REPORT TO COUNCIL

Council Meeting: June 25, 2024

500 Matterson Drive, Ucluelet, BC V0R 3A0

FROM: ANNELIESE NEWEDUK, PLANNER **FILE NO:** 3360-20 RZ24-04/ 3060-20 DP23-09

SUBJECT: ZONING AMENDMENT/DEVELOPMENT PERMIT FOR 2102 PENINSULA ROAD **REPORT NO:** 24-64

ATTACHMENT(S): APPENDIX A – APPLICATION
APPENDIX B – ZONING AMENDMENT BYLAW NO. 1343, 2024
APPENDIX C – DEVELOPMENT PERMIT 23-09
APPENDIX D – ENVIRONMENTAL QEP REPORT
APPENDIX E – ENGINEERING AND SERVICING REPORT

RECOMMENDATION(S):

THAT Council direct staff to give notice of first reading for *District of Ucluelet Zoning Amendment Bylaw No. 1343, 2024.*

BACKGROUND:

In April 2024 the Ucluelet Rent-It Center Ltd. (the "**Applicant**") submitted a proposal to build a mixed commercial/residential development at 2102 Peninsula Road and the adjacent property; PID 018743633, Lot 5, Plan VIP58757, District Lot 284, Clayoquot Land District, and PID 027730573, Lot C, Plan VIP85941, District Lot 284, Clayoquot Land District, (the "**development area**") (See **Figure 1 and Figure 2**). It should be noted that the two parcels that make up the development area are anticipated to be consolidated.

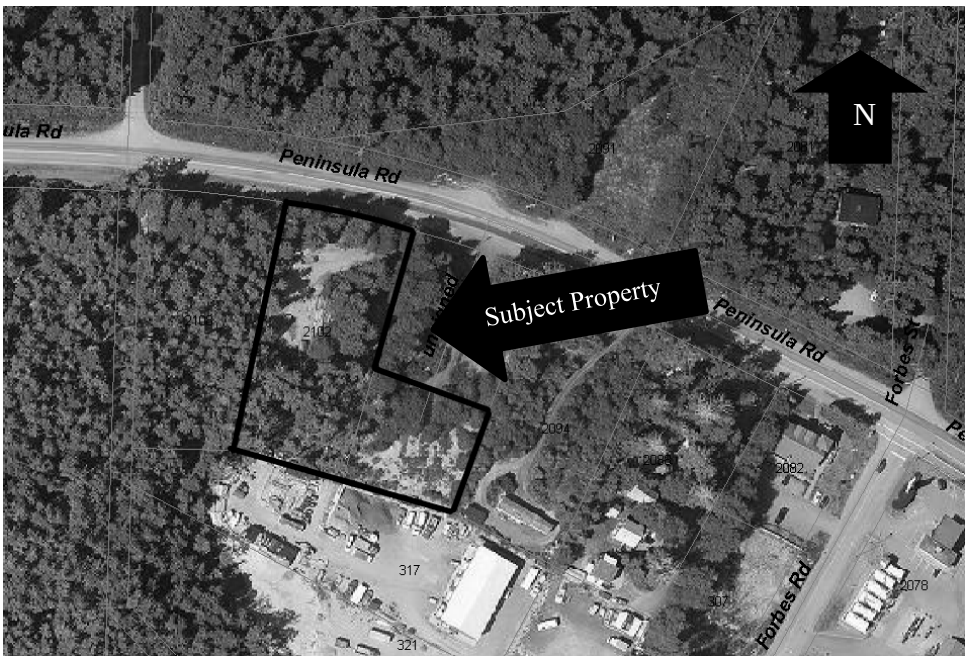
THE PROPOSAL:

The development area is currently undeveloped, with a mixture of disturbed and forested lands. The proposed development includes three (3) four-unit townhomes near the rear (south), and two ground-floor commercial with second-storey resort condo buildings at the front (north) of the development area (See **Figure 3 and 4**).

There is a gradual northward slope towards Peninsula Road, therefore a large retaining wall is proposed to create flat ground for the two mixed commercial/resort condo buildings, and the associated parking, and create vehicle and pedestrian access to the upper residential area. An amenity greenspace will aid the transition from residential to commercial. There is an existing driveway and access easement that allows access to the rear portion of the development area

across the neighbouring property, however the intent is for it to remain as emergency access only. Access to all buildings will be through a new paved driveway and there will be a total of 55 parking spots.

(Figure 1. The Development Area)



(Figure 2. Orthographic image of Development Area)

ZONING:

The development area is currently zoned as Service Commercial (CS-2). Permitted principal uses in the CS-2 zone relevant to this application include *Mixed Commercial/Resort Condo* as well as *Mixed Commercial/Residential*. The CS-2 zone does not have *Multi-Family Residential* (MFR) as a stand alone principal permitted use, which would be required to allow for the townhomes.

Immediately surrounding the subject property, land is mostly zoned CS-2, except for Comprehensive Development Zone 1 (Eco Industrial; CD-1) directly south. Construction of a new medical center directly east of the subject property is underway. Just beyond that is the Raven Lodge Multi-family housing (R-3 Zone), northeast is the C&N Backpackers Hostel (HS Zone), and the remaining area consists of vacant lots (CS-2) and some parkland (P-1).

OFFICIAL COMMUNITY PLAN:

LONG RANGE LAND USE PLAN:

The subject property is designated as "Service Commercial" (SC) as per the Long-Range Land Use Plan (Schedule A) in the District of Ucluelet *Official Community Plan Bylaw No. 1306, 2022* (OCP). The proposal aligns with future designated use of the property and the accompanying policies.

DEVELOPMENT PERMIT AREAS:

The subject property lies within the following Development Permit Areas:

- Development Permit Area II – Peninsula Road (Form and Character)
- Development Permit Area IV – Multi-Family/Commercial/Mixed Use (Form and Character)
- Development Permit Area VI – Stream and Riparian Area Protection (Environmental)

The DP areas will be encompassed into a single permit (See Appendix "C").

DISCUSSION:

REZONING:

The intent of CS-2 zoning is to include a range of uses, including both residential and commercial. However, having a residential building separate from the commercial building is not currently permitted. The applicant is requesting a zoning amendment to the CS-2 zone in the *District of Ucluelet Zoning Bylaw no. 1160, 2013,* that would allow MFR as a principal use in the development area (See Appendix "B"). This zoning amendment would not change density or the intended use of the CS-2 zone, but it would allow for the residential and commercial uses to exist in separate buildings.

PARKING:

Currently, the application proposes 55 parking spaces, meeting the minimum requirements outlined by Section 505.1 of the zoning bylaw. To determine the commercial parking requirements, the *Retail* use was used. Note that if the use of the commercial space changes, parking requirements could change.

(Figure 3. Illustrative Site Plan)

(Figure 4. Illustrative site plan aerial view)

FORM AND CHARACTER DEVELOPMENT PERMIT AREAS:

Form and character DPAs are established to guide development and land use to ensure a pedestrian-oriented, compact, and vibrant community which maintains its coastal village character. The General, Peninsula Road (DPAII) and Multi-Family / Commercial / Mixed Use (DPAIV) guidelines are specifically relevant to this application.

BUILDING FORM:

The three 2-storey residential townhomes would each contain four units (153m^2 each) for a total floor area of 1841m^2 (See **Figure 3 and 4**). Each unit would be three bedrooms, contain a one-car enclosed garage, and a balcony. The proposed townhomes would help broaden the supply of housing choices in Ucluelet and could positively contribute to OCP affordability and housing objectives (OCP Policies 3.131G, 3.137, 3.140, 3.147, and 3.149)

The two mixed commercial/resort condo buildings have a total floor area of 818m^2 (See **Figure 3 and 4**). A total of eight (1 two-bedroom and 7 one-bedroom) resort condo units will be accessible by a set of indoor and outdoor stairs, will each have their own balcony, and will have access to a communal amenity outdoor deck. The specific ground floor commercial uses would be dependent on the incoming tenants.

The design and architecture intend to evoke fishing village heritage and west coast character through form and materials, therefore utilize corrugated steel, concrete, and facades with light colours and wood accents to add warmth (OCP F1 and F11).

Guideline F8 recommends avoiding "*extensive use of blank walls regardless of material*" and contains various recommendations on how developments can soften the visual impact of blank walls such as public seating, planters, graphic design, or architectural details. In addition, guideline F22 requires landscape planting to provide clarity within the public realm and suggests that planting can be used to help define outdoor spaces, highlight pedestrian corridors, beautify streetscapes, and more. While the Frontage to Peninsula Road addresses these policies, note that the retaining wall, adjacent mixed commercial/resort condo building, and parking area exhibit large areas of concrete face (See **Figure 5**). Given the challenging topography of the site, the concrete retaining aspects of the development are justifiable.

PEDESTRIAN CONNECTIVITY:

The frontage currently contains a paved Multi-Use Path (**MUP**), which the applicant proposes to connect directly to (OCP F.II.6). Pedestrians can access the rear residential portion of the development area through stairs and a pedestrian walkway, creating comprehensive pedestrian connectivity throughout the development area.

LANDSCAPING:

The applicant notes that it is not anticipated that a significant amount of tree retention will be possible, and majority of the development area will become impervious surfaces and buildings. It is important to note that large trees shown on the concept plans are outside the development area boundary (See **Figure 3 and 4**).

The area fronting Peninsula Road will be fully landscaped, with low-growing native grasses, mulch-topped garden beds with native vegetation, and retained or newly planted native trees (OCP F21, F.I.5, and F.II.7). Additional landscaping will be completed to provide shade and privacy across the development area, consisting of non-invasive native and drought tolerant plants. A communal green and park amenity space is located in between the commercial and residential buildings to create a buffer and space for residents to gather and recreate (OCP F9). The development area's west property line borders a watercourse and area where significant tree canopy has been retained, however south and east has seen significant clearing.

ARCHAEOLOGICAL POTENTIAL:

Additionally, guideline F30 states that "*All developments shall respect archaeological resources and comply with all relevant statutes for the protection thereof*". According to OCP Archaeological and Cultural Potential Map 3, areas of archaeological potential fall within the development area. The applicant has been provided information on Protected Archaeological sites in BC, and is aware of the necessary steps to remain in line with the *Heritage Conservation Act* to assess the archaeological potential of the development area.

(Figure 5. Illustration of parking area, mixed commercial/resort condo area, and retaining wall)

ENVIRONMENTAL PROTECTION PERMIT AREA:

The development area borders a watercourse and falls within the OCPs Stream and Riparian Area Protection DP area (DPA VI). The OCP exempts "*Development in sites which have been previously assessed and where a Section 219 Restrictive Covenant has already been registered on the title of the property identifying areas and measures necessary to protect environmental values*" according to DPA Exemptions Section 13. An existing covenant on title states that "*no building shall be constructed, nor mobile home located within thirty (30.0) metres of the natural boundary of the sea, nor within fifteen (15.0) metres of the natural boundary of any nearby watercourse, whichever is greater*." The development exhibits a 15m setback from the watercourse.

Notwithstanding, the applicant has engaged a QEP at Current Environmental to complete a biophysical assessment of the development area (See Appendix "D"). The report states that the development must not encroach on a 10m Streamside Protection and Enhancement Area (SPEA). The proposal does not encroach on this setback, therefore satisfying this aspect of the QEP report and the existing covenant. The report outlines potential environmental impacts (Section 4) and accompanying mitigation measures (Section 5) that have been incorporated into the development permit. The QEP assessed the development as acceptable for the property and of low environmental risk, if the mitigation measures recommended in the report are effectively implemented.

RELEVANT OCP POLICIES:

Below are other policies listed in the OCP relevant to the proposal that may facilitate minor proposal adjustments that will not impact the issuance of a DP:

- Policy 2.15 will require some of the parking to incorporate infrastructure to support electric vehicle charging,
- Policy 2.29 recommends the inclusion of adequate, secure, bike parking facilities,

FIRE PROTECTION:

The subject property satisfies the initial access requirements of the Fire Department. Any proposed alterations to the layout design will require consultation and approval of the Fire Chief.

SERVICING:

The applicant engaged Herold Engineering to complete a servicing review of the proposal (see Appendix "E"). The site has been reviewed for Development Permit (preliminary design) civil works. The developer has provided a detailed mark-up identifying items that need clarification and revision prior to Building Permit (detailed design).

Potable Water:

- There is enough capacity within the water system fronting the property without additional off-site upgrades.

Fire Flow Water:

- There is enough capacity for firefighting purposes without additional off-site upgrades. Prior to the completion of detailed design, the adequacy of the proposed 150mm water service will have to be confirmed.

Sewer:

- The development is located within the Peninsula Road Lift Station catchment area. The system includes flows along the inner harbour system which is approaching capacity. To accommodate growth, including this development, the District is working on capacity solutions. The timing of this development may be affected by capacity constraints of the Inner Harbour sewer system.

Storm:

- Prior to the completion of detailed design, a storm water master plan will be required as well as a permit from the Ministry of Transportation and Infrastructure.

Site Access:

- Prior to the completion of detailed design, the District's road cross section and site access specifications will have to be integrated.

BUILDING SERVICES:

Due to the complexity of the proposed development, in accordance with District of Ucluelet Building Bylaw No. 1165, 2014, Section 10.3., the Building Official will require professional design and review for all aspects of construction - civil, geotechnical, structural, and mechanical under letters of assurance. Fire suppression systems, if proposed, will be required to be designed and reviewed by a registered professional under letters of assurance. The owner shall retain a coordinating registered professional to coordinate all design work and field reviews of the registered professionals of record required for the project to ascertain that the design and construction will substantially comply with the British Columbia Building Code and other applicable enactments respecting safety. Referral to the Ministry of Transportation for traffic impact, access and drainage will be required and should be under the purview of the project civil engineers.

ANALYSIS OF OPTIONS:

A	Direct staff to give notice of first reading to *Bylaw No. 1343, 2024*	Pros	• Development application will proceed at this time.
		Cons	• Unknown at this time.
		Implications	• Approval would allow the application to proceed. • Could allow for MFR use on the development area if adopted/issued.
B	Provide alternative direction	Pros	• Achieves the goals and objectives as identified by Council.
		Cons	• Unknown at this time.
		Implications	• Depends on the direction of Council.
		Suggested Motion	THAT Council, with regards to Zoning Amendment Bylaw No. 1343, [*provide alternative direction here*]

C	Reject the application	Pros	• The development will not proceed at this time.
		Cons	• Does not allow the applicant's proposed development to proceed.
		Implications	• The application would not proceed. • Additional staff time will be required to follow up with applicant and consultants.
		Suggested Motion	THAT Council reject the application for DP23-09 and RZ24-04 because it does not adequately address [*quote OCP Bylaw DP guideline section(s) not met*].

POLICY OR LEGISLATIVE IMPACTS:

This application impacts the *District of Ucluelet Zoning Bylaw No. 1160, 2013* by adding a text amendment to section CS-2.1.

This application is consistent with the *Official Community Plan* and the *Local Government Act*.

It is important to note that *Bill 44 – 2023 Housing Statutes (Residential Development) Amendment Act, 2023* amended Part 14, Division 3, Section 464 (3) of the *Local Government Act*, now states that:

> *(3) A local government must not hold a public hearing on a proposed zoning bylaw if*
>
> *(a) an official community plan is in effect for the area that is the subject of the zoning bylaw,*
>
> *(b) the bylaw is consistent with the official community plan,*
>
> *(c) the sole purpose of the bylaw is to permit a development that is, in whole or in part, a residential development, and*
>
> *(d) the residential component of the development accounts for at least half of the gross floor area of all buildings and other structures proposed as part of the development.*

Where a public hearing would have previously been held, these legislative changes prohibit the District of Ucluelet from holding a public hearing for *District of Ucluelet Zoning Amendment Bylaw No. 1343, 2024*.

In addition, is important to note, that the applicant is responsible for ensuring that all Provincial and Federal laws, requirements, and best practices are followed.

NEXT STEPS:

If Council directs staff to give notice of first reading to the draft of *District of Ucluelet Zoning Amendment Bylaw No. 1343, 2024,* staff would undertake the required notifications.

Respectfully submitted: ANNELIESE NEWEDUK, PLANNER
BRUCE GREIG, DIRECTOR OF COMMUNITY PLANNING
DUANE LAWRENCE, CAO

District of Ucluelet Planning Department
200 Main Street,
POBox 999,
Ucluelet, BC,
V0R3A0

Date: February 12, 2023

Attn: Bruce Greig
Re: Development Permit, 2102 Peninsula Rd, Ucluelet, BC.
LOT 5, SECTION 21, CLAYOQUOT DISTRICT, PLAN VIP 587757, DISTRICT LOT 284 & LOT C PLAN VIP 85941, DISTRICT LOT 284
Zoned CS2 – Service Commercial

Project Intent:

To create a compact vibrant mixed use neighbourhood at the entrance to The District of Ucluelet.

Project Overview:

The subject property is located at and adjacent to 2102 Peninsula Road, Ucluelet, BC.

The development spans two parcels both zoned CS2 Service Commercial. Rent-it Centre is proposing a mixed use development consisting of 417 m^2 of ground floor commercial with condo-hotel units on the second storey, spread across two buildings adjacent to Peninsula Rd. The proposal also includes 3 x 4 unit two storey townhome buildings, two to the rear of the property (Lot 5) and the third occupying the second parcel (Lot C).

While access to Lot C is possible from an existing road and access easement it is envisioned this site will be accessed primarily through Lot 5. The existing access easement will remain for emergency access and fire apparatus turn-around as initially intended with the easement.

We would be looking for guidance on a preferred path to addressing the two lots and access to satisfy the zoning and the intent of the OCP either through a site specific zoning amendment, variance, or rezoning if necessary.

While we acknowledge the townhouse units on Lot C do not conform the Primary use for CS2 There is an opportunity to create a compact medium density neighbourhood comprised of "missing middle" housing forms which are a scarce commodity in Ucluelet. These units are in close proximity to the commercial uses on Lot 5 which would perhaps still be considered aligned with the vision within the OCP.

The townhouse units would be sold at market rates with STR restrictions and no long term rental restrictions to encourage year round occupancy for local residents.

The total Floor Area spanning Lot 5 & Lot C is equal to 2731 m^2 (.47 FAR) and would be distributed as follows:

- 3 x 4 *(153.4 m^2 incl. Garage)* units townhouse buildings totalling 1841 m^2
- 8 x 1 & 2 bedroom Resort Condo Units Totalling 446 m^2

- Ground level commercial space totalling 372m^2

Parking and Loading:

A total of 54 parking spaces for the entire development are provided with additional parking spaces possible with reduced green space if necessary.

28 surface and covered parking spaces are provided for the commercial units at a ratio of .75 spaces per 10m^2 which would satisfy the most stringent parking bylaw ratios for various potential uses.
2 of the spaces are "small" at 2.5m x 5.2m. Two spaces are designated as accessible and the remainder are full size at 2.5m x 6m. 8 full size parking spaces are provided for the Condo hotel units @ 1 space per unit.

1.5 parking spaces per townhouse unit are provided for resident use and an additional 3 guest parking spaces are available provided. 1 garage space per dwelling unit with the remainder consisting of surface parking.

All drive aisles are minimum 6m wide with parking areas served by 7.5m wide drive aisles.

A covered loading zone (9m x 3m) with overhead clearance of 4.3m is provided at the rear of the mixed use building adjacent to Peninsula Rd.

Landscape/Environment:
The properties are a mixture of disturbed and forested lands sloping down to the north end and fronting onto Peninsula road. The forested areas contain a mixture of Hemlock Cedar and Spruce. Due to the topography and significant earth works required to complete the development it is not anticipated that a significant number of trees would be able to be retained. Large trees indicated on the concept plans largely fall outside of the property boundaries and are shown for context.

The property to the west contains a watercourse and tree cover along the property line has been retained by the property owner who is in final stages of development.
Current Environmental has provided the Biophysical Assessment for both this property and the neighbouring property as required under Environmental DPA guidelines.

Significant Landscaping will be required to provide shade and privacy within the development. The landscaping will consist of non-invasive native and drought tolerant plants.

A communal green space and park amenity space is located on Lot C providing a buffer between neighbouring properties and space for residents to gather and recreate.

The Peninsula Road Frontage will be planted to provide intermittent views of the building facade. A combination of low growing native shrubs and grasses and Native deciduous flowering trees will screen the upper floor units while allowing commercial frontages to have visual exposure to the street. Plant Species to include: Pacific Dogwood, Pacific Crabapple, Vine Maple, Dull Oregon Grape, Red-osier Dogwood, and Kinnikinnik.

Areas of disturbance with neighbouring properties are to be restored using native plant materials including: Western Red Cedar, Sitka Spruce, Douglas Fir, Salal Evergreen Huckleberry and Sword Ferns.

