



REGULAR MEETING OF COUNCIL
Monday, October 23, 2023 @ 4:00 PM
Ucluelet Community Centre
500 Matterson Drive, Ucluelet

AGENDA

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1.	CALL TO ORDER	
1.1	ACKNOWLEDGEMENT OF THE YUULUŦİŦATH Council would like to acknowledge the YuuluŦifŦath, on whose traditional territories the District of Ucluelet operates.	
1.2	NOTICE OF VIDEO RECORDING Audience members and delegates are advised that this proceeding is being video recorded and broadcast on YouTube and Zoom, which may store data on foreign servers.	
2.	LATE ITEMS	
3.	APPROVAL OF THE AGENDA	
4.	ADOPTION OF MINUTES	
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7.1	Development and Development Variance Permit 2091 Peninsula Road <i>Bruce Greig, Director of Community Planning</i> RTC - DP23-01 Report for Council Appendix A - Application Appendix B - Environmental Report Appendix C - Development Variance Permit 23-09 Appendix D - Development Permit 23-01	19 - 91
7.2	Development Permit for 2094 Peninsula Road <i>John Towgood, Municipal Planner</i> RTC - DP23-05 Report for Council	93 - 146

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| 7.3 | <p>Fire Hall Replacement
<i>Rick Geddes, Fire Chief</i>
RTC - Staff Report Firehall
Appendix A - Firehall Feasibility Study (2022)</p> | 147 - 267 |
| 8. | NOTICE OF MOTION | |
| 9. | CORRESPONDENCE | |
| 9.1 | <p>Fossil gas terminology to enhance climate change communication and action
<i>Eddie Dearden, CEO and Founder, GNAR Sustainable Home Designs</i>
2023-10-13 Fossil gas terminology to enhance climate change communication and action.pdf</p> | 269 - 282 |
| 10. | INFORMATION ITEMS | |
| 10.1 | <p>Development Limits Caused by Sanitary Sewer Capacity
<i>James MacIntosh, Director of Engineering Services</i>
IRTC - Sanitary System Sewer Capacity
Appendix A - Sanitary Sewer Master Plan (Relevant Excerpts)
Appendix B - Site Servicing Assessment</p> | 283 - 309 |
| 10.2 | <p>CMHC Housing Accelerator Fund - Action Plan
<i>Bruce Greig, Director of Community Planning</i>
IRTC - HAF action plan 2023Oct23</p> | 311 - 317 |
| 10.3 | <p>Working Together Community Lunch: NIC on the West Coast - An Update
<i>Lisa Domae, President of North Island</i>
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| 10.4 | <p>Reminder: National Veterans' Week Speakers Program 2023
<i>Vance White, Manager, Stakeholder Engagement Team, Department of National Defense</i>
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| 11. | MAYOR'S ANNOUNCEMENTS AND COUNCIL COMMITTEE REPORTS | |
| 11.1 | <p>Councillor Shawn Anderson
<i>Deputy Mayor, April 1 - June 30, 2023</i></p> | |
| 11.2 | <p>Councillor Jennifer Hoar
<i>Deputy Mayor, January 1 - March 31, 2023</i></p> | |
| 11.3 | <p>Councillor Ian Kennington
<i>Deputy Mayor, July 1 - September 30, 2023</i></p> | |
| 11.4 | <p>Councillor Mark Maftai
<i>Deputy Mayor, October 1 - December 31, 2023</i></p> | |
| 11.5 | <p>Mayor Marilyn McEwen</p> | |
| 12. | QUESTION PERIOD | |
| 13. | CLOSED SESSION | |
| 14. | ADJOURNMENT | |

DISTRICT OF UCLUELET
MINUTES OF THE REGULAR COUNCIL MEETING
HELD IN THE UCLUELET COMMUNITY CENTRE, 500 MATTERSON DRIVE
Tuesday, October 10, 2023 at 4:00 PM

Present: **Chair:** Mayor McEwen
 Council: Councillors Anderson, Hoar, Kennington, and Maftei
 Staff: Duane Lawrence, Chief Administrative Officer
 Bo Gill, Chief Financial Officer
 Bruce Greig, Director of Community Planning
 James MacIntosh, Director of Engineering Services
 Joseph Rotenberg, Manager of Corporate Services

Regrets:

1. CALL TO ORDER

The meeting was called to order at 4:00 PM.

1.1 ACKNOWLEDGEMENT OF THE YUULUʔILʔATH

Council acknowledged the Yuuluʔilʔath, on whose traditional territories the District of Ucluelet operates.

1.2 NOTICE OF VIDEO RECORDING

Audience members and delegates were advised that the proceeding was being video recorded and broadcast on YouTube and Zoom, which may store data on foreign servers.

2. LATE ITEMS

There were no late items.

2.1 Press Release - ACRD launching solid waste survey with movie night for public

2023.2262.REGULAR *It was moved and seconded **THAT** Council amend the Regular Council Meeting Agenda to include the late item under item 11.1. of the Agenda.*

CARRIED.

