of Metro Vancouver
iscmv.ca

International Dark Sky Association
darksky.org

Metro Vancouver's DLC Waste Management Toolkit
metrovancouver.org

Metro Vancouver Technical Specifications for Recycling and Garbage Amenities in Multi-family and Commercial Developments
metrovancouver.org/services

Metro Vancouver's Stormwater Source Control Guideline
metrovancouver.org/services

Naturescape BC
naturescapebc.ca

Project for Public Spaces
pps.org

Riparian Areas Regulation Assessment Methods
gov.bc.ca

Standards and Best Management Practices for Instream Works
env.gov.bc.ca

Standards and Guidelines for the Conservation of Historic Places in Canada
historicplaces.ca

Stream Stewardship: A Guide for Planners and Developers
stewardshipcentrebc.ca

Translink: Transit Oriented Communities
translink.ca/transit-oriented-communities

Vancouver Bird Strategy – City of Vancouver (2015)
vancouver.ca