A conceptual Landscape Plan is provided as part of the Development Permit Application while a detailed Landscape Architectural plan is subject to final grading and clearing requirements and will be submitted as part of the Building Permit.

Architecture:
The design is intended to evoke the fishing village heritage of the region with form and materials derived form the industrial waterfront buildings such as corrugated steel and concrete pilings. Facades utilize light colours and wood accents to add warmth and "west coast" character.

The building massing does not exceed the 8.5m height restriction under the existing CS2 zoning. Special consideration was given to the design to keep the height below the maximum through low slope roof lines in order to keep the development from being visually intrusive and to maintain as much light through the site as possible.

Due to the site being dramatically undulating and partially cleared it is difficult to assess what the average natural grade is and detailed survey information will need to be collected to ensure maximum heights are respected and in some cases may require a variance application or design revisions at Building Permit Stage.

Waste Management:
Animal proof waste bins and recycling rolling bins will be accessible for both commercial and residential use as indicated in the two locations on the site plans.

In Conclusion:
We have taken time to consider the commercial, tourism economy, and long term housing needs of the community. Our initial meeting with the Planning department last year was encouraging and we look forward to continuing this collaborative approach. It is our hope that this development aligns with the priorities set out in the OCP as well as attempting to adjust to rapidly evolving Provincial and District housing policies.

Sincerely

Mayco Noel
Rent-it Centre
#313-317 Forbes Rd
Ucluelet, BC
V0R 3A0
[redacted]

Appendix A

CLIENT
RENT-IT CENTRE

DRAWN BY
IK

ISSUE
February 12,

PROJECT

2102 PENINSULA RD
Ucluelet, BC

The Design Centre
RESIDENTIAL & RESORT PLANNING & DESIGN
133 Edwards Place, PO Box 1243,
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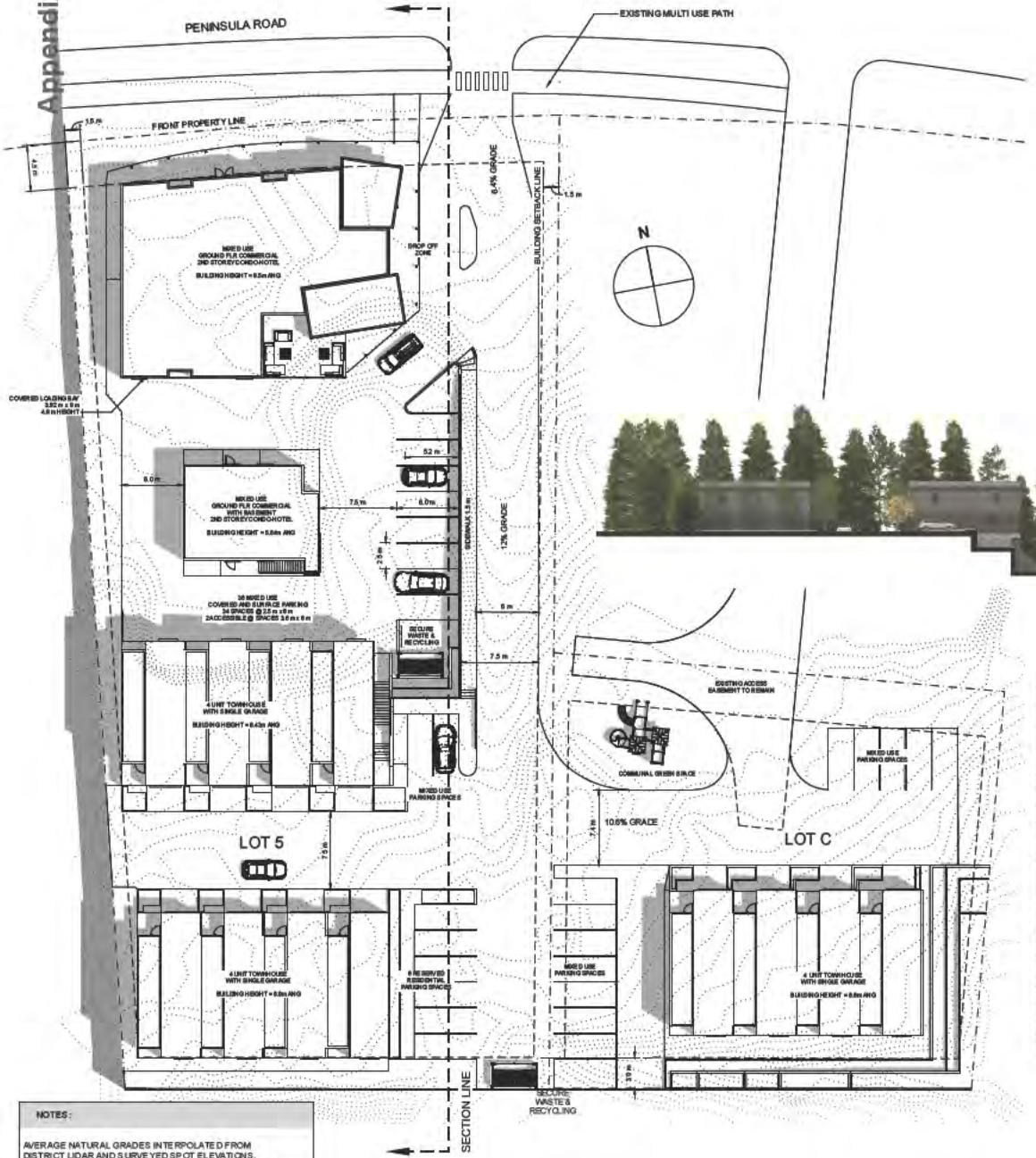
Appendix A



NOTES:

AVERAGE NATURAL GRADES INTERPOLATED FROM DISTRICT LIDAR AND SURVEYED SPOT ELEVATIONS. GRADES TO BE VERIFIED BY DETAILED SURVEY AT BUILDING PERMIT STAGE.

CONTEXT MAP

SITE SECTION

ZONING INFORMATION:			
CIVIC ADDRESS:	2102 PENINSULA RD		
LEGAL DESCRIPTION	LOT 5, SECTION 21, CLAYOQUOT DISTRICT, PLAN VIP 587757, DISTRICT LOT 284 & LOT C PLAN VIP 85941, DISTRICT LOT 284		
ZONING:	CS2		
LOT AREA:(5884 sq.m. / 63336 sq.ft.)	LOT 5 (4168.7 sq.m. / 44871.5 sq.ft.) LOT C (1715.4 sq.m. / 18464.4 sq.ft.)		
HEIGHT/SETBACK REQUIREMENTS:			
	ZONING	PROPOSED	CONFORMING
HEIGHT:	8.5m (28'-0")	8.5m (28'-0")	YES
FRONT YARD SETBACK:	4.5m (15'-0")	4.5m (15'-0")	YES
REAR YARD SETBACK:	3m (10'-0")	3m (10'-0")	YES
INTERIOR SIDE SETBACK:	1.5m (5'-0")	1.5m (5'-0")	YES
EXTERIOR SIDE SETBACK:	3m (10'-0")	na	YES
LOT COVERAGE: (1311 sq.m./14111 sq.ft.)	50%	22.3%	YES
PROPOSED FLOOR AREA:			
TOWNHOUSE X 12 (1646 sqft)	1841 sq.m (19816sq.ft.)		
CONDO/HOTEL 8 UNITS	446 sq.m (4804 sq.ft.)		
COMMERCIAL	372 sq.m (4004 sq.ft.)		
COMMERCIAL BLDG BASEMENT STORAGE	72 sq.m (773 sq.ft.)		
TOTAL:	2731 sq.m (29,396 sq.ft.)		
FLOOR AREA RATIO (.60):	.47		YES

1 / A.01 SITE PLAN
Scale: 1:200m

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Site Plan

A.01

Appendix A

DEVELOPMENT SUMMARY:

GROUND FLOOR COMMERCIAL - 372 m^2 (4004 ft^2)
- BLDG 1 - 304 m^2 (3272 ft^2)
- BLDG 2 - 68 m^2 (732 ft^2)

CONDO-HOTEL UNITS: - 446 m^2 (4804 ft^2)
- 1 - 2 BEDROOM UNIT
- 7 - 1 BEDROOM UNITS

TOWNHOUSE UNITS:
- 3 2 BEDROOM UNITS @ 129 m^2 (1387 ft^2)
- 9 3 BEDROOM UNITS @ 129 m^2 (1387 ft^2)

1 ATTACHED GARAGE SPACE @ 24.4 m^2 (263 ft^2)

PARKING:
- COMMERCIAL: *(.75 space per 10m^2 provided)*
  28 SURFACE & COVERED SPACES (including 2 accessible spaces)
- CONDO-HOTEL:
  8 SPACES
- TOWNHOUSE *(1.5 per unit provided)*:
  1 ATTACHED GARAGE SPACE + 6 SURFACE SPACES

1 / A.02 ILLUSTRATIVE PLAN
Scale: NTS

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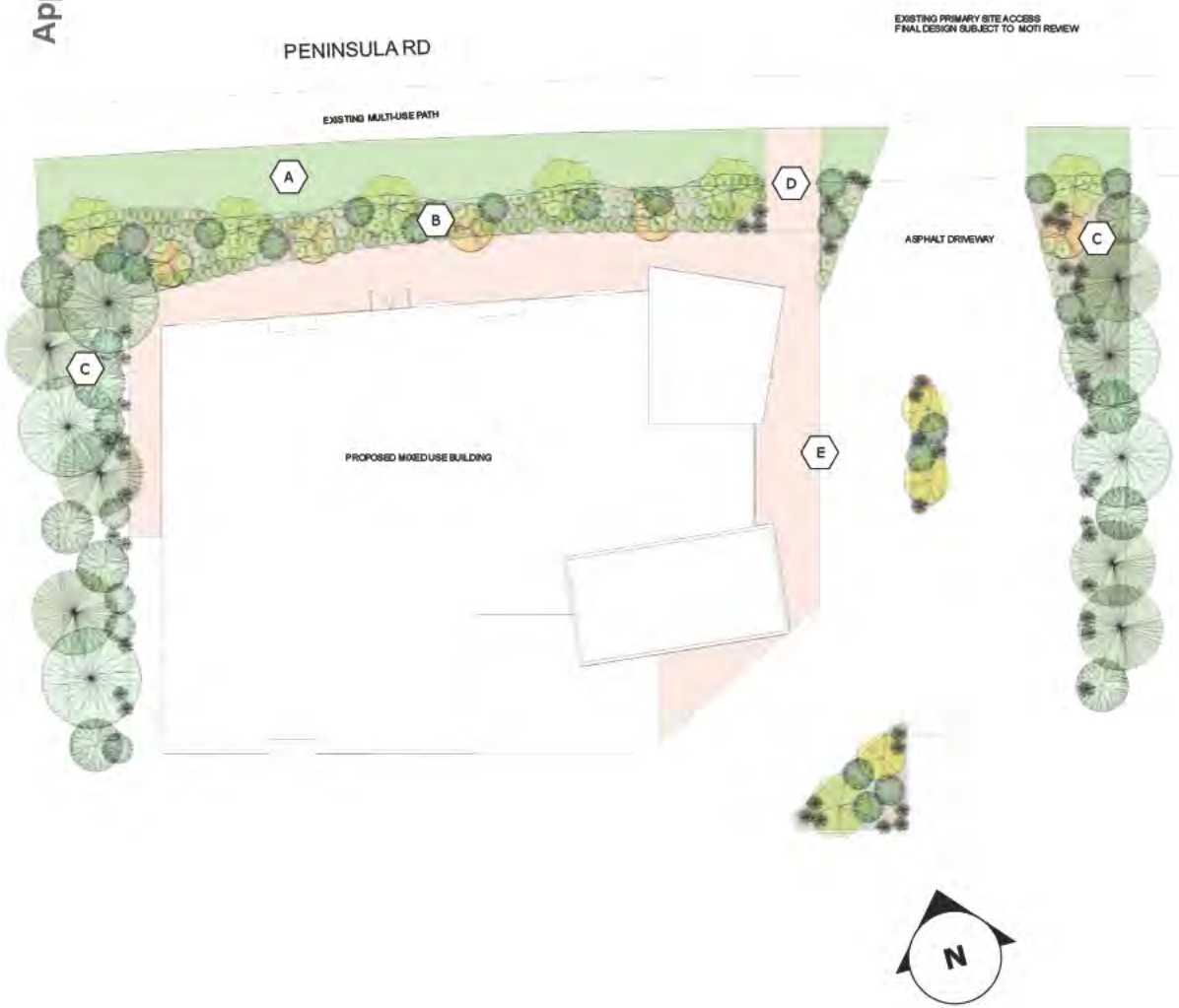
ILLUSTRATIVE PLAN

A.02

Appendix A



A HYDROSEED AREA, NATIVE GRASSES

B MULCH TOPPED GARDEN BEDS. NATIVE SHRUBS AND GROUND COVERS MIX OF #1 / #2 POT EVERGREEN HUCKLEBERRY, RED OSIER DOGWOOD, DULL OREGON GRAPE, AND SWORD FERN.

C RETAIN EXISTING TREES OR ALLOW FOR MIX OF #1 POT SALAL, EVERGREEN HUCKLEBERRY AND SWORD FERNS AND 3m HEIGHT WESTERN RED CEDAR, SITKA SPRUCE AND DOUGLAS FIR

D ACCESSIBLE HARD SURFACE PAVING

E LOW VOLTAGE GROUND LIGHTING BOLLARDS

PLANT LIST

TREES:		**SIZE**
CORNUS NUTTALLII	*PACIFIC DOGWOOD*	5cm Cal.
MALUS FUSCA	*PACIFIC CRABAPPLE*	5cm Cal.
ACER CIRCINATUM	*VINE MAPLE*	5cm Cal.
THUJA PLICATA	*WESTERN RED CEDAR*	3m Height
PICEA SITCHENSIS	*SITKA SPRUCE*	3m Height
PSEUDOTSUGA MEZIESII	*DOUGLAS FIR*	3m Height
NATIVE SHRUBS:		
POLYSTICHUM MUNITUM	*SWORD FERN*	#1 POT
CORNUS SOLONIFERA	*RED-OSIER DOGWOOD*	#2 POT
MAHONIA NERVOSA	*DULL OREGON GRAPE*	#1 POT
VACCINIUM OVATUM	*EVERGREEN HUCKLEBERRY*	#2 POT
GROUND COVER:		
KINNIKINNIK	*COMMON BEARBERRY*	10cm
GAULTHERIA SHALLON	*SALAL*	#1 POT

DEVELOPMENT PERMIT ONLY
NOT FOR CONSTRUCTION

Note: Landscape design is conceptual only.
Detailed landscape plan and plant mix to be provided at building permit stage.
Final landscape design to be prepared by registered Landscape Architect.

1 / A.03 CONCEPTUAL LANDSCAPE PLAN
Scale: NTS

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PENINSULA ROAD LANDSCAPE PLAN

A.03

Appendix A

1 A.04 MIXED USE BUILDING 2
Scale: NTS

2 A.04 MIXED USE PARKING
Scale: NTS

3 A.04 SITE ENTRANCE
Scale: NTS

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PERSPECTIVES

A.04

Appendix A

1 A.05 TOWNHOUSE LANEWAY
Scale: NTS

2 A.05 TOWNHOUSE LANEWAY 2
Scale: NTS

3 A.05 MIXED USE PARKING
Scale: NTS

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PERSPECTIVES

A.05

Appendix A

1 / A.06 ELEVATION 1 FRONT
Scale: 1/4 = 1' - 0"
0 1 2 4 6 10 FT

2 / A.06 ELEVATION 2 REAR
Scale: 1/4" = 1' - 0"
0 1 2 4 6 10 FT

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ELEVATIONS

A.06

Appendix A

27'-0" a.f.f.
ROOF PEAK

14'-0" a.f.f.
FINISHED FLR 2

0'-0"
FINISHED FLR

1
A.07
ELEVATION 1 BLDG 1 FRONT
Scale: 1/4 = 1' - 0"
0 1 2 4 6 10 FT

23'-1" a.f.f.
ROOF PEAK

11'-0" a.f.f.
FINISHED FLR 2

0'-0"
FINISHED FLR

2
A.07
ELEVATION 2 BLDG 2 FRONT
Scale: 1/4" = 1' - 0"
0 1 2 4 6 10 FT

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2102 PENINSULA RD

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February 12, 2024

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ELEVATIONS

A.07

Appendix A

1 A.08 ELEVATION 3 BLDG 1 SIDE

Scale: 1/4 = 1'- 0"

0 1 2 4 6 10 FT

2 A.08 ELEVATION 4 BLDG SIDE

Scale: 1/4" = 1' - 0"

0 1 2 4 6 10 FT

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A.08

NOTES:

DIMENSIONS INCLUDE EXTERIOR SHEATHING
INTERIOR WALLS MEASURED FROM/TO FRAMING

1 / A.09 FP1
Scale: 1/4" = 1'-0"

A.09

1ST FLOOR PLAN
TOWNHOUSE

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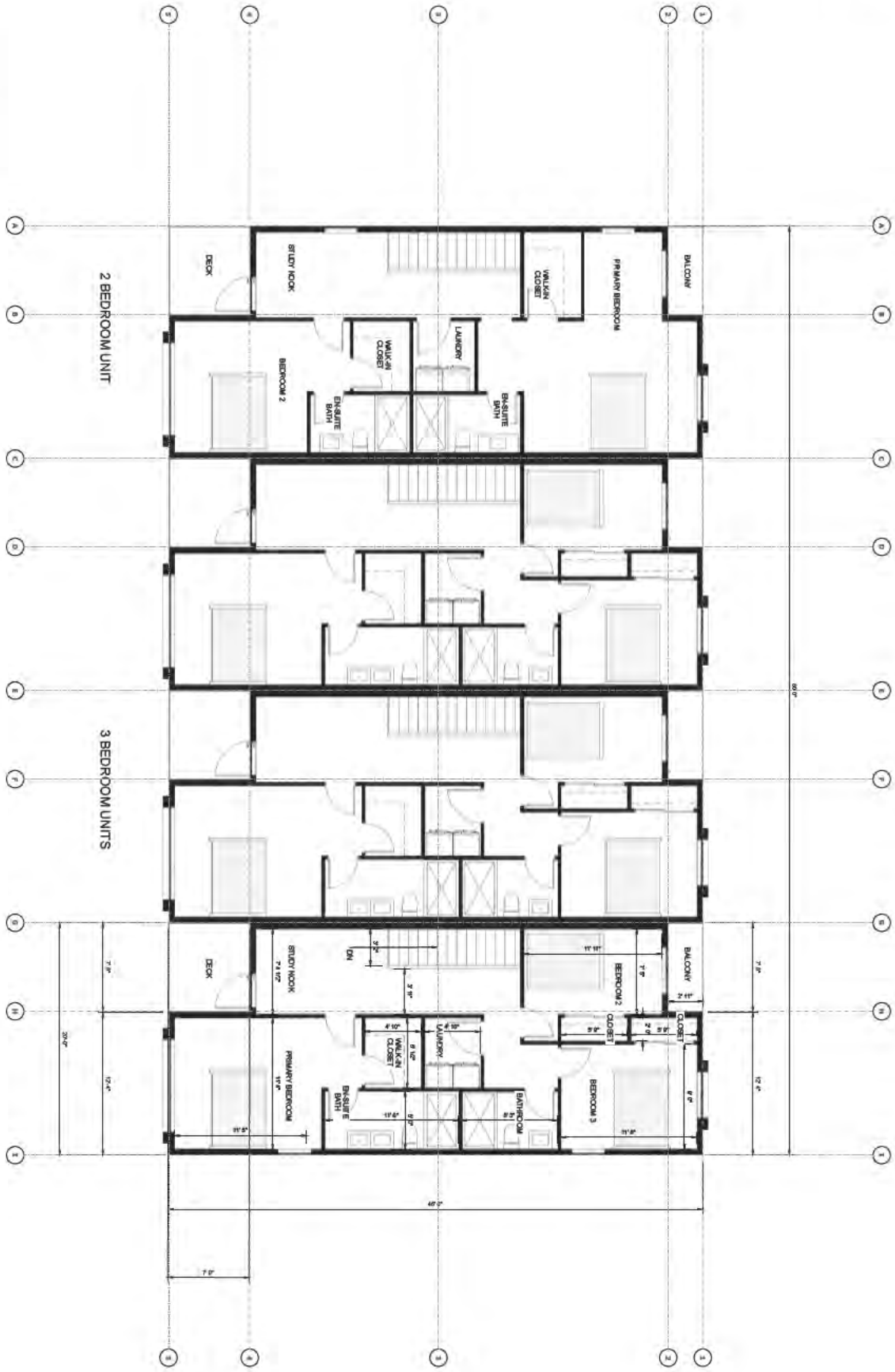
NOTES:

DIMENSIONS INCLUDE EXTERIOR SHEATHING
INTERIOR WALLS MEASURED FROM/TO FRAMING



1 / A.10 FP2
Scale: 1/4" = 1'-0"

A.10

2ND FLOOR PLAN
TOWNHOUSE

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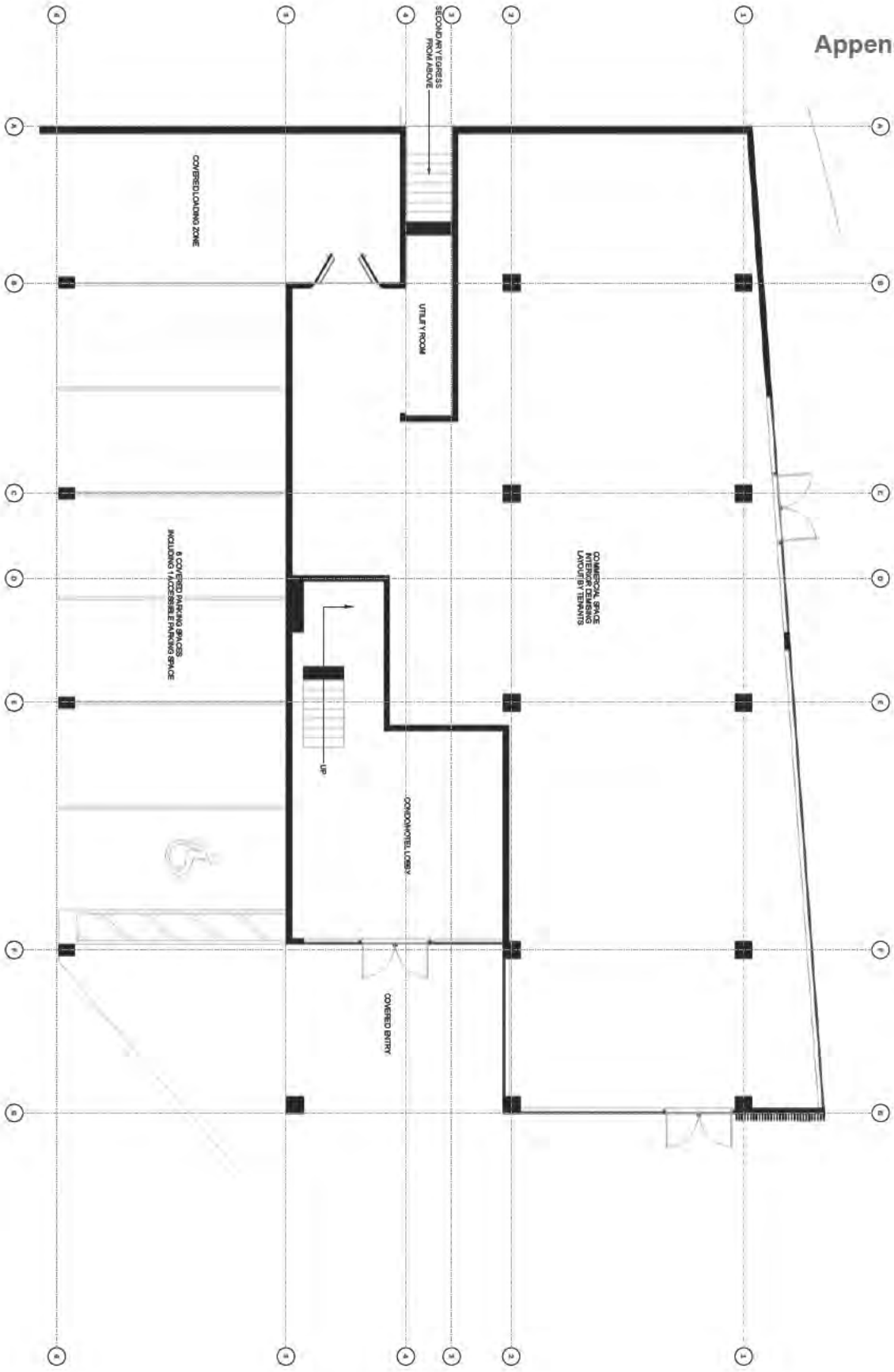

1 / A.11 FP1 COMMERCIAL UNITS
Scale: 1/4" = 1'-0"

A.11

1ST FLOOR PLAN
MIXED USE BLDG 1
COMMERCIAL

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NOTES:

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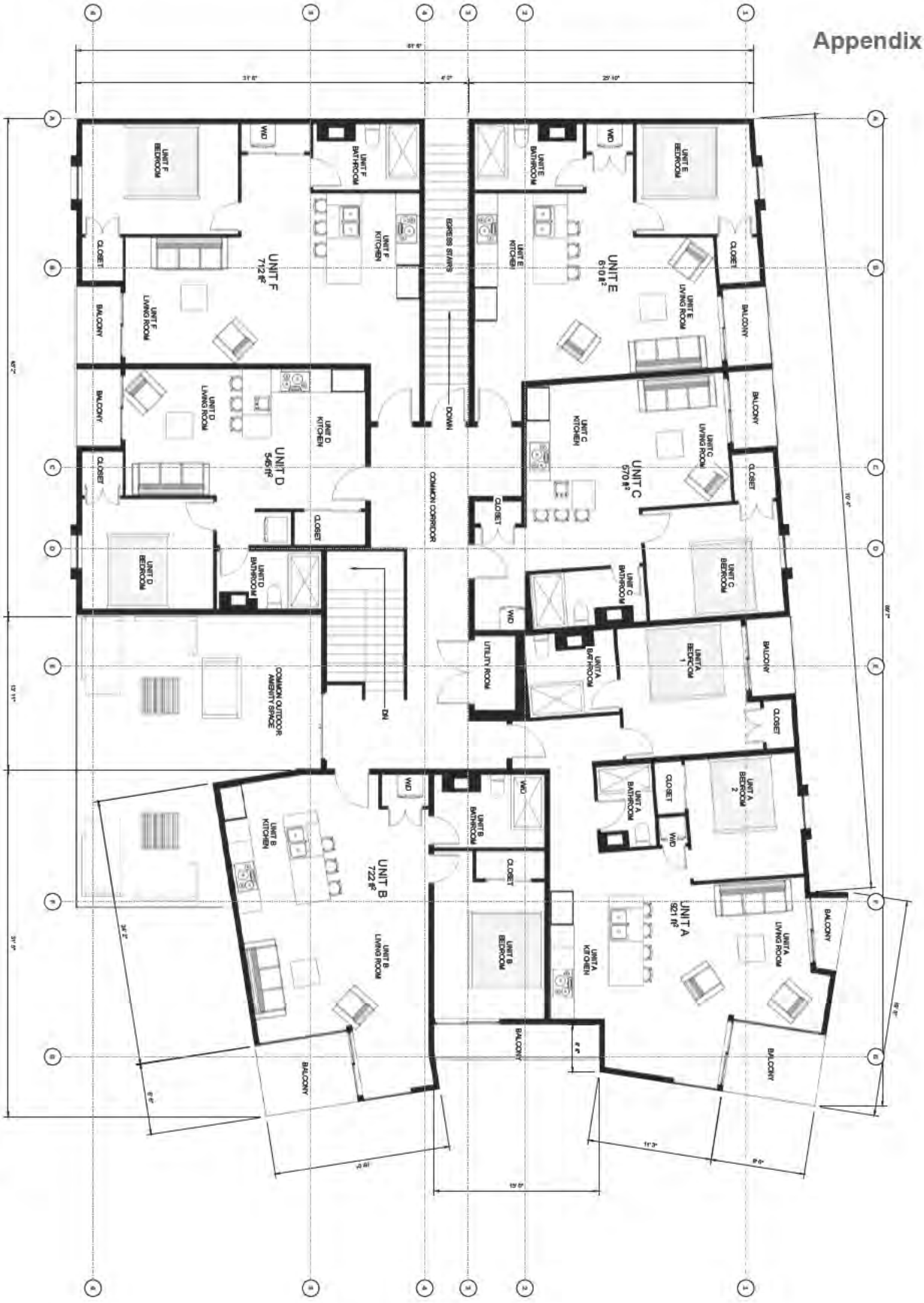

1 / A.12 FP2 CONDO/HOTEL UNITS
Scale: 1/4" = 1'- 0"

A.12

2ND FLOOR PLAN
MIXED USE BLDG 1
CONDO HOTEL

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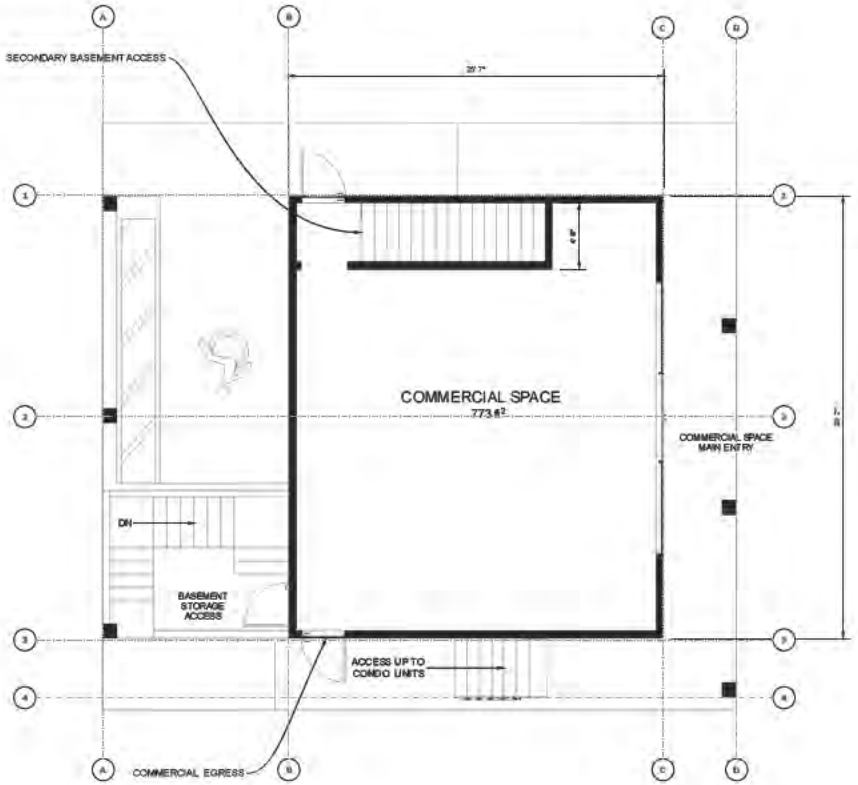
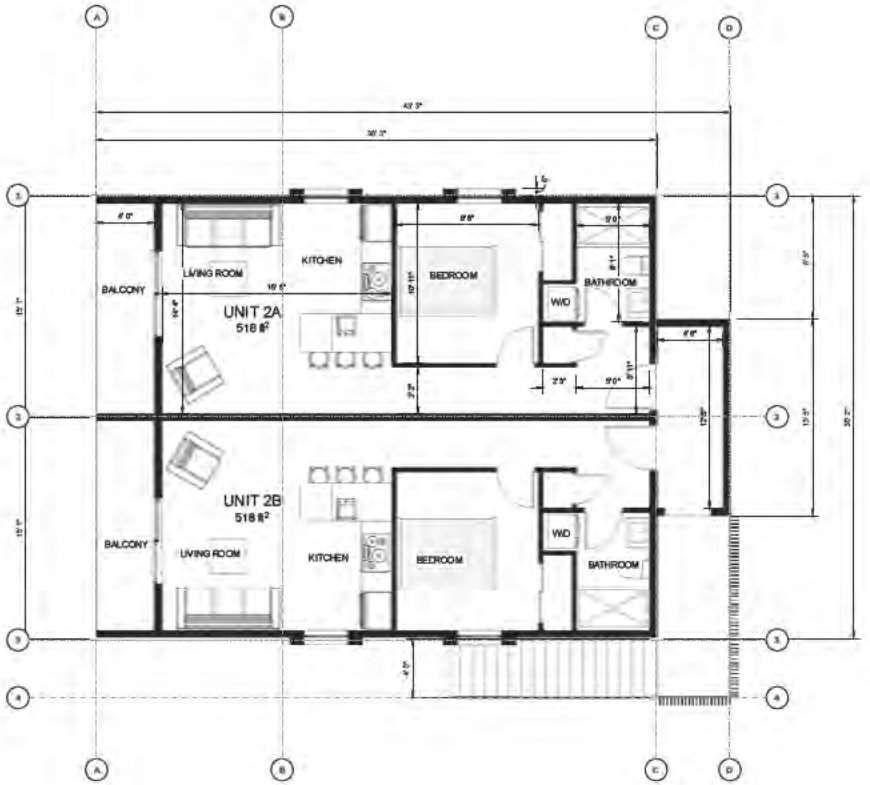


1 A.13 FP 1 COMMERCIAL UNITS
Scale: 1/4" = 1'-0"



2 A.13 FP2 CONDO/HOTEL UNITS
Scale: 1/4" = 1'-0"

NOTES:

DIMENSIONS INCLUDE EXTERIOR SHEATHING
INTERIOR WALLS MEASURED FROM/TO FRAMING

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2ND FLOOR PLAN
MIXED USE BLDG 2

A.13

DISTRICT OF UCLUELET

Zoning Amendment Bylaw No. 1343, 2024

A bylaw to amend the "District of Ucluelet Zoning Bylaw No. 1160, 2013".

(2102 Peninsula Road)

WHEREAS the District of Ucluelet Council by Bylaw No. 1160, 2013, adopted the Zoning Bylaw and now deems it appropriate to amend the Zoning Bylaw;

NOW THEREFORE the Council of the District of Ucluelet, in open meeting assembled, enacts as follows:

1. Text Amendment:

Schedule B of the District of Ucluelet Zoning Bylaw No. 1160, 2013, as amended, is hereby further amended by:

A. adding the following section (3) to section CS-2.1 in alphanumerical order, as follows:

"CS-2.1.3 For Lot 5, Plan VIP 58757, District Lot 284, Clayoquot Land District and Lot C, Plan VIP 85941, District Lot 284, Clayoquot Land District, *Multiple Family Residential* is also a *principal permitted use*"

2. Citation:

This bylaw may be cited as "District of Ucluelet Zoning Amendment Bylaw No. 1343, 2024".

FIRST NOTIFICATION OF FIRST READING published this day of **, 2024.**

SECOND NOTIFICATION OF FIRST READING published this day of **, 2024.**

READ A FIRST TIME this day of , **2024.**

READ A SECOND TIME this day of , **2024.**

READ A THIRD TIME this day of , **2024.**

ADOPTED this day of , **2024.**

CERTIFIED CORRECT: "District of Ucluelet Zoning Amendment Bylaw No. 1343, 2024."

Marilyn McEwen
Mayor

Duane Lawrence
Corporate Officer

THE CORPORATE SEAL of the
District of Ucluelet was hereto
affixed in the presence of:

Duane Lawrence
Corporate Officer

DISTRICT OF UCLUELET

DEVELOPMENT PERMIT DP23-09

Pursuant to section 488 of the Local Government Act, R.S.B.C 2015 C.1 as amended:

1. This Development Permit is issued to:

UCLUELET RENT-IT CENTER LTD (The **"Owner"**)

2. This Development Permit applies to, and only to, those lands within the District of Ucluelet described below, and the buildings, structures, and other development thereon:

2102 Peninsula Road and the adjacent property; PID 018743633, Lot 5, Plan VIP58757, District Lot 284, Clayoquot Land District, and PID 027730573, Lot C, Plan VIP85941, District Lot 284, Clayoquot Land District, (The **"Lands"**).

3. This Permit authorizes the construction of three four-unit townhomes, two commercial/resort condominium buildings, play equipment and associated landscaping.
4. This development applies only in the locations indicated, and otherwise in accordance with, the drawings and specifications attached to this Permit as **Schedule 1**.
5. The permit holder, as a condition of issuance of this Permit, agrees to comply with the terms and conditions of **Schedule 2** which is attached hereto and forms part of this permit.
6. In addition to compliance with the terms and conditions listed in Schedule 2, the permit holder must adhere to all conditions of the Qualified Environmental Professional report in **Schedule 3** which is attached hereto and forms part of this permit.
7. Prior to issuance of a Building Permit, the Owner's engineer shall confirm that adequate civil works are available or will be available prior to occupancy to adequately service the development Lands.
8. Prior to issuance of a Building Permit, the owner is responsible for engineering and obtaining approval for the location and details of the driveway entrance, entry signage, and marked pedestrian crossings to the satisfaction of the Ministry of Transportation and Infrastructure (MoTI). The Owner is responsible for complying with any permit requirements from MoTI.
9. Prior to issuance of a Building Permit, the Owner is responsible for the creation and implementation of a Stormwater Master Plan.
10. Prior to issuance of a building permit, the Owner is responsible for retaining a coordinated registered professional to coordinate all design world and field reviews of the registered professionals of record required for the project to ascertain that the design and construction will substantially comply with the British Columbia Building code and other applicable enactments respecting safety.
11. Prior to issuance of a Building Permit, the Owner shall consolidate the Lands into a single parcel.
12. The work authorized by this Permit may only be carried out in compliance with all federal, provincial, and municipal statutes, regulations, and bylaws. The Owner is responsible for ensuring that the timing of the work and any required permits or notifications by other agencies are obtained as required to comply with all applicable regulations.

DISTRICT OF UCLUELET

13. Notice shall be filed in the Land Title Office under Section 503 of the Local Government Act, and upon such filing, the terms of this Permit or any amendment hereto shall be binding upon all persons who acquire an interest in the Land affected by this Permit.
14. The Owner shall substantially commence the development within 24 months of the date of issuance, after which this permit shall be null and void.
15. This Permit is NOT a Building Permit.
16. The Municipality's Chief Administrative Officer is hereby authorized to approve minor amendments to the plans provided that such amendments are consistent with the overall character and intent of the original plans.

AUTHORIZING RESOLUTION passed by the Municipal Council on the th day of , 2024.

ISSUED the th day of , 2024.

_____

Bruce Greig
Director of Community Planning

Schedule 1 (1 of 11)

Schedule 1 (2 of 11)

1 / A.02 ILLUSTRATIVE PLAN
Scale: NTS

DEVELOPMENT SUMMARY:

GROUND FLOOR COMMERCIAL - 372 m^2 (4004 ft^2)
BLDG 1 - 304 m^2 (3272 ft^2)
BLDG 2 - 68 m^2 (732 ft^2)

CONDO-HOTEL UNITS: - 446 m^2 (4804 ft^2)
1 - 2 BEDROOM UNIT
7 - 1 BEDROOM UNITS

TOWNHOUSE UNITS:
3 2 BEDROOM UNITS @ 129 m^2 (1387 ft^2)
9 3 BEDROOM UNITS @ 129 m^2 (1387 ft^2)

1 ATTACHED GARAGE SPACE @ 24.4 m^2 (263 ft^2)

PARKING:
COMMERCIAL: 1.75 space per 100m^2 (rounded)
28 SURFACE & COVERED SPACES (including 2 accessible spaces)

CONDO-HOTEL:
8 SPACES

TOWNHOUSE (1.5 per unit rounded)
1 ATTACHED GARAGE SPACE + 5 SURFACE SPACES

A.02 ILLUSTRATIVE PLAN

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Schedule 1 (3 of 11)

A HYDROSEED AREA: NATIVE GRASSES

B MULCH TOPPED GARDEN BEDS: NATIVE SHRUBS AND GROUND COVERS MIX OF #1 /#2 POT EVERGREEN HUCKLEBERRY, RED OSIER DOGWOOD, DULL OREGON GRAPE, AND SWORD FERN

C RETAIN EXISTING TREES OR ALLOW FOR MIX OF #1 POT SMALL EVERGREEN HUCKLEBERRY AND SWORD FERNS AND 5m HEIGHT WESTERN RED CEDAR, SITKA SPRUCE AND DOUGLAS FIR

D ACCESSIBLE HARD SURFACE PAVING

E LOW VOLTAGE GROUND LIGHTING BOLLARDS

PLANT LIST

		SIZE
TREES		
CORNUS NUTTALLII	PACIFIC DOGWOOD	5cm Cal.
MALUS FUSCA	PACIFIC CRABAPPLE	5cm Cal.
THUJA PLICATA	WESTERN RED CEDAR	3m Height
PICEA SITCHENSIS	SITKA SPRUCE	3m Height
PSEUDOTSUGA MENZIESII	DOUGLAS FIR	3m Height
NATIVE SHRUBS:		
POLYSTICHUM MUNITUM	SWORD FERN	#1 POT
CORNUS SOLONIFERA	RED-OSIER DOGWOOD	#2 POT
VACCINIUM OVATUM	EVERGREEN HUCKLEBERRY	#2 POT
GROUND COVER:		
KINNIKINNIK		10cm
GAULTHERIA SHALLON	COMMON BEARBERRY SALAL	#1 POT

DEVELOPMENT PERMIT ONLY
NOT FOR CONSTRUCTION

Note: Landscape design is conceptual only.
Detailed landscape plan and plant mix to be provided at building permit stage.
Final landscape design to be prepared by registered Landscape Architect.