3. APPROVAL OF THE AGENDA

3.1 October 10, 2023, Regular Council Meeting Agenda

2023.2263.REGULAR *It was moved and seconded **THAT** the October 10, 2023, Regular Council Meeting Agenda be approved as amended.*

CARRIED.

4. ADOPTION OF MINUTES

4.1 September 26, 2023, Regular Council Meeting Minutes

Council noted that "Fire Fighter Suits" was misspelled on page ten of the minutes and the "in" should be added between the words "be" and "position to access" on page eleven of the minutes under under item 11.3.

2023.2264.REGULAR *It was moved and seconded **THAT** the September 26, 2023, Regular Council Meeting Minutes be adopted as amended.*

CARRIED.

5. PUBLIC INPUT & DELEGATIONS

5.1 Delegations

**Andrea Blakeman, David Brooks, Bob Moss, and Ed Mayne -
Ballenas Housing Society
Re: Affordable Housing**

Ballenas Housing Society, formerly known as Nanaimo Affordable Housing Society, presented a PowerPoint presentation. The Society outlined its history and noted its charitable status, mission, and vision. It also detailed its clients, partners, completed projects, property portfolio, funding model and its negotiated agreements which allow discounted rental rates at their properties.

The Society noted local housing need and interest in pursuing development of an 80 unit affordable housing rental apartment building on the property known as the water tower property (the "Property") at the end of Short Road. The Society noted phasing options, and noted that acquiring land, servicing and financing are the the most significant challenges for a development like this.

The Society is seeking a commitment from the District to undertake servicing and rezoning from the property, transfer the Property to the Society for nominal consideration and waive municipal fees and charges associated with this development. In exchange the Society would undertake a feasibility study and if feasible, construct and operate an affordable rental housing development.

The Society's goal is to introduce this development within four to six months would allow them to submit a grant funding proposal at the annual BC Housing intake.

The Society responded to questions related to next steps, alternate locations, the number of proposed units, alternate housing forms, management of properties owned by other entities, their tenant vetting process, and the provision of seasonal housing.

6. UNFINISHED BUSINESS

There was no unfinished business.

7. BYLAWS

7.1 Zoning Amendment & DVP - 256 Matterson Drive *Bruce Grieg, Director of Community Planning*

Staff clarified that the proposed bylaw is to rezone the property to an R6 Zone not an R5 Zone.

2023.2265.REGULAR *It was moved and seconded **THAT** Council, with regard to the proposed change in zoning designation of the western part of 256 Matterson Drive for a proposed subdivision, give first and second reading to District of Ucluelet Zoning Amendment Bylaw No. 1335, 2023, and direct staff to give notice for a public hearing to receive input on the bylaw and Development Variance Permit DVP23-12.*

CARRIED.

8. REPORTS

8.1 Port Albion Road Water Service Application *James MacIntosh, Director of Engineering Services*

Staff responded to Council questions related to the Applicant's request and the rationale for Staff's recommendation.

2023.2266.REGULAR *It was moved and seconded **THAT** Council refer this matter back to staff to work with the applicant to install the service connection at the desired location subject to a positive recommendation of a Qualified Environmental Professional.*

2023.2267.REGULAR *It was move and seconded that the motion be amended as follows:
THAT Council refer this matter back to staff to work with the applicant to install the service connection **at the applicant's** desired location subject to a positive recommendation of a Qualified Environmental Professional.*

CARRIED.

2023.2268.REGULAR *It was moved and seconded **THAT** Council refer this matter back to staff to work with the applicant to install the service connection at the applicant's*

desired location subject to a positive recommendation of a Qualified Environmental Professional.

CARRIED.

9. NOTICE OF MOTION

There were no notices of motion.

10. CORRESPONDENCE

10.1 Mitzi Dean, Minister

Ministry of Children and Family Development

10.2 Ambrose Yung, Registrar

Youth Parliament of B.C Alumni Society

Council requested that this information be forwarded to the Ucluelet Secondary School.

10.3 Vance White - Manager, Stakeholder Engagement Team

Assistant Deputy Minister (Public Affairs), Department of National Defence

Council requested that this information be forwarded to the Ucluelet Secondary School.

10.4 Cathy Peters

Anti Human trafficking Initiative BC

10.5 Nicole Thompson, Vice Principal

Ucluelet Secondary School, Scholarship Recipients

11. INFORMATION ITEMS

11.1 Movie Night/ Survey Press Release

Alberni- Clayoquot Regional District

11.2 Monthly Policing Report, September 2023

Sgt. Marc Jones, Ucluelet Detachment

12. MAYOR'S ANNOUNCEMENTS AND COUNCIL COMMITTEE REPORTS

12.1 Councillor Shawn Anderson

Deputy Mayor, April 1 - June 30, 2023

Councillor Anderson met with the medical health officer for the Central and North Island Dr. Enns to discuss public health issues. He is pursuing a meeting with Dr. Kerr to discuss doctor retention and recruitment.

Councillor Anderson noted a meeting with Stephanie Kar from Lane Light Traffic Technologies at the Union of British Columbia annual conference. Councillor Anderson noted interest in improving safety lighting at pedestrian crossings on Peninsula Road.

Councillor Anderson also attended a meeting about the Municipal Protected Areas Project where biological conservation in municipal areas was discussed. Councillor Anderson will attend the Decolonize First Learning Circle course commencing in November.

12.2 Councillor Jennifer Hoar
Deputy Mayor, January 1 - March 31, 2023

Councillor Hoar attended the Truth and Reconciliation day exhibit at the Ucluelet Secondary School on September 30th. The exhibit will be presented at the Tofino Visitor Centre on on Friday, October 13th.

Councillor Hoar plans to attend a working lunch in November hosted by North Island College.

Councillor Hoar noted that the keynote speaker at the UBCM Conference stated that "If you can't be good, be great".

12.3 Councillor Ian Kennington
Deputy Mayor, July 1 - September 30, 2023

Councillor Kennington chaired the Accessibility Committee Meeting on October 4th where he distributed accessibility related materials provided at a tour hosted by the Union of British Columbia annual convention related to financing accessibility projects.

12.4 Councillor Mark Maftei
Deputy Mayor, October 1 - December 31, 2023

Councillor Maftei plans to attend the Clayoquot Biosphere Trusts Regional Forum on October 18h.

12.5 Mayor Marilyn McEwen

On September 27th Mayor McEwen attended a Tourism Ucluelet Meeting. A task force has been convened to determine whether or not to use the Pacific Rim Visitor Centre for visitor services and whether such services should be offered in-person in town.

The Mayor will attend a 4VI industry session in Ucluelet on November 30th from 4 PM to 7 PM. Minister Popham will be in attendance.

The Mayor attended the Alberni-Clayoquot Regional Directors Board meeting on September 27th and she attended the raising of the Survivors Flag at the Municipal Office on September 29th. On October 4th Mayor McEwen attended the West Coast Committee Meeting. Tipping rates at the West Coast Landfill will increase, a motion was adopted to implement pay parking at the Long Beach Airport, and West Coast transit service level and costing was approved by the Committee.

13. QUESTION PERIOD

There were no questions.

14. ADJOURNMENT

The meeting was adjourned at 5:50 PM.

CERTIFIED CORRECT: Minutes of the Regular Council Meeting held on Tuesday, October 10, 2023 at 4:00 pm in the Ucluelet Community Centre 500 Matterson Road, Ucluelet, BC.

Duane Lawrence, Corporate Officer

Marilyn McEwen, Mayor



REPORT TO COMMITTEE OF THE WHOLE

Council Meeting October 23, 2023
500 Matterson Drive, Ucluelet, BC V0R 3A0

FROM:	DUANE LAWRENCE	FILE NO: 8400-20
SUBJECT:	VISITOR PARKING PROGRAM	REPORT NO: 21- 139
ATTACHMENT(S):	N/A	

BACKGROUND SUMMARY OF DESIRED OUTCOME

The District is experiencing a growing demand for resources to support increased community growth and aging infrastructure, in part due to increased tourism. In order to support the demands of a growing community with a substantial tourist population, aging infrastructure and increasing service level demands, Staff are seeking direction from Council with respect to exploring visitor parking fees as an alternative revenue source that would assist in meeting these increased demands.

BACKGROUND

As the District completes its infrastructure assessments and asset management (AM) plans, staff have identified significant deficiencies within the municipalities water, storm, sewer, road and sidewalk networks and buildings. This is primarily due to aging infrastructure that was installed between 40 to 70 years ago and is now at the end or past its anticipated useful life and increased system demands related to tourism. Many municipalities have initiated long-term asset management programs over the past 10 – 15 years. Ucluelet started an AM program around 2015, that work, in combination with the new reserves bylaw, is showing more clearly the anticipated funding gaps.

The District's aging infrastructure and associated replacement costs are also increasing due to community growth and demands related to tourism. This increases demand on infrastructure and staff time needed to operate, maintain, and repair various community assets. The demand is further compounded by an expanding visitor presence in the community which effectively triples demand levels. During the peak tourist season, Ucluelet can see demands on our infrastructure that are the equivalent of over 6000 permanent residents.

Excluding some specific grant opportunities - such as recreation-orientated grants that provide for the replacement of recreation facilities, and the one-time Growing Communities Fund announced in 2023 by the Province - there are currently limited grant opportunities that fund the *replacement* of existing infrastructure (water, sewer, roads, storm). Additionally, development cost charges (DCC), connection fees, the municipal resort development tax (MRDT), resort municipal initiative (RMI), gas tax etc., are restricted funds focussed on new infrastructure; at the time of this report these sources cannot be utilized to fund the replacement of existing infrastructure.