1 / A.03 CONCEPTUAL LANDSCAPE PLAN
Scale: NTS

A.03 PENINSULA ROAD LANDSCAPE PLAN

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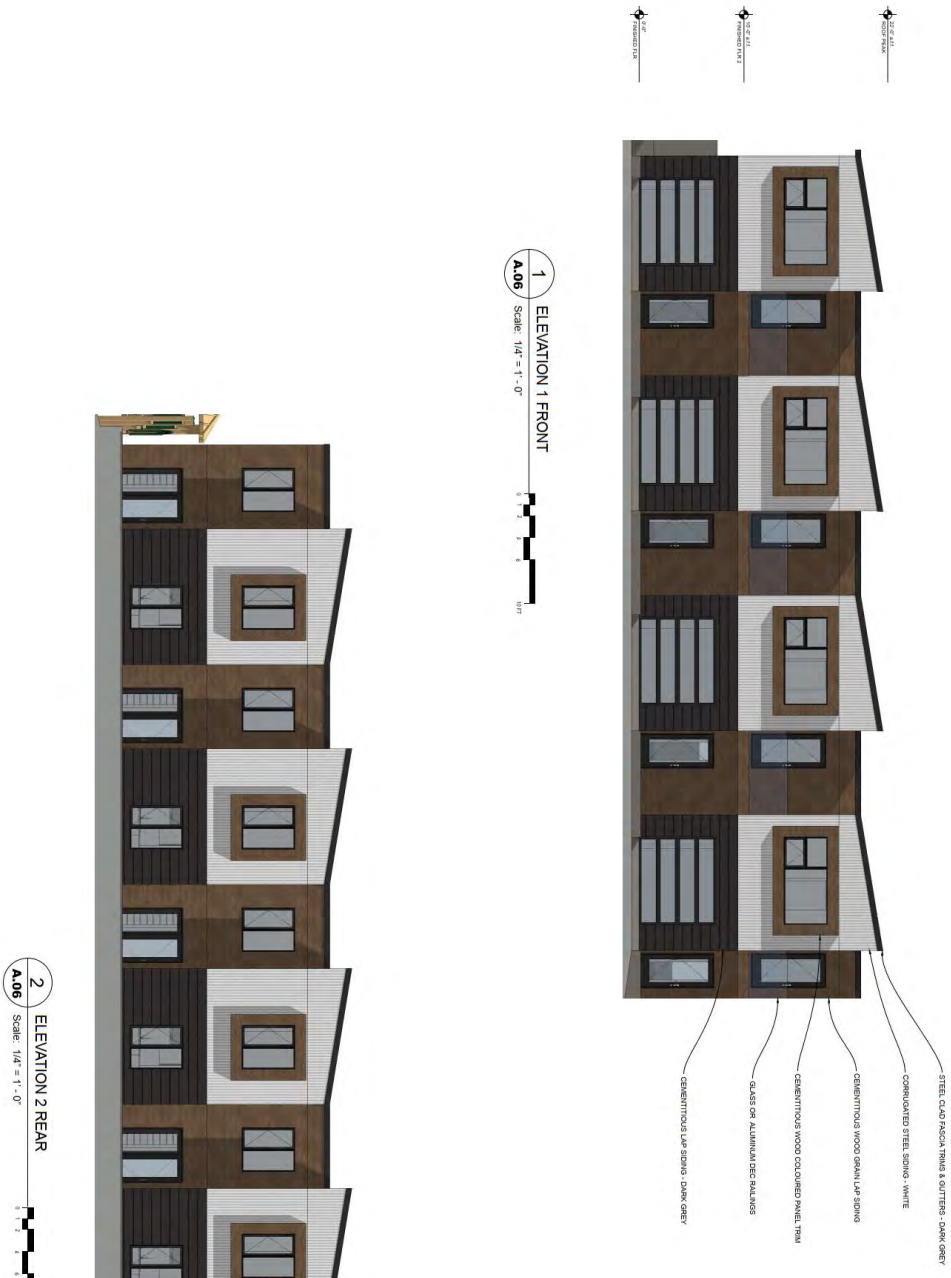
Schedule 1 (4 of 11)



A.06 ELEVATIONS

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Schedule 1 (5 of 11)

A.07 ELEVATIONS

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Schedule 1 (6 of 11)

A.08 | ELEVATIONS

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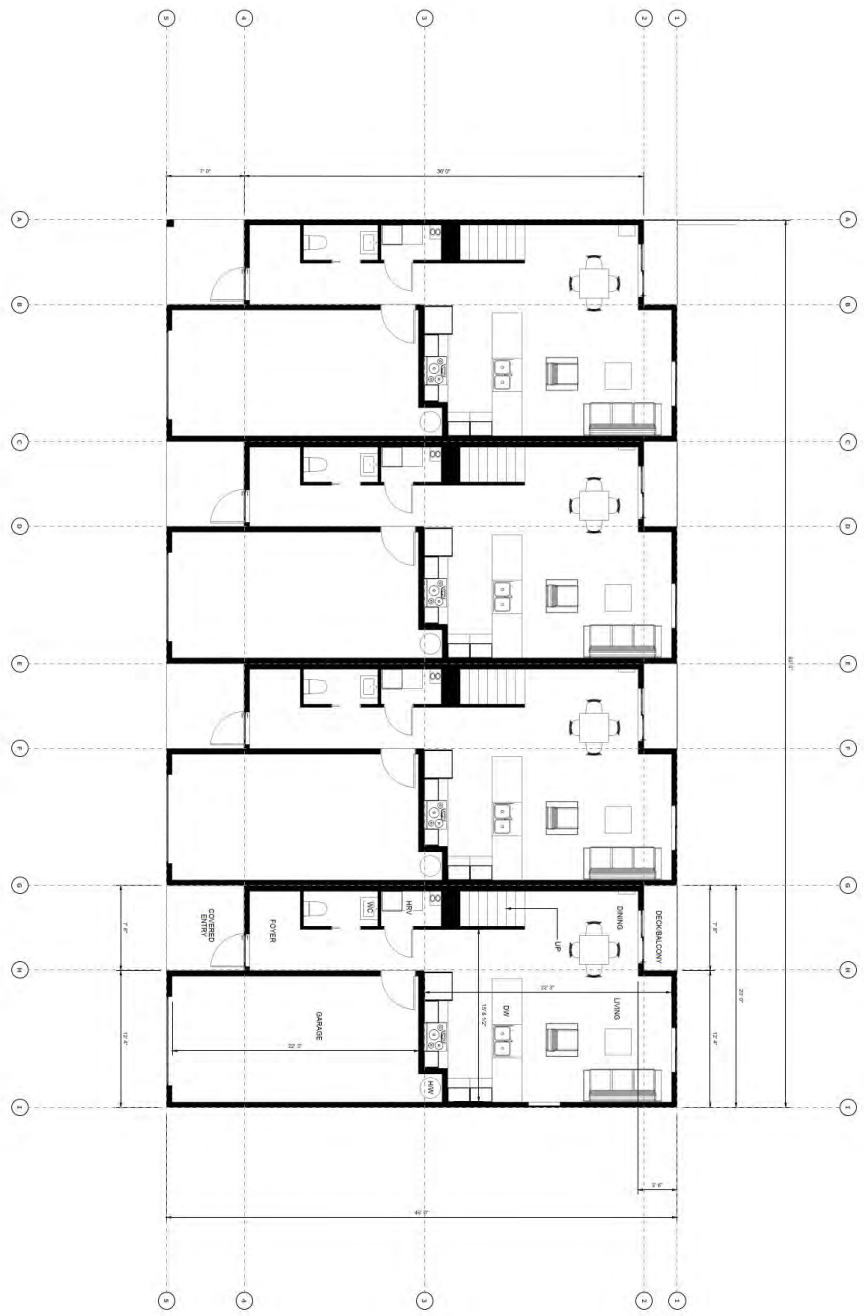
Schedule 1 (7 of 11)

NOTES:
DIMENSIONS INCLUDE EXTERIOR SHEATHING
INTERIOR WALLS MEASURED FROM/TO FRAMING



1 A.09 FP1
Scale: 1/4" = 1' - 0"

A.09 1ST FLOOR PLAN TOWNHOUSE

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Schedule 1 (8 of 11)

NOTES

DIMENSIONS INCLUDE EXTERIOR SHEATHING
INTERIOR WALLS MEASURED FROM/TO FRAMING

1 / A-10 FP2
Scale: 1/4" = 1' - 0"

A.10 | 2ND FLOOR PLAN TOWNHOUSE

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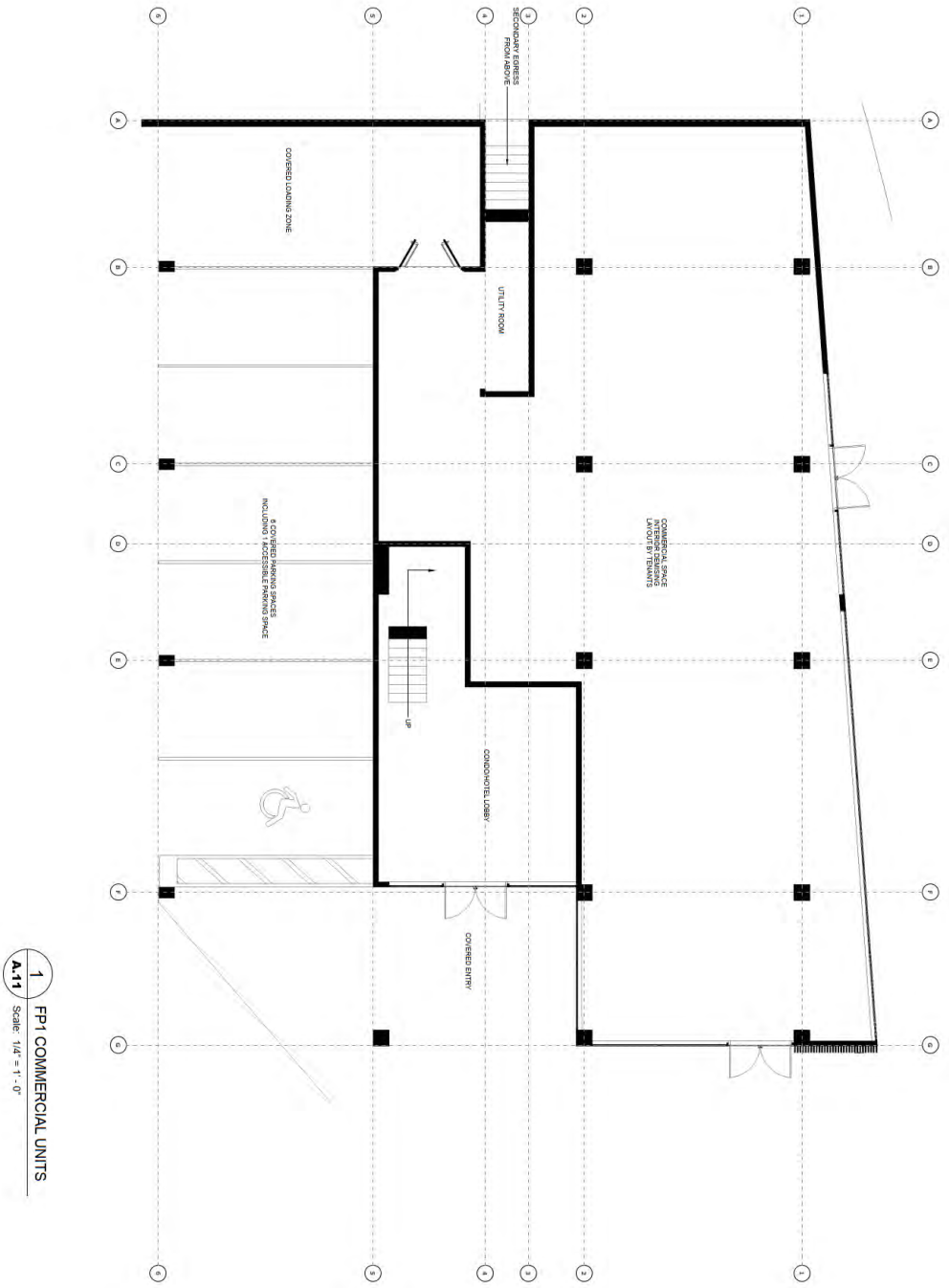
Schedule 1 (9 of 11)



1 / A-11 FP1 COMMERCIAL UNITS
Scale: 1/4" = 1' - 0"

A-11 | 1ST FLOOR PLAN MIXED USE BLDG 1 COMMERCIAL

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Schedule 1 (10 of 11)

1 A.12 FP2 CONDO/HOTEL UNITS
Scale: 1/4" = 1'-0"

A.12 2ND FLOOR PLAN
MIXED USE BLDG 1
CONDO HOTEL

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Schedule 1 (11 of 11)

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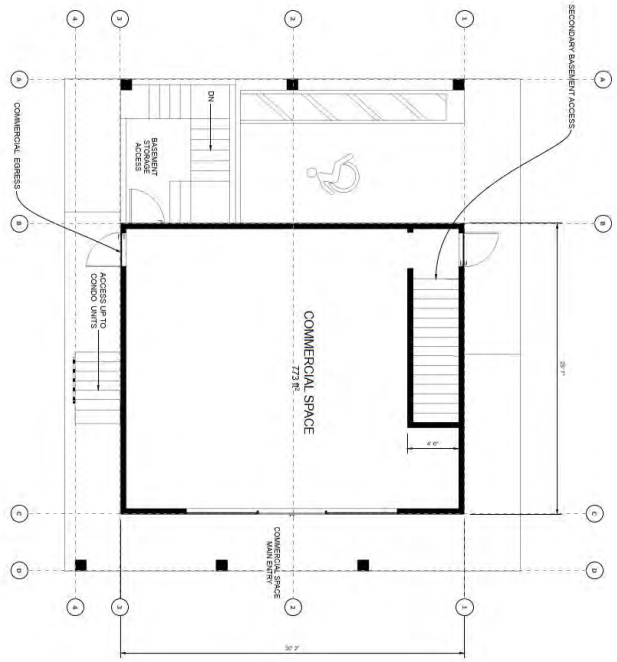

1 A.13 FP 1 COMMERCIAL UNITS
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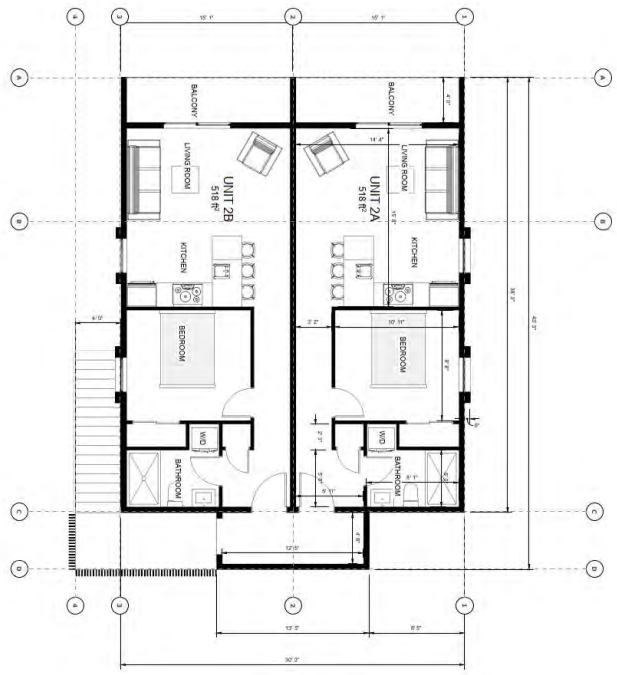

2 A.13 FP2 CONDO/HOTEL UNITS
Scale: 1/4" = 1'-0"

A.13 2ND FLOOR PLAN
MIXED USE BLDG 2

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Schedule 2 (1 of 5)

Terms and Conditions

As a condition of the issuance of this Permit, the Permittee representing the Lands hereby to comply with all following Impact Reductions and Mitigation Measures, determined by Qualified Environmental Professional (QEP) as necessary to avoid negative impacts to environmental habitats within and adjacent to the Property.

The following mitigation measures are recommended regarding the design phase:

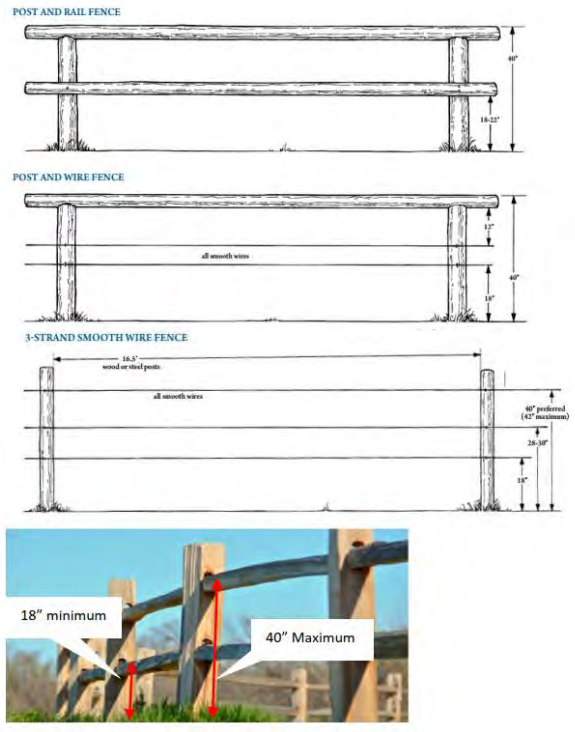
1. Maintaining and protecting the 10m Streamside Protection and Enhancement Area (SPEA) for Stream 1
    a. All proposed clearing, construction, storage of materials, and machine access during construction will be outside of the 10 m SPEA
    b. Due to the significant clearing of the forest on the subject property, and the steep banks of Stream 1 adjacent to the proposed development, A certified arborist or danger tree assessor must be retained to assess proposed clearing activities. If needed, a plan to limit wind effects on newly exposed trees as a result of clearing may be needed.
2. Stormwater Management
    a. Due to the significant amount of coverage of impermeable surfaces proposed on the subject property, it is important to ensure that rainwater runoff is not piped or otherwise channelized into the 10 m SPEA of Stream 1 as it will likely increase the flashiness of flow patterns and exacerbate problems caused by erosion.
    b. To minimize the impact of runoff, drainage infrastructure associated with new development must be designed by a Qualified Engineering Professional specializing in hydrology to ensure that existing hydrological conditions of Stream 1 are retained. Design guidelines and target conditions of the stormwater infrastructure are recommended to be adapted from A Guidebook for British Columbia: Stormwater Planning
3. Restricting Use of Sensitive Habitats
    a. The development of residential, commercial, and tourism on the subject property will drastically increase the amount of human use adjacent to the SPEA
    b. To avoid such impacts to the sensitive riparian habitat, the 10 m SPEA or subject property boundary (whichever is further from Stream 1) must be fenced to discourage access. Any fences must, however, be designed to allow for the free passage of wildlife by using a combination of the following design characteristics:
        i. Gaps are left in fence panels where existing animal migration routes (ie. Deer paths) are evident.
        ii. Maximum height 1 m (40”).
        iii. Provide sections that meet “under passage” requirement of 0.6 m (18”).

Schedule 2 (2 of 5)

iv. Fence should be easily visible.

c. No part of the fence will have a negative impact on the root zones of trees within environmental setbacks and will be installed no closer than 10 m from the Top of Bank as flagged on November 1, 2022. Appropriate Root Protection Zones (RPZs) for the protection of all trees within the 10 m SPEA will be determined by a qualified arborist and the fence will be installed outside of these zones.

d. Examples of the recommended fencing options are shown below:



4. Restoration Plan

a. The SPEA for Stream 1 is in excellent condition, therefore there are no recommendations for restoration at this time, and the emphasis is on protection as described in Schedule 2.