At the February 2023 budget meeting Council directed staff to investigate additional alternative revenue source opportunities which could be utilized to support the:

- reduction of the total long-term borrowing requirements for the water treatment project

- reduction of the anticipated borrowing requirements for future fire apparatus purchases
- funding the replacement and maintenance of aging infrastructure (lift stations, pumps, water/sewer lines, storm systems)
- increasing costs associated with bylaw enforcement and parks and trails maintenance directly related to increased visitor presence
- offsetting the impacts of tourism related increases in population on infrastructure
- funding of statutory and non-statutory reserves to allow for effective funding and leveraging of funds against Provincial and Federal grant programs

ANALYSIS OF OPTIONS

Staff have reviewed potential alternative revenue sources and have identified a visitor parking program as the most beneficial program available to the municipality.

As a result of this investigation, parking fees was the only program identified that could be developed to generate additional revenues without directly impacting taxation on permanent residence.

In communities that have developed and managed parking programs, it is reported that parking fees have the potential to be the second largest source of revenue for a municipality. Additionally, parking fee programs can have the added benefit of encouraging visitors and locals to use non-motorized transportation options, thereby reducing traffic volumes, demands on parking infrastructure and reduced vehicle emissions.

At the time of this report the following information regarding visitors and vehicle traffic to the west coast and Ucluelet are as follows:

- Parks Canada sells an average of 1.1M vehicle passes annually.
- Total number of vehicles entering Ucluelet annually was 647,292 in 2021 (MOTI Traffic Data).
- Average daily vehicle count on the Tofino-Ucluelet High south of the junction is 1,901.
- Ucluelet has 839 individual rooms available through hotels and vacation rentals, not including camping or vacation rentals outside of the Municipality.
- The Wild Pacific Trail, lighthouse loop, sees approximately 55,000 visitors per month during the summer.
- There are an estimated 800 District-operated public parking spaces.

PARKING PROGRAM OVERVIEW

In order to provide Council with a starting point with respect to what a potential visitor parking program could look like Staff have developed the following overview. These details will be subject to change as determined by Council and are intended to provide discussion points for consideration. There are many possible fee structures and implementation strategies with various benefits and costs. Below is staff's first consideration of a visitor parking program that would be the simplest and most cost-effective to implement and manage.

GENERAL PARKING PROGRAM OVERVIEW

1. All permanent Ucluelet residents exempt from parking fees.
2. Nominal cost recovery fee for all other West Coast permanent residents.
3. Blanket parking program (all District roads and parking lots).
4. A flat daily rate for all visitor vehicles.
5. Kiosk and/or digital payment system.

Item	Pros	Cons
District wide fair zone (streets, parking lots, District properties)	<ul style="list-style-type: none"> • Reduces the spillover effect from visitors looking for free parking areas • Ease of implementation & enforcement • Reduced signage requirements • Reduced number of kiosks • Encourages visitors to walk from local accommodation rather than drive • Potential to ease/reduce future parking lot expansion requirements 	<ul style="list-style-type: none"> • Potential for increased amount of parking in private parking lots (potential mitigation through installation of signage indication private lot is parking fee compliant)
Flat rate system (day rate) i.e. \$5/day	<ul style="list-style-type: none"> • Ease of implementation • Increases likelihood of longer visitations • Easier for visitors, buy once & good for the day no matter where they park • Enforcement is easier 	<ul style="list-style-type: none"> • Visitors stopping by quickly may not purchase a pass
Local Residents Exemption	<ul style="list-style-type: none"> • Does not impose an additional cost on residents already paying property taxes 	<ul style="list-style-type: none"> • Increased oversight costs • Does not discourage local vehicle usage behaviours • Reduced total revenues
West Coast Residents (Nominal Cost Recovery for Administration of parking passes)	<ul style="list-style-type: none"> • Ucluelet residents are not subsidizing neighbouring residents that do not directly contribute to municipal services • West Coast residents outside of Ucluelet will not be subject to the full parking fees only administration cost recovery 	<ul style="list-style-type: none"> • West coast residents will need to register their vehicles and pay a nominal cost recovery fee for administering the pass
Business Rate (annual fee)	<ul style="list-style-type: none"> • An annual fee that would cover the administrative costs of the program could be considered • Minimizes impact of parking fees on local businesses • ICBC estimate 750 commercial vehicles are registered in Ucluelet 	<ul style="list-style-type: none"> • Adds a cost to local businesses that operate commercial vehicles
Parking Fees (General)	<ul style="list-style-type: none"> • Increases municipal revenues to address key priority areas • May mitigate/dissuade van life parking behaviours • Targeted revenue program aimed to generate revenues from visitors which do not contribute to maintaining infrastructure • Reduces tax burden of permanent residents and businesses who contribute to infrastructure requirements directly related to tourism 	<ul style="list-style-type: none"> • Some businesses may see this as discouraging visitors • Mitigation efforts will need to be undertaken to address potential increased usage of private parking lots • Increased demands on the municipality for implementation and oversight • Enforcement costs

PARKING FEE COLLECTION SYSTEMS

The collection of parking fees could utilize a combination of digital and in-person credit or cash kiosk systems. Based on a community wide program staff would anticipate placing kiosks in key locations within

the community where visitors can easily access a kiosk station such as at the light house, near the municipal hall, locations along Peninsula Road etc. Staff would also anticipate using an online platform that would be accessed via a downloadable app.

ENFORCEMENT

The level and type of enforcement will be determined based on how aggressive or passive Council wishes to enforce compliance. As a Tourist destination, it is the goal of the community to ensure visitors experience is a positive one; receiving a parking ticket and having aggressive parking enforcement may have a negative impact. Initially staff would recommend using signage to advise visitors of the parking program and bylaw enforcement to educate and gain compliance as needed. Staff are assuming that 75 – 80% of the population will automatically purchase a parking pass without the need for active enforcement. 10- 20% of visitors may try to avoid paying a parking fee although if they see enforcement occurring will purchase a pass. 5 -10% of visitors will go to greater lengths to avoid parking fees. The level of enforcement should be considered based on how desirable it is to capture the 20 – 25% of visitors that might not purchase a parking pass. If fees are maintained at a reasonable rate, voluntary compliance is likely to be fairly high, at or above 80%.

GENERAL IMPACT ASSESSMENT

If a parking program is implemented based on the suggestions within this report the below table provides an overview of the potential anticipated impacts to the various stakeholders that reside or visit the community. If desired, staff could contract out a formal impact assessment, using a third-party consultant to provide increased confidence in the determination of how a parking program could impact residents, businesses and visitors.

Permanent Residents	<ul style="list-style-type: none"> Residents will be required to register and display parking passes.
West Coast Residents	<ul style="list-style-type: none"> Required to register and pay for the administration of a parking pass.
Day Trippers to the West Coast	<ul style="list-style-type: none"> Unlikely to see a reduction in visitations. Planned trip, will visit all sites they wanted to explore.
Overnight Visitors	<ul style="list-style-type: none"> Potential for reduced travel inside town, may walk or bike rather than drive to locations.
Tofino Day Trippers	<ul style="list-style-type: none"> Moderate potential impact, possible change in number of visits to Ucluelet over the entirety of their stay although fairly low. i.e. If they want to visit the wild pacific trail a parking fee is unlikely to affect this decision.
Fishing Community	<ul style="list-style-type: none"> No reduction in visitations. Very unlikely that a visitor will change their destination based on a parking fee.
Local Business Visitations	<ul style="list-style-type: none"> Impacts on various businesses is very difficult to predict or validate. Residential visitations to businesses should remain unchanged if locals are exempt from parking fees. With respect to visitors, if the above assumptions are correct there should be limited impacts for most businesses with some businesses seeing increased pedestrian traffic. Pedestrians are more likely to enter a business if they are walking than if they are in a vehicle driving to a specific location or on a specific errand.

OPERATIONAL EXPENDITURES

Staff anticipate entering into either a contracted services agreement, supply and maintenance agreement or combination thereof. A competitive bidding process would be required where staff would request proposals from organizations that have the expertise, knowledge, and experience with the implementation of parking programs.

Based on discussion with the District of Tofino, staff anticipate a temporary increase in demands at the front counter answering questions and issuing passes. The finance department will see an increase in dedicated oversight and management responsibilities to oversee the program. Bylaw enforcement will see the highest impact with a potential need to increase bylaw officers depending on the level of enforcement desired by Council. If increased bylaw enforcement is supported, the position(s) should be fully fundable through visitor parking fees.

Capital costs would include the lease or purchase and installation of signage and kiosks. Operational costs and the costs of licence for the software would be an annual cost. Based on other jurisdictions that have implemented parking programs, staff would anticipate a fee for service program that includes the installation, maintenance and operation of parking kiosks.

If the District were to pursue a parking program, staff would recommend issuing a request for proposal for a parking program based on the parameters identified by Council. The costs associated for the development and implementation of the program would be dependent on the number of kiosks required, enforcement contract (if desired), signage, online platform, complexity of managing the program, and/or if the proponent would be responsible for delivering all or part of the program.

Staff have reviewed the parking programs undertaken by the ACRD at the Long Beach Airport and the District of Tofino. Both programs operate based on a flat annual operating fee plus a percentage of the total revenue generated by the parking program.

REVENUE

Based on the assumption that a visitor parking program would not apply to local residents and in order to give Council an idea of the potential revenue, before expenses, staff have undertaken a high-level calculation experiment that would provide some insight into the possible monthly gross revenues of a community-wide parking program.