The following mitigation measures are recommended regarding the construction phase:

1. Monitoring and Enforcement

a. As laid out in the District of Ucluelet Official Community Plan, monitoring and enforcement of a proposed development site should be a collaborative effort between Local Government, the QEP employed by the developer, landowners, non-government organizations (NGOs) such as stream keepers, and the public. The public or NGOs can inform the District of violations.

Schedule 2 (3 of 5)

b. The property owner must contact the QEP prior to commencing work on the proposed development, to review the requirements in this report and to ensure all the necessary mitigation measures are in place prior to starting work.
c. The QEP must be contacted if an unanticipated issue occurs during construction, such as a hydraulic spill into the SPEA or Stream 1, and the QEP will follow-up promptly with guidance and applicable reporting.
d. A post construction monitoring site visit must be done by the QEP to ensure that the new development is in compliance with the measures in this report and that the SPEA remains intact.

2. Vegetation Management, Disturbance or Removal
    a. Clearing limits must be flagged or clearly identified prior to construction, and areas outside of the limits will be protected from disturbance. This is particularly important with respect to the SPEA so that no unintentional encroachment into the protected area can occur during site clearing works.
    b. Temporary fencing will be established along the SPEA boundary and any root protection zones identified by an arborist prior to the start of work. Temporary fencing must be highly visible, and all workers made aware of the sensitivities of protected areas. Temporary fencing must be replaced with permanent fencing as soon as practicable and prior to substantial completion of the project.
    c. Prevent the spread of invasive plant species that could be found on site by cleaning equipment before moving into new areas. Remove all weeds and suspect plants from equipment and vehicles to prevent the spread of invasive species. If encountered, separate cleared material containing invasive species from other cleared material and perform disposal at an appropriate transfer facility (i.e. landfill).
    d. Restore bare soil as quickly as possible after disturbance using a native seed mix or native plants to prevent invasive species from establishing.
3. Wildlife Habitat Alteration, Disturbance, or Loss
    a. Do not destroy, remove or clear any active bird nests.
    b. All clearing activities should occur outside of the migratory bird nesting window for this region, which is approximately March 15th to August 15th. Although it is preferable to have clearing completed outside this nesting window, should any clearing be required to happen within this timeframe, a bird nest assessment must be undertaken no earlier than five days prior to the required clearing by a Qualified Environmental Professional with experience identified bird nests.
    c. All wildlife attractants should be secured on the work-site. No food, food waste, cook stoves, garbage, drink containers (full or empty), recyclable materials will be left neither unattended nor accessible to wildlife.

Schedule 2 (4 of 5)

d. There is a low potential of amphibians (both adults and juveniles) migrating near the western edge of the worksite, especially during heavy rainfall events throughout the fall, winter, and spring. If any salamanders or frogs are observed on the work site, care should be taken to isolate these animals from potential traps such as deep excavations by using silt fencing or poly as needed.

4. Sediment and Erosion Control
    a. Erosion control measures that prevent sediment from entering Stream 1 will be an important element of construction. Sediment laden water being released into aquatic habitat can harm aquatic life stages of amphibians as well as fish.
    b. Filter fabric dams, rock check dams, settling ponds, geotextiles, French drains, interception ditches, and silt fencing should be used as needed on a site-specific basis to control erosion. Filtration should be accomplished using filter fabric keyed into substrates and banks and elevated using stakes. Silt fencing is not an acceptable mitigation technique to control erosion in flowing ditches; however, it is useful for containing slumping areas of soil and for use as baffles to slow water velocities.
    c. Excavation should be stopped during intense rainfall events or whenever surface erosion occurs affecting Stream 1. Erosion and sediment control measures should be inspected within 24 hours after intense rainfall events.
    d. Runoff and stormwater are to be managed and directed away from areas of exposed soils.
    e. Wherever possible, soil stockpiles should be placed a minimum of 30 m from Stream 1 and in a location where erosion back into this stream cannot occur. Soil stockpiles with the potential to erode into Stream 1 should be covered with poly sheeting.
    f. Clearing should take place immediately prior to excavation and earthworks to minimize the length of time that soils are exposed.
5. Fuels and Hazardous Materials
    a. The accidental release of petroleum, oils, hydraulic fluids, lubricants, concrete additives, anti-freeze or other hazardous materials onto land surfaces or into waterbodies may result in degradation of habitat quality and could be a threat to human health. As such, it must be actively prevented.
    b. Any contractor working on site must establish and follow a spill response plan in the event of any spill. The spill response plan should be reviewed by all crew members regularly during tailgate meetings, especially machine operators as they are often the first line of defense.
    c. A large spill kit should be on hand at all times during construction. Spill response supplies must be capable of dealing with 110% of the largest potential spill and shall be maintained in good working order.
    d. All identified spills will be cleaned up immediately, and contaminated soils and vegetation will be removed for appropriate disposal.

Schedule 2 (5 of 5)

e. Refueling of equipment and maintenance of equipment with the potential for accidental spills (i.e,. oil changes, lubricants) should occur only at designated fueling stations and located at least 30 m from all waterbodies. Tarps should be laid down prior commencement of work to facilitate clean up.
f. All fuel, chemicals, and hazardous materials will be clearly marked and stored a minimum of 30 m from any waterbody.
g. If accidental mixing of fuels, chemicals, and hazardous materials does occur, the waste product will need to be removed to an approved disposal/recycling facility.
h. Pumps, generators, and jerry cans are to be placed on poly sheeting and sorbent pads or drip trays to contain spills.
i. Used oil, filters, and grease cartridge lubrication containers, and other products of equipment maintenance should be collected and kept in a secure receptacle for later disposal.
j. In the event of a spill, the following general guidelines should be followed:
    i. Stop work in the vicinity of the spill;
    ii. Deploy on-site personnel to build containment dykes or pump spilled contaminant into storage drums.
    iii. Apply sorbent pads and booms as necessary.
    iv. Dispose of all contaminated debris, cleaning materials, and absorbent material by placing in an approved disposal site.
    v. Debrief all site personnel on the incident and take additional precautions to ensure that similar accidents will not recur.
    vi. Spills to the receiving environment are to be reported to the Environmental Management BC (1-800-663-3456) if they exceed the reportable limits (e.g. 100 liters of fuel or oil or spills of any quantity to water).

6. Garbage and Waste
    a. Work areas should be kept in a safe, clean, and sanitary condition. All waste, rubbish and debris will be kept in a centralized location within the work area and removed from the project site at the end of each day.
    b. Waste containers should be wildlife and wind proof containers to prevent dispersal. Food or food waste should be stored in leak-proof storage containers or vehicles that will prevent access by wildlife throughout the workday.

DISTRICT OF UCLUELET

Schedule 3 (1 of 1)

As a condition of the issuance of this permit, the Permittee representing the Lands hereby agrees to comply with all following conditions in the Environmental Assessment Report (See Appendix D)

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To:	Mayco Noël, Project Proponent	Date:	December 2, 2022
CC:	Ian Kennington, Project Architect		
From:	Jamie Godfrey, Technologist Dusty Silvester, R.P.Bio.	Pages:	25
Cc:	Ucluelet Planning Department		

RE: Biophysical Assessment for 2102 Peninsula Road, Ucluelet, BC

This letter report is intended to inform the District of Ucluelet (DoU) of the current biophysical state of Lot 5, Plan VIP58757, District Lot 284, Clayoquot Land District with the PID: 018-743-633. This biophysical report is required as part of the development permit requirements for lands within Development Permit Area VI – Stream and Riparian Areas Protection as defined in the District of Ucluelet Official Community Plan, Bylaw 1306[1].

The objectives of this biophysical assessment are to:

1. Describe any previously unidentified sensitive habitats and species on the subject property;
2. Identify potential impacts to environmentally sensitive areas;
3. Provide recommendations for protection of and mitigation of impacts to environmentally sensitive areas if required.

This report is divided into the following categories:

TABLE OF CONTENTS

[1] District of Ucluelet. 2022. District of Ucluelet Bylaw No. 1306, 2022. Accessed from: https://ucluelet.ca/images/OCP_Bylaw_1306.pdf

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1 BACKGROUND

The site of proposed development is a 0.42 ha Service Commercial (CS-2)zoned lot northwest of the town center of Ucluelet. CS-2 zoning allows for vehicle accessible businesses on larger lots, with potential for residential or accommodation uses. The subject lot resides on the main arterial road access to Ucluelet and is bordered to the west and north by relatively well vegetated lands zoned for eco-industrial, and residential development, respectively. Lands to the east and south are mostly cleared of trees and have been developed for commercial uses (Figure 1).

Figure 1. Overview of the subject property (outlined in yellow) and surrounding land use.

1.1 PROPERTY OVERVIEW

The subject property lies within the jurisdiction of the District of Ucluelet and bears the legal description "LOT 5, Plan VIP58757 District Lot 284, Clayoquot Land District" and the PID: 018-743-633. It has previously been partially cleared but does not retain any permanent development other than two access roads (Photos 1, 2, and 3) which both connect to Peninsula Road. Development of lots surrounding the subject property is variable, with forest canopy being largely intact to the north and west, while there has been much more clearing to the south and east.

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The property lies within the Coastal Western Hemlock Very Wet Hypermaritime (CWHvh1) biogeoclimatic (BGC) zone, which covers lower elevations on much of British Columbia's western coasts. The moderate temperatures, low annual snowfall, and high humidity result in vigorous plant growth. Formalized vegetation plots were not conducted on the property; however, the vegetation community appears to closely match that of the CwYc-Salal site series of this BGC zone. Intact forest remains along the property's east and south boundaries that is dominated by western hemlock (*Tsuga heterophylla*) and western redcedar (*Thuja plicata*), with red alder (*Alnus rubra*) present around forest edges and in previously disturbed areas. There is a well-developed shrub layer consisting primarily of salal (*Gaultheria shallon*) and evergreen huckleberry (*Vaccinium ovatum*), with salmonberry (*Rubus spectabilis*) and thimbleberry (*Rubus parvifolius*) around forest edges and clearings. The forb layer is dominated by deer fern (*Blechnum spicant*) (Photos 2 and 4).

An unnamed fish bearing creek runs adjacent to the subject property on the neighboring property to the west. This creek runs roughly parallel to the western border of the subject property at a distance of between 15 and 20 m (Figure 2). It is the proximity of this creek to proposed development on the subject property that has triggered development permit requirements for lands within Development Permit Area VI – Stream and Riparian Areas Protection as defined in the District of Ucluelet Official Community Plan, Bylaw 1306[1]

1.2 PROPOSED DEVELOPMENT

The proposed development on the subject property consists of a mixed commercial and residential use plan. The development will cover almost the entire lot at 2102 Peninsula Road and extend onto a neighboring property to the east (Figure 2). The neighboring property included in the development proposal has no street address but has the assigned PID: 027-730-573. Development proposed on the subject property includes 4 separate buildings: 2 separate 4-unit townhomes, and 2 buildings with commercial space on the ground floor and condo-hotels on the second floor (Figure 3). A third 4-unit townhouse and communal green space are proposed for the neighboring lot with PID 027-730-573. All buildings will be connected by paved driveways and there will be a total of 46 parking spaces (Figure 2).

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Figure 2. Architectural drawing of the entire development proposal on 2102 Peninsula Road and the neighboring property with PID: 027-730-573. The subject property at 2102 Peninsula Road is approximately outlined by the yellow lines.

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Figure 3: Site Plan of proposed development on the subject property (Development extending to neighboring property not shown) in relation to Stream 1 and associated SPEA.

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2 METHODS

Background information on the property and potential sensitive species or ecosystem occurrences in proximity to it were obtained from the following sources:

1. District of Ucluelet Community Map (UkeeMap)[2];
2. Habitat Wizard[3];
3. Wildlife Tree Stewardship Atlas (WiTS)[4];
4. Great Blue Heron (GBHE) Management Team Atlas[5];
5. British Columbia Conservation Data Center[6]
6. British Columbia Species Explorer[7]
7. Satellite imagery.

A site assessment of aquatic and terrestrial habitats and species was carried out on November 1, 2022, according to the methodologies explained under the headings below.

2.1 AQUATIC HABITATS AND SPECIES

Criteria for delineating streams was based primarily on *Riparian Areas Protection Regulation* (RAPR) methodology[8]. All aquatic habitat was delineated using Avenza software on an iPad mini 4; therefore, the accuracy of these features depicted in site plans will vary depending on forest cover and satellite availability at the time of assessment. Buffers and setback areas for the streams were then displayed using ArcMap 10.5 software. All mapped linework produced by CEL is for illustration purposes only and a legal survey must establish the physical setbacks at the site level. No fish sampling was conducted as a part of this assessment.

2.2 TERRESTRIAL HABITATS AND SPECIES

Survey methods for terrestrial elements or Environmentally Sensitive Areas (ESAs) were directed in part by those outlined in *Environmental Best Management Practices for Urban and Rural Land Development in British Columbia*[9], and the *Field Manual for Describing Terrestrial Ecosystems*[10]. Trees were inspected for bird nests and habitat values

[2] District of Ucluelet (2022). UkeeMap. Accessed from <https://ucluelet.ca/community/ukeemap/>

[3] Ministry of Environment and Climate Change (2022). Habitat Wizard. Accessed from <http://maps.gov.bc.ca/ess/hm/habwiz/>

[4] Wildlife Tree Stewardship (WiTS) Program (2022). Nest Tree Report. The Community Mapping Network. Accessed from <http://www.cmnmaps.ca/wits/>

[5] Great Blue Heron (GBHE) Management Team (2022). The Community Mapping Network. Accessed from <http://cmnmaps.ca/GBHE/>

[6] BC Conservation Data Center. CDC iMap (2022). Accessed from <http://maps.gov.bc.ca/ess/sv/cdc/>

[7] BC Conservation Data Center. (2022). Species and Ecosystems Explorer. Accessed from < http://a100.gov.bc.ca/pub/eswp/>

[8] Ministry of Forests, Lands, Natural Resource Operations & Rural Development. (2019). Riparian Areas Protection Regulation Technical Assessment Manual. Accessed from: < https://www2.gov.bc.ca/assets/gov/environment/plants-animals-and-ecosystems/fish-fish-habitat/riparian-areas-regulations/rapr_assessment_methods_manual_for_web_11.pdf>

[9] Ministry of Environment (2014). Develop With Care: Environmental Guidelines for Urban and Rural Land Development. Accessed from <https://www2.gov.bc.ca/gov/content/environment/natural-resource-stewardship/laws-policies-standards-guidance/best-management-practices/develop-with-care>

[10] Ministry of Forests, Lands and Natural Resource Operations (formerly Ministry of Forests and Range) and Ministry of Environment (2010). Field Manual for Describing Terrestrial Ecosystems, 2nd Edition. Accessed from <http://www2.gov.bc.ca/assets/gov/environment/plants-animals-and-ecosystems/conservation-data-centre/field_manual_describing_terrestrial_ecosystems_2nd.pdf >

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using Nikon Prostaff 3S binoculars, and *Plants of Coastal British Columbia*[11] was used as an aid for plant identification as needed.

2.1 SPECIES AT RISK AND RAPTOR NESTING

An office-based inquiry of Species at Risk occurrences on and near the property was completed using the Provincial *CDC iMap*[6] and *Species Explorer*[7]. Raptor and heron nesting sites were researched using the online *WiTS Atlas*[4] and the *GBHE Atlas*[5] and assessed visually during field work. The on-site assessment was completed according to guidelines in *Environmental Best Management Practices for Urban and Rural Land Development.*

3 RESULTS

Development on the property is affected by one DoU Environmental Development Permit Area (DPA):

1) DPA VI (Stream and Riparian Areas Protection) – Associated with a creek running roughly north-south through the neighboring property to the west.

The results discussed in the following sections are intended to address the primary concerns of this Environmental DPA, as well as address any other potential environmental concerns with development on the subject property.

3.1 AQUATIC HABITAT - STREAM 1

There is one stream that flows south to north along the western edge of the subject property (Figure 3, Photos 5 and 6). This stream is unnamed according to the available online databases and is referred to as "Stream 1" in this report.

Stream 1 appears to originate in a wetland approximately 500 m upstream of the subject property and flows into the ocean at Ucluelet Inlet approximately 150 m north of the subject property. Adjacent to the subject property the stream channel is characterized by well-defined banks, a relatively steep bed gradient (~ 3 %), and substrates that consist primarily of cobble, gravel, and sand. There are several Coarse Woody Debris (CWD) complexes overhanging Stream 1 (Photo 6) which provide shade and refuge habitat for fish. Additionally, the general stream profile has a natural riffle/pool sequence and meandering flow path that suggests it has been subject to minimal disturbance in the past. With a relatively steep gradient and banks that slope away from the stream, there are no concerns with an active floodplain or active meandering channel at this location. The steep (60% slope) eastern (right) bank of Stream 1 adjacent to the subject property (Photo 7) is very well vegetated with a multi-layer tree and undergrowth canopy; however, it could present erosion concerns if development were to encroach too closely or if stormwater is not managed appropriately. As such, the stream setback was calculated from the Top of Bank (TOB) rather than the High-Water Mark (HWM) as per provincial *Riparian Areas Protection Regulation* (RAPR) standards.

The riparian area of Stream 1 lies mostly on the neighboring property to the west, and consists of mature forest vegetation, with a thick shrub layer and mature trees. Dominant shrub species include salal, deer fern, and evergreen huckleberry, and dominant tree species include western red cedar, western hemlock, and Sitka spruce (*Picea sitchensis*). Overall, the riparian vegetation is of excellent quality with mature forest, overhanging vegetation for

[11] Pojar, J. and A. Mackinnon. 2004. *Plants of Coastal British Columbia Including Washington, Oregon, and Alaska*. Lone Pine Publishing, Vancouver B.C.

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nutrient inputs and shade, plenty of large woody debris, a thick shrub layer, and well-established root networks (Photos 5 and 7).

The instream habitat of Stream 1 consists of both rearing and spawning habitat (Photo 6), making it of high value for fish. There are local reports of both cutthroat trout (*Oncorhynchus clarkii*) and Coho salmon (*Oncorhynchus kisutch*) utilizing this stream; however, fish presence is not documented on the available online resources and no fish sampling was completed as part of this assessment. Although no evidence of salmon spawning was found during the November 1, 2022 site visit, a previous stream assessment by Current Environmental Ltd. (CEL) on this stream in November 2019 did confirm the presence of a Coho salmon redd containing eggs in Stream 1 adjacent to the subject property.

Finally, Stream 1 crosses under Peninsula Road through a 900 mm culvert that outlets north of the road. This culvert outlet was observed for issues with fish passage, and there appeared to be none; the culvert was partially embedded, and the outlet pool backwatered into the culvert.

3.1.1 Stream 1 Setbacks

Stream measurements were taken and used to calculate a Streamside Protection and Enhancement Area (SPEA) according to *Riparian Areas Protection Regulation* (RAPR) methodology. A 100 m section of Stream 1 was walked immediately adjacent to the subject property, and an average width of 1.7 was calculated. A width of 1.7 m for a known fish stream corresponds to a 10 m setback under RAPR. Furthermore, RAPR dictates that where streambanks are steeper than a 3:1 slope, the SPEA must be measured from the point where the slope becomes less than 3:1 for a distance of at least 15 m (Top of Bank). As such, **the 10 m SPEA for Stream 1 was measured at the TOB of the right bank (Figure 2)**. **The development as proposed does not overlap with this setback**.

3.2 TERRESTRIAL HABITAT

The subject property supports fragmented second growth forest indicating that it has previously been cleared for development; however, the history of the site is unknown as no structures remain. Existing evidence of disturbance on the site consists of two access roads with remnant logs piled along the edges (Photo 3), and an early seral stage forest growing in the central portion of the property where the original forest canopy was removed. Forest edges and open areas in the center of the property are dominated by red alder, which is a pioneering species that grows into disturbed sites and begins the process of succession towards climax species assemblages dominated by conifers (Photo 2). Portions of the property that are relatively undisturbed exhibit a plant community typical of "western cedar – yellow cedar – salal" sites within the CWHvm1 BGC subzone (Photo 1). This plant community indicates a relatively dry site with low to moderate levels of soil nutrients and is relatively common throughout the CWHvm1 BGC subzone.

The subject property is surrounded by relatively high levels of development, with the main highway access for Ucluelet – Peninsula Road – forming the northern border of the property, and industrial development bordering the property to the south and east. Based on the previous and continued development on and surrounding the subject property, it has limited value as a wildlife corridor.

The overall value of terrestrial habitat on the subject property in its current state is considered low due to:

a) **Fragmentation of forest canopy.**
b) **Large portions of early seral stage forest with dense undergrowth.**
c) **Proximity to disturbances such as highway traffic and industrial activity.**

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3.2.1 Nesting Birds

An office-based review of known bald eagle and great blue heron nests was conducted prior to the November 1, 2022 site visit and revealed that the closest known bald eagle nest was approximately 1.2 km from the subject property, and the closest great blue heron nest was almost 10 km from the property.