Table 1 below was developed based on the inferences made based on high-level data provided by Tourism Ucluelet on the number of overnight visitors to Ucluelet. To simplify the calculations staff have utilized a one-rate model rather than an a tiered hourly/multi-hour/daily rate structure. To reduce the likelihood of over-projecting possible revenues, staff have made an assumption that visitors would use pay parking areas within Ucluelet 50% of the time with the remainder of time having their vehicle remain at their accommodation provider's property. It should be noted that staff have not included any projections for day visits or visits from persons staying in campgrounds or accommodation outside of Ucluelet.

Month	Air DNA	Total Rooms	Total Vehicles	Days/Mth	50% Parking Days	Total Parking Days	Total Parking Per Day	\$5/day
January	25%	839	210	31	16	3251	105	\$16,256
February	40%	839	336	28	14	4698	168	\$23,492
March	50%	839	420	31	16	6502	210	\$32,511
April	55%	839	461	30	15	6922	231	\$34,609
May	65%	839	545	31	16	8453	273	\$42,265
June	75%	839	629	30	15	9439	315	\$47,194
July	90%	839	755	31	16	11704	378	\$58,520
August	95%	839	797	31	16	12354	399	\$61,771
September	81%	839	680	30	15	10194	340	\$50,969
October	55%	839	461	31	16	7152	231	\$35,762
November	50%	839	420	30	15	6293	210	\$31,463
December	40%	839	336	31	16	5202	168	\$26,009
								\$460,820

Table 1: projected revenue

*Air DNA provides high level data on occupancy rates. The provided percentage is the average monthly occupancy level for Ucluelet for reporting accommodation providers.

*calculation based on 1 vehicle per vacation rental room and visiting vehicles paying for parking a maximum of half their stay.

*above calculation does not include fees generated from visitors staying outside of Ucluelet and day tripping into town.

*parking fee based on \$5/day although it is recommended that a higher rate or tiered rate be utilized.

*revenue potential should be seen as +/- 50% at this time and are calculated before expenses.

Discussion Questions

Staff have identified some key presumptions that may impact Council's decision on whether or not to institute a parking fee program for Ucluelet.

A. Can a parking program exempt permanent residents?

Yes, through the use of a free parking pass to permanent residents, all permanent residents could be exempt from any parking fees imposed by the municipality.

B. Can Council extend an exemption or reduced fees to permanent residents of other communities?

Yes, Council could extend the exemption, through a process, to neighbouring communities or discount an annual parking pass. It should be noted that administering an exemption program would have staffing and cost implications with the management and oversight of a validation system.

C. How do we prevent pushing visitors out of parking lots and onto neighbourhood streets?

Parking programs that charge fees for specific parking lots or areas do see changes in parking habits with vehicles being parked blocks away from the core areas in order to avoid paying parking fees. Staff are recommending the District consider a blanket, community wide, parking program, all parking lots, streets, side streets etc. to require a parking permit (no free or time restricted parking areas) this would negate the incentive for visitors to search out 'free' parking opportunities.

D. How would the District mitigate visitors leaving cars in private parking lots i.e. the Co-op to avoid parking fees?

The District has little control over private lands and no way to provide coverage or oversight of private parking areas. The prohibition from aiding a business prevents a municipality from assisting a business in this manner.

E. Can the District implement a program that is specific to existing parking lots?

Yes, there are a variety of options for implementing a parking fee program including charging for specific parking lots, streets, areas etc. If only specific parking areas are designated as fee zones, the District would likely see increased visitor parking in non-fee areas which would undermine the program and have a negative impact on residents.

F. Can the District oversee private parking lots?

No. The District is not permitted to charge for parking on private lands. Local businesses could, at their expense, charge for parking on their lands provided they have adequate space and are permitted within their specific zoning.

G. What would the impact on local businesses be?

Staff would estimate that there would be limited impacts on local businesses. Visitors to the region have travelled specifically to visit Ucluelet, Tofino, and the Pacific Rim National Park. It is unlikely that visitors would avoid Ucluelet entirely due to the need to purchase a parking pass.

H. How would enforcement be undertaken?

There are two options that could be considered. The District could undertake enforcement utilizing bylaw enforcement officers which would likely require the hiring of additional bylaw officers to provide monitoring of parking compliance. Alternatively, the District could enter into an agreement with a third party that undertakes enforcement. The degree of active enforcement is at the discretion of Council.

COMMUNITY ENGAGEMENT

It will be important to engage both the business community and community at large if a visitor parking fee program is implemented. The level and type of engagement will need to be determined and planned in advance if this initiative is furthered. There are two considerations that will significantly impact how we plan out an engagement strategy.

If Council has determined that the implementation of a visitor parking fee program is a critical service and revenue generator for the community, then the communication strategy would be informative in nature. Advising residents and businesses of the direction Council is taking, providing answers to anticipated questions and concerns, providing an overview of the program and requesting comments from stakeholders with respect to any items that have been missed or not been considered. An informative communication program would be undertaken in concert with the development of the program and required approximately 80 – 120 hours of staff time to implement.

If Council is undecided as to the benefit of the program and would like to know how the community feels about the implementation of a visitor parking fee program, then a more intensive engagement strategy would be required. This strategy would ask questions about if the community would like to see a parking program be undertaken, what goals or objectives of the program should be considered, perceived impacts, structure etc. If a full engagement program is desirable staff would recommend engaging a third party to undertake the communication and engagement work which staff would anticipate would take between 3

and 4 months. Undertaking this internally would require a minimum of 200 – 300 hours of staff time and draw out the engagement process for an additional 2 to 3 months.

KEY QUESTIONS

1. Does Council wish to explore the implementation of a visitor parking fee program for Ucluelet?
2. If a visitor parking fee program is supported:
 - a. Does Council support a community-wide parking program approach?
 - b. Does Council support the exclusion of permanent west coast residents from parking fees?
 - c. Does Council support a flat rate fee structure?

SUGGESTED RESOLUTION

That the Committee of the Whole recommend Council direct staff to issue a request for proposals for the implementation of a visitor parking program; initiate an informative community engagement process; and bring a follow-up report back to Council providing an overview of the parking program inclusive of costs, impacts and revenue generation for consideration.

NEXT STEPS

- Development of communication materials and strategy
- Confirm type and function of a parking program
- Development and Issuance of Request for Proposals
- Update of Traffic and Parking Bylaw
- Update of Municipal Ticket Information Bylaw

Respectfully submitted: Duane Lawrence, Chief Administrative Officer



REPORT TO COUNCIL

Council Meeting: October 23, 2023
500 Matterson Drive, Ucluelet, BC V0R 3A0

FROM: JOHN TOWGOOD, MUNICIPAL PLANNER

FILE NO: 3060-20 DP23-01/3090-20 DVP23-09

SUBJECT: DEVELOPMENT AND DEVELOPMENT VARIANCE PERMIT FOR 2091 PENINSULA ROAD **REPORT NO:** 23-134

ATTACHMENT(S): APPENDIX A – APPLICATION
APPENDIX B – ENVIRONMENTAL REPORT
APPENDIX C – DEVELOPMENT VARIANCE PERMIT 23-09
APPENDIX D – DEVELOPMENT PERMIT 23-01

RECOMMENDATION(S):

THAT Council authorize the issuance of Development Variance Permit 23-09 to allow for a mixed use building and associated site works within 30m of a stream and wetland as per the terms and conditions listed in the permit.

THAT Council authorize the issuance of Development Permit 23-01 to allow for a proposed mixed-use building and associated site works in environmental and form and character Development Permit areas at 2091 Peninsula Rd.

THAT Council request that the Ucluelet Consumer’s Cooperative Association consider granting a statutory right-of-way for a potential future pedestrian trail connection across the northwest corner of the property at 2091 Peninsula Road to access the adjacent municipal park.

BACKGROUND:

This Development Permit (DP) and Development Variance Permit (DVP) application was received in August of 2023, for the property located at 2091 Peninsula Road (PID 018743617, Lot 3, Plan VIP58757, District Lot 284, Clayoquot Land District; the “**subject property**”). The subject property is a triangular lot that is currently vacant with the central area having been previously cleared. The property to the east is the C&N Backpackers’ Hostel and directly to the west is a municipal park property that contains a fish bearing stream (Raven Haven Creek).

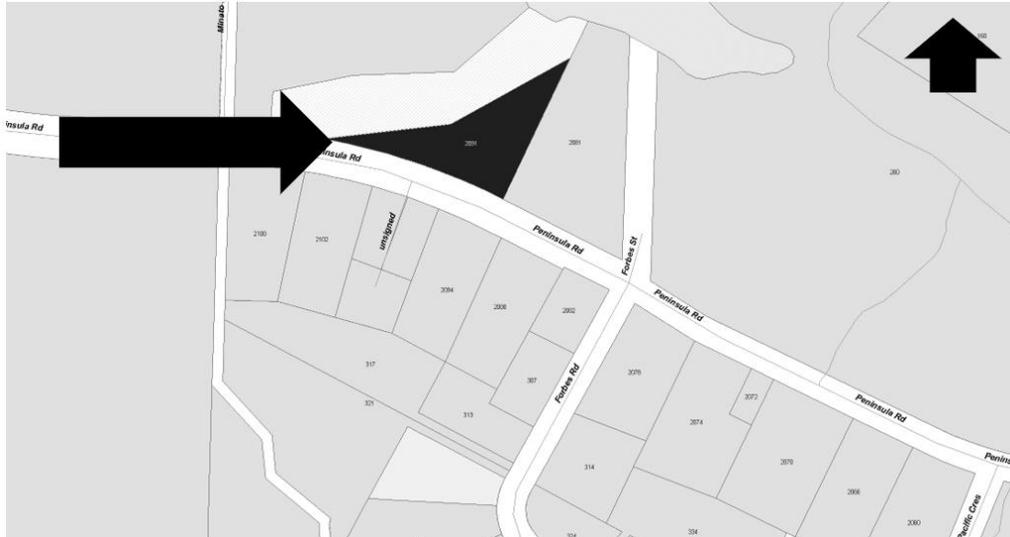


Figure 1 – Subject Property

The property lies within the following DP 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 V- Terrestrial (Environmental)
- Development Permit Area VI- Streams and Riparian (Environmental)