The property was inspected for any undocumented nests sites belonging to bird species listed under Section 34 of the BC *Wildlife Act* and although several suitable trees were found (Photo 8), there was no evidence of current or past nesting activity. Additionally, it was observed that the property does retain enough tree and shrub cover to provide ample nesting habitat for a range of songbird species. **To ensure that no nests or eggs are damaged, site clearing should be planned outside of the nesting bird window for Vancouver Island (March 15 – August 15). If works cannot be timed to fall outside of this window, then pre-clearing nest surveys should be completed.**

3.3 SPECIES/ECOLOGICAL COMMUNITIES AT RISK

According to the provincial Conservation Data Center iMap application, the subject property overlaps the historical range of one red-listed plant species – Tall woolly-heads (*Psilocarphus elatior*). Additionally, the BC Species and Ecosystems Explorer reveals 10 other provincially listed species that have range and habitat requirements that overlap with the subject property. Table 2 below summarizes the results from the BC Species and Ecosystems Explorer, while Section 3.3.1 discusses the potential of Tall woolly-heads being found on the subject property.

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Table 1. List of potential Species at Risk utilizing the subject property at 2102 Peninsula Road.

Common Name	BC List Level	Habitat Suitability at 2102 Peninsula Road
Northern Goshawk, *laingi subspecies* (nesting)	Red listed	**Low** – Some trees large enough for nesting or roosting; however, the proximity to a main road may deter potential nesters. Additionally, the preferred forest type for this species is a closed canopy and open understory, while forests on the subject property have a fragmented canopy with dense undergrowth.
Keen's Long-eared Myotis (roosting)	Blue listed	**Low** – Some trees with peeling bark that could provide summer roosting habitat, and riparian areas on site have potential foraging, but no critical winter hibernation sites available.
Band-tailed Pigeon (nesting)	Blue listed	**Low to moderate** – Some trees large enough for nesting or roosting, however the proximity to a main road may deter potential nesters. Foraging potential is moderate as there are many berry producing shrubs present (primarily salal).
Western Screech-owl (nesting)	Blue listed	**Low to moderate** – As secondary cavity nesters, this species relies on larger excavations made by woodpeckers. While some of the trees are large enough to support nesting, there were no dead or dying snags with existing cavities identified on the property.
Northern Pygmy-owl (nesting)	Blue listed	**Low to moderate** – As with the Western Screech-owl, this species is a secondary cavity nester. While some of the trees are large enough to support nesting, there were no dead or dying snags with existing cavities identified on the property.
Great Blue Heron (nesting)	Blue listed	**Low**– Low potential for nesting as there are some tall mature trees, however this species is sensitive to disturbance, and the subject property is immediately adjacent to a main road and an industrial property. No nests were observed.
Townsend's Big-eared Bat (roosting)	Blue listed	**Low** – Some trees with peeling bark that could provide summer roosting habitat, and riparian areas on site have potential foraging, but no critical winter hibernation sites available.
Red-legged Frog (adult life stages)	Blue listed	**Low** – Stream 1 may be a potential adult migration corridor towards the wetland upstream, and adult foraging/refuge habitat under coarse woody debris on the forest floor; however this is on the neighboring property. Unlikely for frogs to migrate up the steep banks to the subject property.
Bald Eagle (roosting/nesting)	Yellow listed	**Low to moderate** – Moderate potential for perching with some mature trees on the subject property, however no previous nesting site identified in this area, and bald eagles have high nesting site fidelity.
Black Bear (summer forage and denning)	Yellow listed	**Low to Moderate** – Moderate likelihood of summer foraging with berry shrubs on the subject property– appropriate forest but too close to a main road.
Cutthroat trout	Blue listed	**Likely (Stream 1)** – Due to lack of stream habitat, there is no potential for this species to exist on the subject property; however, it is known to inhabit Stream 1.

3.3.1 Tall Woolly-Heads

Tall Woolly-heads (*Psilocarphus elatior*) is a small plant in the family Asteraceae known to exist in the southeastern portion of Vancouver Island in the Coastal Douglas-fir BCG zone. Typical habitats are vernal pools in Garry oak meadows which are characterized by sun exposure and seasonal wetness other than very dry summer months. No such habitat was found to exist at the subject property, as forest plants create a very shady environment in intact

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areas of the property that are not suitable for Tall Woolly-head growth, while open areas of the property only exist due to previous disturbance. Furthermore, the recorded occurrence near Ucluelet is from a specimen collected in 1909, and no further specimens have been found on the west coast of Vancouver Island in any subsequent collecting efforts[12]. **The likelihood of Tall Woolly-heads persisting anywhere around Ucluelet is extremely low.**

4 POTENTIAL ENVIRONMENTAL IMPACTS

Potential environmental impacts that may occur as part of the proposed development at 2102 Peninsula Road are outlined in the following sections. Section 5 describes the mitigation strategies that should be followed to minimize any potential environmental impacts both during the design phase and during construction.

4.1 IMPACTS TO HYDROLOGICAL FUNCTION AND WATER QUALITY

Increases in the total impervious surfaces and drainage networks (roof leaders and piping) associated with residential developments can impact the hydrological response of local areas. This can result in increased peak flows to downstream watercourses resulting in channel degradation such as increased erosion and channel aggradation, decreases in habitat complexity, channel widening, and flooding of terrestrial areas. As well, the decreased retention capabilities of soils and seasonally flooded areas can seriously impact the availability of wetted habitat during periods of drought.

Surface runoff from driveways, rooftops, and residential yards can result in negative impacts on aquatic resources as a result of increased pollution loading that typically includes hydrocarbon, metal, and fertilizer-based elements related to vehicle use and residential yard and house maintenance. Due to the extent of impermeable surfaces planned in this development as well as their proximity to the steep bank of Stream 1, impacts to hydrological function and water quality of Stream 1 are considered moderate. See Section 5.1.2 for mitigation measures.

4.2 CONSTRUCTION RELATED IMPACTS

Land clearing and other construction-related activities can cause serious degradation of habitat through the release of sediments to downstream habitats, destruction of trees, the spread of invasive plants, and the unnecessary encroachment into prescribed setback areas. Construction-related impacts to aquatic habitat and environmentally sensitive features on site can be managed through the effective implementation of the mitigation measures outlined in Section 5.2 of this report.

4.3 LOSS OF WILDLIFE HABITAT AND SPECIES AT RISK

The existing plant community on the property is highly fractured and disturbed and will largely be removed during the proposed development process. Based on observations made during the process of the site investigation, no species at risk were observed and the assessed value of the habitat on the property for all species at risk considered is low or low-moderate. Due to the subject property being closely associated with ongoing industrial development and traffic noise, it is also not considered highly valuable as a wildlife corridor.

The overall habitat quality of the property is low, and if measures are put in place prior to construction to protect the sensitive habitats of Stream 1 there is expected to be minimal loss of high-quality wildlife habitat.

[12] COSEWIC. 2018. COSEWIC Assessment and Status Report on the Tall Woolly-heads *Psilocarphus elatior* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa.

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4.4 INCREASED HUMAN INTERACTION WITH SENSITIVE HABITATS

A new development on the subject property of the size being proposed will bring more human/wildlife interaction, and the potential for increased foot traffic within the riparian area of Stream 1. Another potential impact is the interaction of pets (dogs and cats) on nesting birds and salmon habitat (especially spawning sites) in Stream 1. The potential for increased interaction with sensitive habitats is considered moderate. Mitigation measures to minimize impacts are outlined in Section 5.1.3 below.

5 MITIGATION MEASURES

Mitigation measures with respect to the design and the construction of the new development at 2102 Peninsula Road will be implemented to minimize impacts to the identified sensitive habitats outlined in this report. These mitigation strategies are outlined below.

5.1 MITIGATION STRATEGIES – DESIGN

5.1.1 Maintaining and Protecting the 10 m SPEA for Stream 1

The effective implementation of the prescribed 10 m Streamside Protection and Enhancement Area (SPEA) measured from the top-of-bank of Stream 1 (Figure 2) will help ensure ecosystem processes will remain largely intact after construction is completed. All proposed clearing, construction, storage of materials, and machine access during construction will be outside of the 10 m SPEA for Stream 1. Additionally, with significant clearing of the forest on the subject property for the proposed development, and the steep banks of Stream 1 adjacent to the proposed development, windthrow is a concern. **A certified arborist or danger tree assessor must be retained to assess proposed clearing activities and develop a plan to limit wind effects on newly exposed trees as a result of clearing, if needed.**

5.1.2 Stormwater Management

Due to the significant amount of coverage of impermeable surfaces proposed on the subject property, it is important to ensure that rainwater runoff is not piped or otherwise channelized into the 10 m SPEA of Stream 1. Piping and channelizing stormwater runoff increases the flashiness of flow patterns in streams, and exacerbates problems caused by erosion. The steep bank of Stream 1 adjacent to the proposed development will accelerate any erosion caused by insufficient drainage infrastructure. **In order to minimize the impacts of runoff, drainage infrastructure associated with new development must be designed by a Qualified Engineering Professional specializing in hydrology to ensure that existing hydrological conditions of Stream 1 are retained**. Design guidelines and target conditions of the stormwater infrastructure are recommended to be adapted from *A Guidebook for British Columbia: Stormwater Planning*[13].

5.1.3 Restricting Use of Sensitive Habitats

While the development as proposed does not encroach into the 10 m SPEA of Stream 1, the development of residential, commercial, and tourism on the subject property will drastically increase the amount of human use

[13] Government of British Columbia. 2002. A Guidebook for British Columbia: Stormwater Planning. Accessed from: https://www2.gov.bc.ca/assets/gov/environment/waste-management/sewage/stormwater_planning_guidebook_for_bc.pdf

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adjacent to the SPEA. If left unmarked, there is a relatively high potential for people and pets to create desire trails in the forested edge of the subject property, including scrambling down the banks to access the stream. **To avoid such impacts to the sensitive riparian habitat, the 10 m SPEA or subject property boundary (whichever is further from Stream 1) must be fenced to discourage access**. Any fences must, however, be designed to allow for the free passage of wildlife by using a combination of the following design characteristics:

1. Gaps are left in fence panels where existing animal migration routes (ie. Deer paths) are evident.
2. Maximum height 1 m (40”).
3. Provide sections that meet “under passage” requirement of 0.6 m (18”).
4. Fence should be easily visible.

No part of the fence will have a negative impact on the root zones of trees within environmental setbacks and will be installed no closer than 10 m from the Top of Bank as flagged on November 1, 2022. Appropriate Root Protection Zones (RPZs) for the protection of all trees within the 10 m SPEA will be determined by a qualified arborist and the fence will be installed outside of these zones.

Examples of recommended fencing options are shown in Figure 4 below:

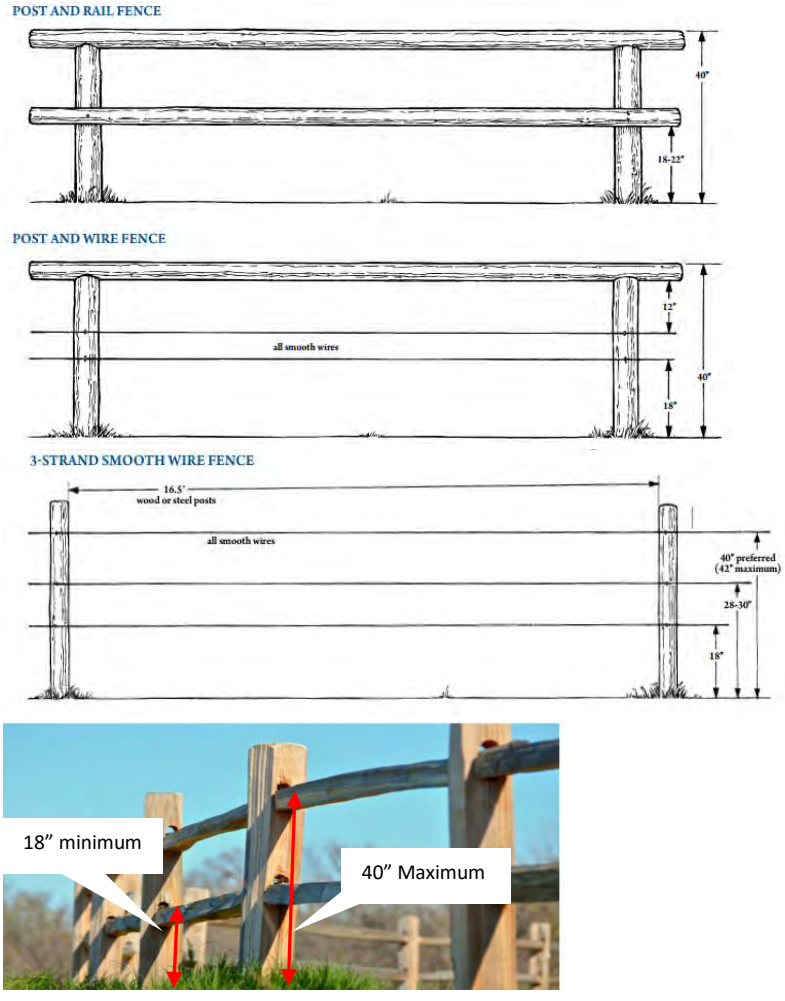

Figure 4: Fence examples meeting criteria for supporting ungulate and bird passage including high-visibility, low height, and under passage. Gaps in fence panels are also required where animal migratory routes are observed.

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5.1.4 Restoration Plan

As previously described, the SPEA for Stream 1 is in excellent condition. There are multiple layers of forest succession, and healthy mature trees and shrubs in the forest. As such, there are no recommendations for enhancement of the SPEA at this time. Instead, the emphasis is on protection, as described in the previous section 5.1.3 and 5.1.1. Development as proposed will not encroach within the 10 m SPEA (Figure 2).

5.2 MITIGATION STRATEGIES – CONSTRUCTION PHASE

The following table (Table 3) outlines the general environmental mitigation measures that should be followed during construction of the proposed development at 2102 Peninsula Road to protect the sensitive habitats described in this report.

Table 2. Environmental mitigation measures that should be followed during construction to minimize impacts to Stream 1.

5.2.1 Monitoring and Enforcement
1) As laid out in the District of Ucluelet Official Community Plan, monitoring and enforcement of a proposed development site should be a collaborative effort between Local Government, the QEP employed by the developer, landowners, non-government organizations (NGOs) such as stream keepers, and the public. The public or NGOs can inform the District of violations. 2) The property owner must contact the QEP prior to commencing work on the proposed development, to review the requirements in this report and to ensure all the necessary mitigation measures are in place prior to starting work. 3) The QEP must be contacted if an unanticipated issue occurs during construction, such as a hydraulic spill into the SPEA or Stream 1, and the QEP will follow-up promptly with guidance and applicable reporting. 4) A post construction monitoring site visit must be done by the QEP to ensure that the new development is in compliance with the measures in this report and that the SPEA remains intact.
5.2.2 Vegetation Management, Disturbance or Removal
1) Clearing limits must be flagged or clearly identified prior to construction, and areas outside of the limits will be protected from disturbance. This is particularly important with respect to the SPEA so that no unintentional encroachment into the protected area can occur during site clearing works. 2) Temporary fencing will be established along the SPEA boundary and any root protection zones identified by an arborist prior to the start of work. Temporary fencing must be highly visible, and all workers made aware of the sensitivities of protected areas. Temporary fencing must be replaced with permanent fencing as soon as practicable and prior to substantial completion of the project. 3) Prevent the spread of invasive plant species that could be found on site by cleaning equipment before moving into new areas. Remove all weeds and suspect plants from equipment and vehicles to prevent

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the spread of invasive species. If encountered, separate cleared material containing invasive species from other cleared material and perform disposal at an appropriate transfer facility (i.e. landfill).

4) Restore bare soil as quickly as possible after disturbance using a native seed mix or native plants to prevent invasive species from establishing.

5.2.3 Wildlife Habitat Alteration, Disturbance, or Loss

1) Do not destroy, remove or clear any active bird nests.
2) All clearing activities should occur outside of the **migratory bird nesting window for this region, which is approximately March 15th to August 15th**. Although it is preferable to have clearing completed outside this nesting window, should any clearing be required to happen within this timeframe, a bird nest assessment must be undertaken no earlier than five days prior to the required clearing by a Qualified Environmental Professional with experience identified bird nests.
3) All wildlife attractants should be secured on the work-site. No food, food waste, cook stoves, garbage, drink containers (full or empty), recyclable materials will be left neither unattended nor accessible to wildlife.
4) There is a low potential of amphibians (both adults and juveniles) migrating near the western edge of the worksite, especially during heavy rainfall events throughout the fall, winter, and spring. If any salamanders or frogs are observed on the work site, care should be taken to isolate these animals from potential traps such as deep excavations by using silt fencing or poly as needed.

5.2.4 Sediment and Erosion Control

1) Erosion control measures that prevent sediment from entering Stream 1 will be an important element of construction. Sediment laden water being released into aquatic habitat can harm aquatic life stages of amphibians as well as fish.
2) Filter fabric dams, rock check dams, settling ponds, geotextiles, French drains, interception ditches, and silt fencing should be used as needed on a site-specific basis to control erosion. Filtration should be accomplished using filter fabric keyed into substrates and banks and elevated using stakes. Silt fencing is not an acceptable mitigation technique to control erosion in flowing ditches; however, it is useful for containing slumping areas of soil and for use as baffles to slow water velocities.
3) Excavation should be stopped during intense rainfall events or whenever surface erosion occurs affecting Stream 1. Erosion and sediment control measures should be inspected within 24 hours after intense rainfall events.
4) Runoff and stormwater are to be managed and directed away from areas of exposed soils.
5) Wherever possible, soil stockpiles should be placed a minimum of 30 m from Stream 1 and in a location where erosion back into this stream cannot occur. Soil stockpiles with the potential to erode into Stream 1 should be covered with poly sheeting.
6) Clearing should take place immediately prior to excavation and earthworks to minimize the length of time that soils are exposed.

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5.2.5 Fuels and Hazardous Materials

1) The accidental release of petroleum, oils, hydraulic fluids, lubricants, concrete additives, anti-freeze or other hazardous materials onto land surfaces or into waterbodies may result in degradation of habitat quality and could be a threat to human health. As such, it must be actively prevented.
2) Any contractor working on site must establish and follow a spill response plan in the event of any spill. The spill response plan should be reviewed by all crew members regularly during tailgate meetings, especially machine operators as they are often the first line of defense.
3) A large spill kit should be on hand at all times during construction. Spill response supplies must be capable of dealing with 110% of the largest potential spill and shall be maintained in good working order.
4) All identified spills will be cleaned up immediately, and contaminated soils and vegetation will be removed for appropriate disposal.
5) Refueling of equipment and maintenance of equipment with the potential for accidental spills (i.e,. oil changes, lubricants) should occur only at designated fueling stations and located at least 30 m from all waterbodies. Tarps should be laid down prior commencement of work to facilitate clean up.
6) All fuel, chemicals, and hazardous materials will be clearly marked and stored a minimum of 30 m from any waterbody.
7) If accidental mixing of fuels, chemicals, and hazardous materials does occur, the waste product will need to be removed to an approved disposal/recycling facility.
8) Pumps, generators, and jerry cans are to be placed on poly sheeting and sorbent pads or drip trays to contain spills.
9) Used oil, filters, and grease cartridge lubrication containers, and other products of equipment maintenance should be collected and kept in a secure receptacle for later disposal.
10) In the event of a spill, the following general guidelines should be followed:
    a. Stop work in the vicinity of the spill;
    b. Deploy on-site personnel to build containment dykes or pump spilled contaminant into storage drums.
    c. Apply sorbent pads and booms as necessary.
    d. Dispose of all contaminated debris, cleaning materials, and absorbent material by placing in an approved disposal site.
    e. Debrief all site personnel on the incident and take additional precautions to ensure that similar accidents will not recur.
    f. Spills to the receiving environment are to be reported to the Environmental Management BC (1-800-663-3456) if they exceed the reportable limits (e.g. 100 liters of fuel or oil or spills of any quantity to water).

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5.2.6 Garbage and Waste

1) Work areas should be kept in a safe, clean, and sanitary condition. All waste, rubbish and debris will be kept in a centralized location within the work area and removed from the project site at the end of each day.
2) Waste containers should be wildlife and wind proof containers to prevent dispersal. Food or food waste should be stored in leak-proof storage containers or vehicles that will prevent access by wildlife throughout the workday.

6 CONCLUSION

The potential risk to riparian function of Stream 1 as a result of the development proposal for 2102 Peninsula Road is considered to be low if the following mitigation measures are implemented:

1) The protection of the 10 m SPEA for Stream 1 as measured from the Top of Bank (T.O.B. flagged Nov. 1, 2022) as shown in Figure 2.
2) The assessment of the 10 m SPEA by a Certified Arborist and the development of a plan to mitigate the potential effects of windthrow.
3) A permanent fence constructed at whichever is furthest from Stream 1 of: the 10 m SPEA; property boundary; or RPZ as defined by a Professional Arborist to encourage protection of trees and discourage human encroachment into the SPEA of Stream 1.

The overall quality of terrestrial habitat on the subject property in its current state is considered to be low both in general and for known Species At Risk in the area. The clearing of the property in favor of the proposed development is expected to have minimal impacts to terrestrial habitat. Impacts will be further reduced through the following measures:

1) Conducting vegetation clearing works outside of the bird nesting window for the region: March 15th to August 15th. If unable to time works outside of this window, pre-clearing nest surveys must be conducted by a Qualified Environmental Professional within 5 days of clearing works.
2) Effective implementation of the general construction mitigation measures as outlined in Section 5.2.

The development as proposed for 2102 Peninsula Road is considered acceptable for the property, and of low environmental risk if the mitigation measures recommended in this report are effectively implemented.

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7 CLOSURE

We trust that this assessment meets the requirements for a biophysical assessment of the proposed development at 2102 Peninsula Road. The observations and recommendations made in this report are intended to characterize existing site conditions and present current regulatory requirements. The presence of the features and functions described herein are based on available information at the time of writing and are subject to change. Environmental site conditions are dynamic and should development of the site be postponed an additional survey may be warranted at a later date.

Please contact the undersigned with any questions or concerns.

Current Environmental Ltd.

Jamie Godfrey, Tech & Dusty Silvester, R.P.Bio

8 DISCLAIMER

This report was prepared exclusively for the property owner, Mayco Noël, by Current Environmental Ltd. The quality of information, conclusions and estimates contained herein is consistent with the level of effort expended and is based on: i) information available at the time of preparation; ii) data collected by the authors and/or supplied by outside sources; and iii) the assumptions, conditions and qualifications set forth in this report. This report is intended to be used by the property owner only, subject to the terms and conditions of its contract or understanding with Current Environmental Ltd. Other use or reliance on this report by any third party is at that party's sole risk.

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9 PHOTOS

Photo 1. The subject property as seen from the driveway access off Peninsula Road. The lot has been partially cleared of trees to support the creation of a gravel access road.

Photo 2: Existing access road running north-south and connecting Peninsula Road to the back end of the lot. Photo taken looking south.

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Photo 3: Logs piled on site from initial clearing of land.

Photo 4: Representative photo of an intact portion of forest vegetation on the subject property at 2102 Peninsula Road.

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Photo 5: Representative photo of Stream 1 on the adjacent property to the west of the subject property showing intact fish habitat.

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Photo 6: A portion of Stream 1 with abundant shade from a complex structure of Coarse Woody Debris (CWD) and gravels, representing excellent salmonid habitat.

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Photo 7: The right (east) bank of Stream 1 on the adjacent property. Stream 1 runs from right to left along the bottom of the image (blue line), and the TOB from which the setback must be measured can be seen near the top of the image (red line).

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Photo 8: Large cedar snag that could provide potential raptor perching on the subject property. It was confirmed to be absent of nests during the November 1, 2022 site visit.

3833-002/02
March 6, 2023

UCLUELET MIXED USE DEVELOPMENT
2102 PENINSULA ROAD
CIVIL ENGINEERING SITE WORKS & SERVICING REPORT

1. INTRODUCTION

The intent of this report is to identify possible issues related to accessing and servicing this site and to suggest appropriate approaches for the civil engineering design of this development in support of a development permit application.

The project is located at 2102 Peninsula Road and Lot C, District Lot 284 which is located within the District of Ucluelet (DoU) and is zoned CS-2 (Service Commercial). Both lots have been partially cleared but do not retain any permanent development other than two access roads which connect to Peninsula Road. Development of lots surrounding the area is variable, with forested areas to the north and west, and cleared areas to the south and east (Figure 1).

The proposed development includes the consolidation of 2102 Peninsula Road and Lot C into one new lot. The development on the new lot consists of five separate buildings: 3 separate 4-unit townhomes, and 2 buildings with commercial space on the ground floor and condo-hotels on the second floor. All buildings will be connected by paved driveways and there will be a total of 46 parking spaces.

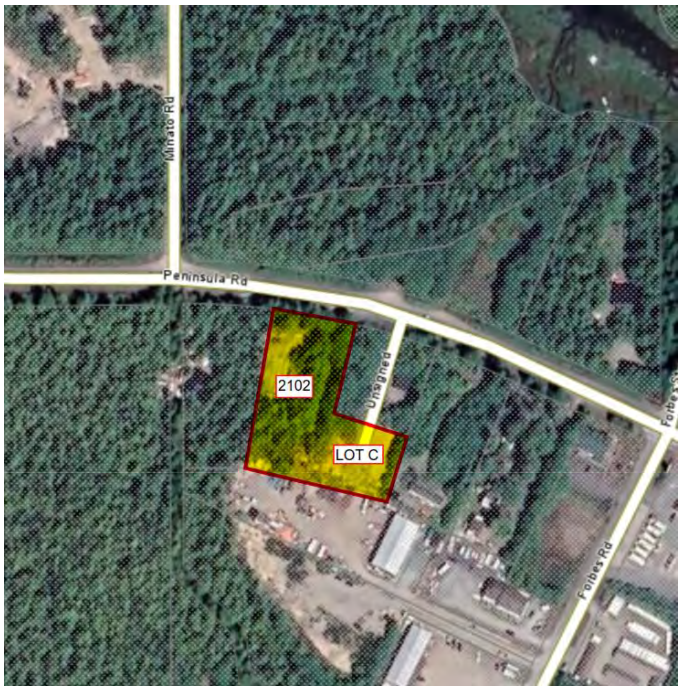

Figure 1: Existing Site – 2102 and Lot C (District of Ucluelet Community Map)

The site and proposed services are shown on the attached drawings C01-C03.

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2. ROADS AND ACCESS

The subject site is fronted by Peninsula Road to the north (Figure 2). There are currently two access roads which connect the two existing lots to Peninsula Road and after the boundary adjustment and lot consolidation only one access to the site will remain. The remaining access will be upgraded to meet MoTI access requirements. (see drawing SK-1 attached). A highway use access permit will be coordinated with MoTI through detailed design.

Peninsula Road

Per online DoU Community Map information, Peninsula Road is located within a 24m-wide right-of-way. The Peninsula Road frontage currently consists of two drive lanes, one in each direction, complete with a 2.5m wide asphalt multi-use pathway and gravel boulevard on the south side of the road, and gravel shoulder and grass boulevard on the north side.

Discussions with DoU staff and the DoU 2011 Transportation Plan indicate that offsite frontage works on Peninsula Road are anticipated to include resurfacing Peninsula Road with new asphalt up to the existing centerline and the mixed-use pathway with new asphalt along the property frontage. A new grass swale with lawn catch basin is proposed between the drive lane and mixed-use pathway.

Final road cross sections will be determined through detailed design in coordination with DoU staff.

Figure 2: Peninsula Road - Looking East (Google Maps)

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3. WATERMAINS

3.1. Water Servicing

There is an existing 50Ø PE water service to the site connected to a 200Ø PVC distribution main on the south side of Peninsula Road. In addition, there is a 350Ø PVC supply main along the south side of the road. The existing 50Ø PE water service is proposed to be capped & abandoned. The new development is proposed to be serviced by a new 150Ø PVC combined fire & domestic service, extending from the 200Ø PVC distribution main along Peninsula Road with a meter in a vault and backflow prevention arrangement at the property line. The service will be split to the individual buildings onsite (see drawing SK-1 for details). Alternatively, the water meter and backflow prevention could be located inside a water-room in Building #1 and then split onsite to service the remaining buildings. The anticipated domestic water demands for the commercial and multi-family portions of the buildings were considered separately and are summarized in Tables 1, 2, & 3 below:

Table 1: Domestic Flow Demands (Multi-Family)

	Flow Required (L/capita/day) *	Flow Demands (L/day)	Flow Demands (L/s)
Average Daily Domestic Flow	455	18,200	0.21
Maximum Daily Domestic Flow	1,135	45,400	0.53
Peak Hour Domestic Flow	1,820	72,800	0.84

* Assumed 2.0 persons per unit for each multi-family residential unit – total of 20 units, demands per DoU Bylaw No. 521. (see drawings SK-1 & architectural drawings for details).

Table 2: Domestic Flow Demands (Commercial)

	Flow Required (L/ha/day) *	Flow Demands (L/day)	Flow Demands (L/s)
Average Daily Domestic Flow	9,000	360	0.004
Maximum Daily Domestic Flow	22,500	900	0.010
Peak Hour Domestic Flow	36,000	1,440	0.017

* 1st floor of Building #1 & #2 classified as “commercial” (22,500 litres per hectare per day per MMCD 2021 Design Guidelines Section 2.4 – total building area 0.04ha (see drawing SK-1 & architectural drawings for details).

Table 3: Combined Domestic Flow Demands

	Flow Demands (L/day)	Flow Demands (L/s)
Average Daily Domestic Flow	18,560	0.21
Maximum Daily Domestic Flow	46,300	0.54
Peak Hour Domestic Flow	74,240	0.86

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The final size of the service and meter, as well as the arrangement of backflow prevention will be determined through detailed design and coordination with the mechanical consultant and DoU.

3.2. Fire Flows

Preliminary Fire Underwriter's Survey (2020) calculations indicate that a fire flow of 83 L/s is required for a duration of 1.5 hours (see attached Fire Flow Calculations).

There is an existing fire hydrant located on the south side of Peninsula Road in the boulevard near the northwest corner of the 2094 Peninsula Road property, which is approx. 50m from the northeast corner of the site. A new private onsite hydrant complete with backflow prevention is proposed to be installed on the site to provide 45m coverage to fire department connections (FDC) on the face of all onsite buildings.

As part of the DP review process, we request that the DoU run their water model to confirm the flows currently available to the site. It is our understanding that the DoU may request Koers & Associates Engineering Ltd. to run a water modelling analysis for the site at the developer's expense.

The final arrangement of hydrants will be determined through detailed design and coordination with the DoU Fire Chief.

4. SANITARY SEWER

Per available District of Ucluelet record drawings, there is a 250mm diameter gravity sanitary main running along the north side of Peninsula Road to the Peninsula Road Lift Station, but no sanitary service to the site. A new 150Ø PVC sanitary service to the existing 250mm diameter gravity sanitary main is proposed for the site.

The anticipated sanitary flow from this development is 2.997L/s (see attached Sanitary Flow Calculations). Preliminary design suggests that a 150Ø sanitary service is adequate for the entire proposed development. The final servicing option will be determined through detailed design in coordination with mechanical consultant.

The capacity of the Peninsula Road Lift Station is listed as 9.3 L/s. As part of the DP review process, we request that the DoU confirm that the lift station has available capacity for the proposed development's sanitary flow.

5. STORM DRAINAGE AND STORMWATER MANAGEMENT

The following stormwater management plan was created based on the DoU Subdivision Control Bylaw No. 521. Additionally, "Stormwater Source Control Design Guidelines 2012" (SSCDG) was consulted for stormwater management best practices.

The proposed site drainage and stormwater management is shown on drawings SK-1 and is as follows:

5.1. Site Overview

1) The existing site is approximately 0.59ha in size, and slopes from south to north (falling approximately 8m towards Peninsula Road).

2) The site does not appear to have an existing storm service. There is an existing unnamed fish bearing creek running south-north through the neighboring property to the west. The creek passes through a 900mm CSP culvert under Peninsula Road and flows into the ocean at Ucluelet inlet approximately 150 m north of the site. We propose to install a new 1050Ø offsite storm manhole and extend a 250Ø PVC storm sewer along the property frontage and connect to the 900mm CSP culvert or exiting storm manhole at the culvert invert. We propose to connect a new 250Ø PVC service to the site, connecting to the 1050Ø offsite storm manhole.

3) We understand that a geotechnical investigation is currently in progress and the potential for stormwater infiltration into the subgrade will be reviewed further during detailed design in coordination with the geotechnical consultant.

4) The site will have some onsite capacity to retain stormwater on site. Approximately 27% of the site area will either remain in its undeveloped state or be landscaped. these areas will be considered to retain and/or infiltrate any stormwater that lands directly on them but will not be designed to accept any additional runoff.

5.2. Detention

5) Per BC MoTI Engineering requirements, the detention storage volume for a 5-year rainfall event for the entire site is 18.26m³. (See attached Detention Calculations). All stormwater that lands on the hard surfaces (building roofs & asphalt driveway) will be directed into a shared onsite below-grade storage tank sized to detain this volume.

    a) The below-grade storage tank will outflow through an orifice-control manhole to limit the post development flows leaving the site to a pre-development rate of 27.28L/s (See attached Detention Calculations).

    b) Further to points #5 above, the tank may be designed to infiltrate into the ground as site conditions allow as directed by the geotechnical consultant. The details of the stormwater detention system will be refined in detailed design in coordination with the geotechnical consultant.

6) The orifice-control manhole will also include an overflow to convey larger return period rainfall events up to the 100-year event.

7) The proposed 250Ø PVC storm service for the site noted in point #2 has capacity for a 100-year rainfall event (see attached storm sewer calculations).

5.3. Water Quality

8) All stormwater that lands on the impermeable asphalt access road/parking lot will flow through an oil/water separator (Stormceptor, CDS or equivalent) for water quality treatment and removal of TSS before leaving the site.

5.4. Offsite Flows, Overflow, and Major System

9) Currently, the 100-year flow path flows overland to the north toward Peninsula Road. The proposed development will include site grading to promote drainage to the onsite storm sewer system and roadways to direct overland flows away from the proposed buildings and neighboring properties and towards the onsite stormwater management system. The proposed development is not expected to significantly alter the existing 100-year flow path.

10) Preliminary design indicates that the 100-year flow leaving the site will be 83.5 L/s (see attached Storm Sewer Calculations). The proposed 250Ø storm service noted in point #2 will have the capacity to convey the 100-year storm event.

The final layout and details will be determined through detailed design and coordination with the landscape architect after a thorough review of the downstream ditches and piping with DoU staff.

6. EROSION AND SEDIMENT CONTROL

An Erosion and Sediment Control plan meeting current DoU requirements and best practices will be prepared and submitted with the application for Building Permit.

7. CONCLUSION

The design of the civil works associated with this project will be consistent with District of Ucluelet engineering standards and aligned with the overall project goals of sustainability, functionality & practicality.

Submitted by:

HEROLD ENGINEERING LIMITED

Prepared by:

Jake Pinneo, EIT

Reviewed by:

Patrick Ryan, P. Eng

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FIRE UNDERWRITER'S SURVEY

PROJECT NAME: Mixed Use Development
PROJECT LOCATION: 2102 Peninsula Road
DESIGNED BY: Jake Pinneo, EIT
REVIEWED BY: Patrick Ryan, P.Eng.

HEL PROJECT No.: 3833-002
DATE: 00/01/1900

FIRE AREA CONSIDERED	TOTAL AREA (m^2)	SPRINKLERED	FIRE FLOW (L/MIN)	FIRE FLOW (L/SEC)
Building 1 - Mixed Use Condo/Hotel	700	YES	4973	83
Building 2 - Mixed Use Condo/Hotel	250	YES	2125	35
Building 3 - Townhouse	505	YES	3570	60
Building 4 - Townhouse	505	YES	4760	79
Building 5 - Townhouse	505	YES	4760	79

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FIRE UNDERWRITER'S SURVEY

PROJECT NAME: Mixed Use Development
PROJECT LOCATION: 2102 Peninsula Road
DESIGNED BY: Jake Pinneo, EIT
REVIEWED BY: Patrick Ryan, P.Eng.

HEL PROJECT No.: 3833-002
DATE: 00/01/1900

FIRE AREA CONSIDERED: Building 1 - Mixed Use Condo/Hotel

TYPE OF CONSTRUCTION: TYPE V, WOOD FRAME CONSTRUCTION

FIRST FLOOR AREA: 300 m^2
SECOND FLOOR AREA: 400 m^2
THIRD FLOOR AREA:

CONSTRUCTION COEFFICIENT, C: 1.5

$$RFF = 220C\sqrt{A}$$

TOTAL FLOOR AREA, A: 700 m^2

FIRE FLOW FROM EQUATION					9000	L/min.	a
GROUP	C - RESIDENTIAL						
HAZARD	Limited Combustible		-15%	x a	-1350	L/min.	
				SUBTOTAL	7650	L/min.	b
AUTOMATIC SPRINKLER			YES	-30%			
WATER SUPPLY IS STANDARD FOR BOTH THE SYSTEM AND FIRE DEPARTMENT HOSE LINES			YES	-10%			
FULLY SUPERVISED SYSTEM			YES	-10%			
				-50% x b	-3825	L/min.	
				SUBTOTAL	3825	L/min.	c

EXPOSURES	DISTANCE			
FRONT	35	ADD	0%	
LEFT	35	ADD	0%	
RIGHT	20	ADD	15%	
BACK	N/A	ADD	0%	* Automatic sprinkler protection in both buildings
		TOTAL	15%	x b

1148 L/min. d

NOTES:
1. Front is the Peninsula Road Frontage
2. Floor area taken from Architectural Plans
3. Based on Water Supply For Public Fire Protection - 2020

FIRE FLOW REQUIRED c + d **4973** L/min.
or
83 L/Sec.

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FIRE UNDERWRITER'S SURVEY

PROJECT NAME: Mixed Use Development
PROJECT LOCATION: 2102 Peninsula Road
DESIGNED BY: Jake Pinneo, EIT
REVIEWED BY: Patrick Ryan, P.Eng.

HEL PROJECT No.: 3833-002
DATE: 00/01/1900

FIRE AREA CONSIDERED: Building 2 - Mixed Use Condo/Hotel

TYPE OF CONSTRUCTION: TYPE V, WOOD FRAME CONSTRUCTION

FIRST FLOOR AREA: 125 m^2
SECOND FLOOR AREA: 125 m^2
THIRD FLOOR AREA:

CONSTRUCTION COEFFICIENT, C: 1.5

$$RFF = 220C\sqrt{A}$$

TOTAL FLOOR AREA, A: 250 m^2

FIRE FLOW FROM EQUATION			5000	L/min.	a
GROUP	C - RESIDENTIAL				
HAZARD	Limited Combustible	-15%	x a	-750	L/min.	
			SUBTOTAL	4250	L/min.	b
AUTOMATIC SPRINKLER		YES	-30%			
WATER SUPPLY IS STANDARD FOR BOTH THE SYSTEM AND FIRE DEPARTMENT HOSE LINES		YES	-10%			
FULLY SUPERVISED SYSTEM		YES	-10%			
			-50% x b	-2125	L/min.	
			SUBTOTAL	2125	L/min.	c

EXPOSURES	DISTANCE				
FRONT	N/A	ADD	0%	* Automatic sprinkler protection in both buildings	
LEFT	35	ADD	0%		
RIGHT	35	ADD	0%		
BACK	N/A	ADD	0%	* Automatic sprinkler protection in both buildings	
		TOTAL	0%	x b	0	L/min.	d

NOTES:
1. Front is the Peninsula Road Frontage
2. Floor area taken from Architectural Plans
3. Based on Water Supply For Public Fire Protection - 2020

FIRE FLOW REQUIRED c + d **2125** L/min.
or
35 L/Sec.

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FIRE UNDERWRITER'S SURVEY

PROJECT NAME: Mixed Use Development
PROJECT LOCATION: 2102 Peninsula Road
DESIGNED BY: Jake Pinneo, EIT
REVIEWED BY: Patrick Ryan, P.Eng.

HEL PROJECT No.: 3833-002
DATE: 00/01/1900

FIRE AREA CONSIDERED: Building 3 - Townhouse

TYPE OF CONSTRUCTION: TYPE V, WOOD FRAME CONSTRUCTION

FIRST FLOOR AREA: 252.5 m^2
SECOND FLOOR AREA: 252.5 m^2
THIRD FLOOR AREA:

CONSTRUCTION COEFFICIENT, C: 1.5

$$RFF = 220C\sqrt{A}$$

TOTAL FLOOR AREA, A: 505 m^2

FIRE FLOW FROM EQUATION 7000 L/min. a

GROUP	C - RESIDENTIAL						
HAZARD	Limited Combustible		-15%	x a	-1050	L/min.	
				SUBTOTAL	5950	L/min.	b
AUTOMATIC SPRINKLER			YES	-30%			
WATER SUPPLY IS STANDARD FOR BOTH THE SYSTEM AND FIRE DEPARTMENT HOSE LINES			YES	-10%			
FULLY SUPERVISED SYSTEM			YES	-10%			
				-50% x b	-2975	L/min.	
				SUBTOTAL	2975	L/min.	c

EXPOSURES	DISTANCE				
FRONT	N/A	ADD	0%	* Automatic sprinkler protection in both buildings	
LEFT	30	ADD	10%		
RIGHT	35	ADD	0%		
BACK	N/A	ADD	0%	* Automatic sprinkler protection in both buildings	
		TOTAL	10%	x b	595 L/min. d

NOTES:
1. Front is the Peninsula Road Frontage
2. Floor area taken from Architectural Plans
3. Based on Water Supply For Public Fire Protection - 2020

FIRE FLOW REQUIRED c + d **3570** L/min.
or
60 L/Sec.

HEROLD ENGINEERING

FIRE UNDERWRITER'S SURVEY

PROJECT NAME: Mixed Use Development
PROJECT LOCATION: 2102 Peninsula Road
DESIGNED BY: Jake Pinneo, EIT
REVIEWED BY: Patrick Ryan, P.Eng.

HEL PROJECT No.: 3833-002
DATE: 00/01/1900

FIRE AREA CONSIDERED: Building 4 - Townhouse

TYPE OF CONSTRUCTION: TYPE V, WOOD FRAME CONSTRUCTION

FIRST FLOOR AREA: 252.5 m^2
SECOND FLOOR AREA: 252.5 m^2
THIRD FLOOR AREA:

CONSTRUCTION COEFFICIENT, C: 1.5

$$RFF = 220C\sqrt{A}$$

TOTAL FLOOR AREA, A: 505 m^2

FIRE FLOW FROM EQUATION 7000 L/min. a

GROUP	C - RESIDENTIAL						
HAZARD	Limited Combustible		-15%	x a	-1050	L/min.	
				SUBTOTAL	5950	L/min.	b
AUTOMATIC SPRINKLER			YES	-30%			
WATER SUPPLY IS STANDARD FOR BOTH THE SYSTEM AND FIRE DEPARTMENT HOSE LINES			YES	-10%			
FULLY SUPERVISED SYSTEM			YES	-10%			
				-50% x b	-2975	L/min.	
				SUBTOTAL	2975	L/min.	c

EXPOSURES	DISTANCE				
FRONT	N/A	ADD	0%	* Automatic sprinkler protection in both buildings	
LEFT	30	ADD	10%		
RIGHT	N/A	ADD	0%	* Automatic sprinkler protection in both buildings	
BACK	10	ADD	20%		
		TOTAL	30%	x b	1785 L/min. d

NOTES:
1. Front is the Peninsula Road Frontage
2. Floor area taken from Architectural Plans
3. Based on Water Supply For Public Fire Protection - 2020

FIRE FLOW REQUIRED c + d **4760** L/min.
or
79 L/Sec.

HEROLD ENGINEERING

FIRE UNDERWRITER'S SURVEY

PROJECT NAME: Mixed Use Development
PROJECT LOCATION: 2102 Peninsula Road
DESIGNED BY: Jake Pinneo, EIT
REVIEWED BY: Patrick Ryan, P.Eng.

HEL PROJECT No.: 3833-002
DATE: 00/01/1900

FIRE AREA CONSIDERED: Building 5 - Townhouse

TYPE OF CONSTRUCTION: TYPE V, WOOD FRAME CONSTRUCTION

FIRST FLOOR AREA: 252.5 m^2
SECOND FLOOR AREA: 252.5 m^2
THIRD FLOOR AREA:

CONSTRUCTION COEFFICIENT, C: 1.5

$$RFF = 220C\sqrt{A}$$

TOTAL FLOOR AREA, A: 505 m^2

FIRE FLOW FROM EQUATION 7000 L/min. a

GROUP	C - RESIDENTIAL						
HAZARD	Limited Combustible		-15%	x a	-1050	L/min.	
				SUBTOTAL	5950	L/min.	b
AUTOMATIC SPRINKLER			YES	-30%			
WATER SUPPLY IS STANDARD FOR BOTH THE SYSTEM AND FIRE DEPARTMENT HOSE LINES			YES	-10%			
FULLY SUPERVISED SYSTEM			YES	-10%			
				-50% x b	-2975	L/min.	
				SUBTOTAL	2975	L/min.	c

EXPOSURES	DISTANCE			
FRONT	35	ADD	0%	
LEFT	N/A	ADD	0%	* Automatic sprinkler protection in both buildings
RIGHT	22	ADD	10%	
BACK	10	ADD	20%	
		TOTAL	30%	x b

1785 L/min. d

NOTES:
1. Front is the Peninsula Road Frontage
2. Floor area taken from Architectural Plans
3. Based on Water Supply For Public Fire Protection - 2020

FIRE FLOW REQUIRED c + d **4760** L/min.
or
79 L/Sec.

HEROLD ENGINEERING

Stormwater Management Summary Sheet

PROJECT NAME: Mixed Use Development
PROJECT LOCATION: 2012 Peninsula Road
DESIGNED BY: Jake Pinneo, EIT
REVIEWED BY: Patrick Ryan, P.Eng.

HEL PROJECT No.: 3833-002/03
DATE: 27/02/2023

Predevelopment Area	**C**	**Area (m^2)**	**Area (ha)**
Heavy Soil, Greater than 5% Slope	0.35	5884	0.59
N/A	0.00	0	0.00
Total Average	**0.35**	**5884**	**0.59**

Post Development Area	**C**	**Area (m^2)**	**Area (ha)**
Building Roofs	0.85	1565	0.16
Walkways	0.85	455	0.05
Streets	0.90	2300	0.23
Landscaping	0.25	1564	0.16
N/A	0.00	0	0.00
Total Average	**0.71**	**5884**	**0.59**

IDF Curve	**UCLUELET AMPHITRITE POINT**	**+10%**

1. Based on the Environment Canada 2021 IDF Curves for Amphitrite Point (Ucluelet)

2. 10% Added to Intesities for climate change

Results Summary		
Pre-Development Flow Rate (L/s)	27.28	
Post-Development Flow Rate (L/s)	55.34	5-Year
Total Detention Volume (m^3)	18.26	5-Year

Pages Following:
5 Year Detention Calculations
Storage Calculations

Notes:

1. Based on the Environment Canada 2021 IDF Curves for Amphitrite Point (Ucluelet)
2. Onsite areas taken from Architectural Drawings.
3. Pre-development onsite runoff coefficient taken as Heavy Soil, with slopes greater than 5% , as per DoU Bylaw No. 521.
4. Post development onsite runoff coefficient is a weighted average of proposed roofs, drives & walks, and heavy soil, with varying slopes, as per DoU Bylaw No. 521.

HEROLD ENGINEERING

Stormwater Management
5-Year Calculation

PROJECT NAME: Mixed Use Development
PROJECT LOCATION: 2012 Peninsula Road
DESIGNED BY: Jake Pinneo, EIT
REVIEWED BY: Patrick Ryan, P.Eng.

HEL PROJECT No.: 3833-002/03
DATE: 27/02/2023

IDF Curve	UCLUELET AMPHITRITE POINT	5-Year	10% Added to Intesities

Time of Concentration (min)	
t_c (Pre)	10
t_c (Post)	10

$R=A*t_c^B$	
A_2=	22.2
B_2=	-0.373

Predevelopment Area	C	Area (m^2)	Area (ha)	Flow (L/s)
Forested	0.35	5884	0.5884	27.28
N/A	0.00	0	0	0.00
Total Average	0.35	5884	0.5884	27.28

Post Development Area	C	Area (m^2)	Area (ha)	Flow (L/s)
Building Roofs	0.85	1565	0.1565	17.62
Walkways	0.85	455	0.0455	5.12
Streets	0.90	2300	0.23	27.42
Landscaping	0.25	1564	0.1564	5.18
N/A	0.00	0	0	0.00
Total Average	0.71	5884	0.5884	55.34

Duration (hr)	I (mm/hr)	Inflow (L/s)	Total Inflow Volume over Duration (L)	Total Allowable Outflow Volume over Duration (L)	Storage Required (m^3)
0.083	61.7	71.66	21499	8183	13.32
0.100	57.6	66.95	24102	9819	14.28
0.117	54.4	63.21	26548	11456	15.09
0.167	47.6	55.34	33202	16366	16.84
0.250	41.0	47.57	42812	24548	18.26
0.500	31.6	36.73	66117	49097	17.02
0.750	27.2	31.58	85256	73645	11.61
1.000	24.4	28.36	102108	98194	3.91

Maximum Storage Required (m^3)	**18.26**

Notes:
1. Five Year Detention Storage Per MoTI Engineering Requirements

HEROLD ENGINEERING

STORMWATER MANAGEMENT
MANHOLE STORAGE

PROJECT NAME: Mixed Use Development
PROJECT LOCATION: 2012 Peninsula Road
DESIGNED BY: Jake Pinneo, EIT
REVIEWED BY: Patrick Ryan, P.Eng.

HEL PROJECT No.: 3833-002/03
DATE: 27/02/2023

Required Detention Volume (m^3)	**18.3**

Number of Manholes	1
Diameter (m)	1.05
Depth (m)	1.00
Manhole Volume (m^3)	**0.9**

Length (m)	4.50
Width (m)	3.60
Depth (m)	1.10
Pipe Volume (m^3)	**17.8**

Total Storage Volume (m^3)	**18.7**

Appendix E

HEROLD ENGINEERING

STORM SEWER DESIGN CALCULATION SHEET

PROJECT NAME: Mixed Use Development
PROJECT LOCATION: 2102 Peninsula Road
DESIGNED BY: Jake Pinneo, EIT
REVIEWED BY: Patrick Ryan, P.Eng.

IDF LOCATION: UCLUELET AMPHITRITE POINT
RETURN PERIOD: 10 YEAR

HEL PROJECT No.: 3833-002
DATE: 22/02/2023

Mannings "n" 0.013 PVC
Mannings "n" 0.024 CSP
Mannings "n" 0.014 CONC.

Time of Concentration 10.00 mins

Mannings Formula

$$V = \frac{R_h^{(2/3)} S^{(1/2)}}{n}$$

				Rational Formula: Q=CIA2.78												
FROM MH	TO MH	Catchment Area	Area (Ha)	Run Off Coeff. (C)	Equiv. Area (ha)	Total Area, A (Ha)	Time of Conc. (mins)	Rainfall Intensity, I (mm/hr)	Q (l/sec)	Slope, s (%)	Pipe Diameter, D (mm)	Pipe Material	Velocity, V (m/s)	Length (m)	Time of Flow (min)	Capacity (l/s)
		Pre-Development														
		Entire Site	0.588	0.35	0.206	0.21	10.00	48.69	30.6	2.00	200	PVC	1.48	5	0.06	46.4
		Post-Development														
		Entire Site	0.588	0.71	0.417	0.42	10.00	48.69	62.2	2.00	250	PVC	1.71	5	0.05	84.1

Notes:

1. Based on the Environment Canada 2021 IDF Curves for Amphitrite Point (Ucluelet)
2. Onsite areas taken from Architectural Drawings.
3. Pre-development onsite runoff coefficient taken as Heavy Soil, with slopes greater than 5% , as per DoU Bylaw No. 521.
4. Post development onsite runoff coefficient is a weighted average of proposed roofs, drives & walks, and heavy soil, with varying slopes, as per DoU Bylaw No. 521.
5. To be read in conjunction with "Stormwater Management Rationale" prepared by Herold Engineering Ltd.

Appendix E

HEROLD ENGINEERING

STORM SEWER DESIGN CALCULATION SHEET

PROJECT NAME: Mixed Use Development
PROJECT LOCATION: 2102 Peninsula Road
DESIGNED BY: Jake Pinneo, EIT
REVIEWED BY: Patrick Ryan, P.Eng.

IDF LOCATION: UCLUELET AMPHITRITE POINT
RETURN PERIOD: 100 YEAR

HEL PROJECT No.: 3833-002
DATE: 22/02/2023

Mannings "n" 0.013 PVC
Mannings "n" 0.024 CSP
Mannings "n" 0.014 CONC.

Time of Concentration 10.00 mins

Mannings Formula

$$V = \frac{R_h^{(2/3)} S^{(1/2)}}{n}$$

				Rational Formula: Q=CIA2.78												
FROM MH	TO MH	Catchment Area	Area (Ha)	Run Off Coeff. (C)	Equiv. Area (ha)	Total Area, A (Ha)	Time of Conc. (mins)	Rainfall Intensity, I (mm/hr)	Q (l/sec)	Slope, s (%)	Pipe Diameter, D (mm)	Pipe Material	Velocity, V (m/s)	Length (m)	Time of Flow (min)	Capacity (l/s)
		Pre-Development														
		Entire Site	0.588	0.35	0.206	0.21	10.00	65.40	41.2	2.00	200	PVC	1.48	5	0.06	46.4
		Post-Development														
		Entire Site	0.588	0.71	0.417	0.42	10.00	65.40	83.5	2.00	250	PVC	1.71	5	0.05	84.1

Notes:

1. Based on the Environment Canada 2021 IDF Curves for Amphitrite Point (Ucluelet)
2. Onsite areas taken from Architectural Drawings.
3. Pre-development onsite runoff coefficient taken as Heavy Soil, with slopes greater than 5% , as per DoU Bylaw No. 521.
4. Post development onsite runoff coefficient is a weighted average of proposed roofs, drives & walks, and heavy soil, with varying slopes, as per DoU Bylaw No. 521.
5. To be read in conjunction with "Stormwater Management Rationale" prepared by Herold Engineering Ltd.

Appendix E

DISTRICT OF UCLUELET SANITARY SEWER FLOW ANALYSIS - CALCULATION SHEET

Project:	**2102 Peninsula Road**	Date:	22-Feb-23
Eng'ing Company:	Herold Engineering Ltd.	Design By:	Jake Pinneo, EIT
Address:	3710 Shenton Rd. Nanaimo BC	Review By:	Patrick Ryan, P.Eng.
Engineer:	Patrick Ryan, P.Eng.	Sheet:	1 of 1

								Sewage Flow		Infiltration & Inflow		Total Flow		Pipe Capacity			
Area	**MH No.**	**Location**	**Area (Ha)**	**Units**	**Density ppu**	**Equiv. Pop. (ca)**	**Peak flow Per Capita (L/day)**	**Peak Flow (L/day)**	**Peak Flow (ML/day)**	**Infilt. (ML/day)**	**Cum. Infilt. (ML/day)**	**Total Flow (ML/day)**	**Flow (L/s)**	**Slope (%)**	**Pipe Diameter (mm)**	**Velocity (m/s)**	**Capacity (L/s)**
Entire Proposed Development	Pump Station	2102 Peninsula Road	*0.59*	20	2.0	84	3000	252,390	0.252	0.007	-	0.259	2.997	2.0	150	1.22	21.54

*Assumed

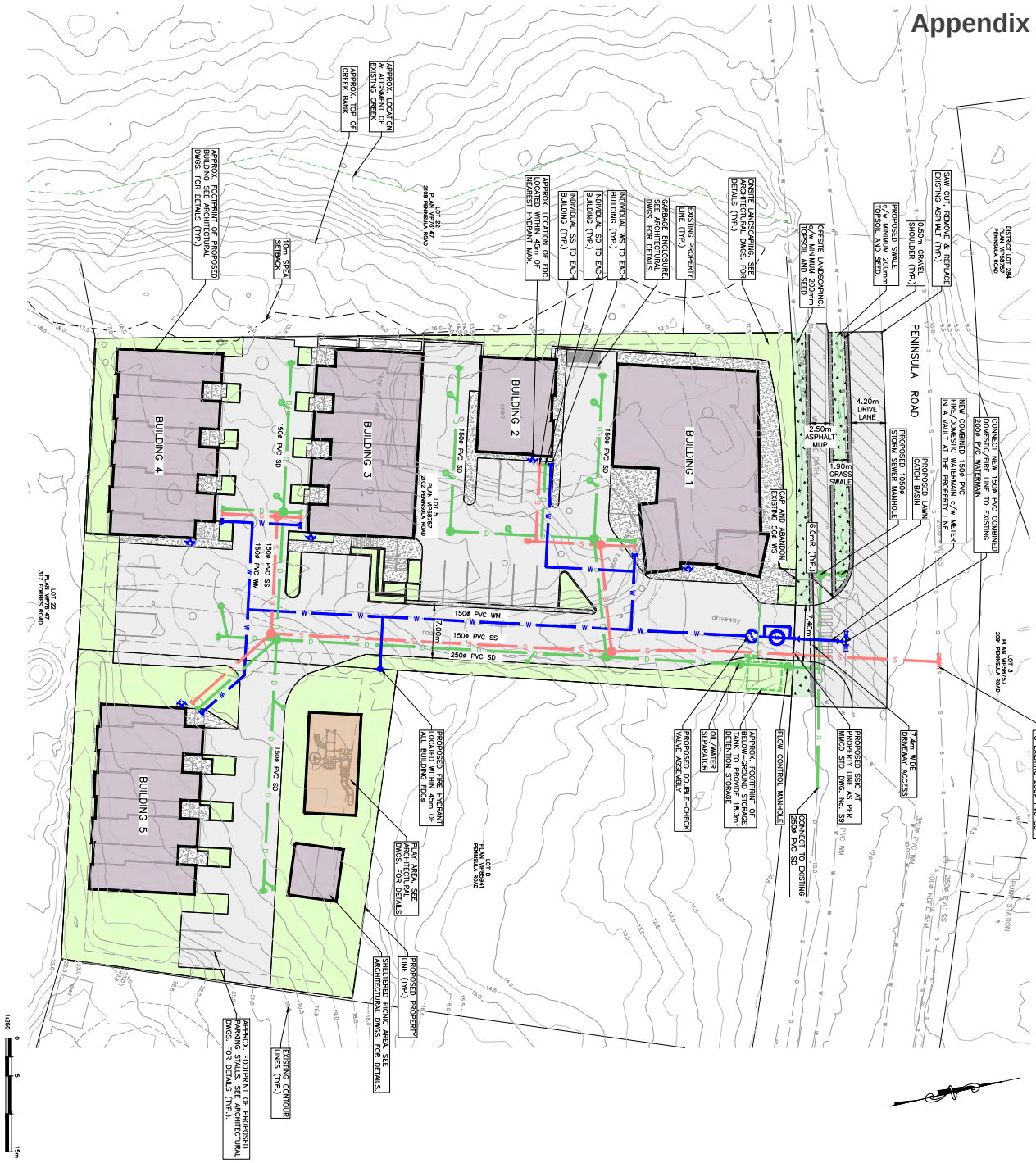
Notes:

1. Population Density (Commercial - 1st Floor) = 75ppha commercial per District of Ucluelet (DoU) Bylaw No. 521 & MMCD Design Guidelines 2022
2. Population Density (Multi-Family - Townhouses) = 2.0 Person Per Unit (PPU).
3. Population Density (Multi-Family - Condo/Hotel) = 2.0 Person Per Unit (PPU).
4. Peak Flow = 3000L/capita/day per DoU Bylaw No. 521.
5. Infiltration = 11,200L/day/ha per District of Ucluelet Bylaw No. 521.
6. To be read in conjunction with "Civil Engineering Site Works & Servicing Report" prepared by Herold Engineering Ltd.

HEROLD ENGINEERING

File: H:\Projects\3833-002 2102 Peninsula Road Mix Use Development\04C Drawings\3833-002 Civil Drawings.dwg Plot Time: Mar. 2, 23 11:10 AM User: Jake Pinneo

Appendix E



LOCATION PLAN
NTS

ISSUED FOR CO-ORDINATION

NOT FOR CONSTRUCTION

ISSUES		
No.	DATE mm-dd-yy	ISSUED FOR
A	2023.03.27	PRE-DP REVIEW

CLIENT

HEROLD ENGINEERING
3701 Shenton Rd, Nanaimo, BC V9T 2H1
Phone: 250-756-3355 Fax: 250-756-3359
Email: mail@herold-engineering.com

MIXED USE DEVELOPMENT
CIVIL WORKS
2102 PENINSULA ROAD

UCLUELET, BC

RENT-IT CENTER

CIVIL SITE SERVICING PLAN

DESIGNED	JDP/PGR
DESIGN REVIEW	PGR
DRAFTED	JDP
DRAWING REVIEW	PGR
PROJECT No.	3833-002
CLIENT DRAWING No.	
SCALE	1:250
PERMIT No.	
H:	
V:	
REL DRAWING No.	
SK-1	1 OF 1
REVISION	A

ENGINEER'S SEAL

DESTROY ALL DRAWINGS SHOWING PREVIOUS REVISION