The Development Permit Areas listed above will be encompassed into a single permit with each area being discussed separately below. The proposal also encroaches within 30m of a stream and wetland and therefore requires a DVP for that encroachment.



Figure 2 – OCP Schedule “E” Environmental Development Permit Areas

DISCUSSION

Development Permit - Form and Character

Form and Character DP guidelines - which are adopted within the *District of Ucluelet's Official Community Plan (OCP)* bylaw - specify the District's objectives for the form and character of the built environment within town. The [General](#), [Peninsula Road \(DPAII\)](#) and [Multi-Family / Commercial / Mixed Use \(DPAIV\)](#) guidelines are specifically relevant to this application.

Building Form

The applicant is proposing a two-storey building with a total floor area of 9,333ft², consisting of 4,711ft² of commercial space on the ground floor and 6 residential units (total 4,622ft² area) located on the second floor. The ground floor is anticipated to contain a 2,180ft² daycare and three 700ft² commercial spaces. The second storey would contain three two-bedroom and three one-bedroom residential units. The building is located in a previously cleared area of the site with the parking located to rear of the front face of the building. The building's low slope roof lines, irregular shape, and stepped back building faces give the building a dynamic and interesting façade from every side. The applicant is proposing multiple exterior materials such as panel and corrugate metal, horizontal cedar, and horizontal Hardie Plank siding which are all consistent with the form and character guidelines.

Landscaping

The landscaping proposed is a mix of hardscape and trees and planter boxes located close to the building, drive aisle, and parking area. As the site contains multiple environmentally sensitive areas including the frontage adjacent to the drive aisle, this contained approach to the utilization of the site is appropriate. The environmental report does however note that the invasive species on the property should be removed and replaced with native species trees and ground cover. This requirement will form part of the conditions listed in the DP (see **Appendix D**).

Pedestrian Connectivity

The need for safe pedestrian access to the site and new building was discussed with the applicant. The applicant has indicated that either a sidewalk on the north side of Peninsula Road connecting to the Forbes Road intersection or a pedestrian crosswalk connecting to the existing multi-use path on the west side of Peninsula Road would be constructed as part of this application. The exact configuration of this pedestrian route will require further discussions between staff, the applicant, their consultants and the Ministry of Transportation and Infrastructure, and will be a condition of the DP (see **Appendix D**).

Emergency Access

The applicant has worked with the Ucluelet Fire Department on fire access and turnaround. The proposed site plan attached within **Appendix A** has received Fire Department approval.

Engineering and Public Works

The building utility demands and municipal utility servicing availability have been analyzed in preparation for this development permit. The available capacity at the property line for the municipal potable water, sprinkler water and sanitary sewer system are as follows:

Potable water:

- The property will be serviced by the District's highway reservoir which will provide an estimated 64 psi at the property main line municipal connection, which is adequate to the service the property without upgrade.
- The capacity of service line and building line will be conducted at the building permit stage.

Sprinkler water:

- Fire flow demand for the proposed building is not known as the building design is still in progress.
- If a design fire flow greater than 200 lps is required, additional offsite improvements will be required.
- Two fire hydrants are located near the site:
 - Peninsula Rd, northwest corner of 2094 Peninsula Rd
 - Peninsula Rd, at 2081 Peninsula Rd (near Forbes Road intersection)

Sanitary sewer:

- The existing 250 mm diameter main on Peninsula Road is adequate to service the proposed development.
- A review of the lift stations downstream of the property indicate they are not capable of handling the calculated peak design flow from the proposed development. Upgrades to the municipal sanitary system must be completed prior to bringing the building online.

Upgrades to the sanitary sewer system will be required prior to occupancy for new developments in this area of the system. Work is underway to identify options for short-, medium- and long-term system upgrades, and the potential costs and funding strategies. Separate reports will be presented to Council on this subject. While related, the adequacy of site services can be considered separate from the requested DP and DVP. A condition of the DP would allow the project to proceed, while ensuring that a solution is in place prior to building occupancy.

Parks

As noted above, the subject property is adjacent to an existing municipal park containing Raven Haven creek (see Figure 3). The OCP Schedule C - Parks and Trails Network plan shows future pedestrian trails parallel to the creek and accessing Olsen Bay. These trails are not yet constructed.

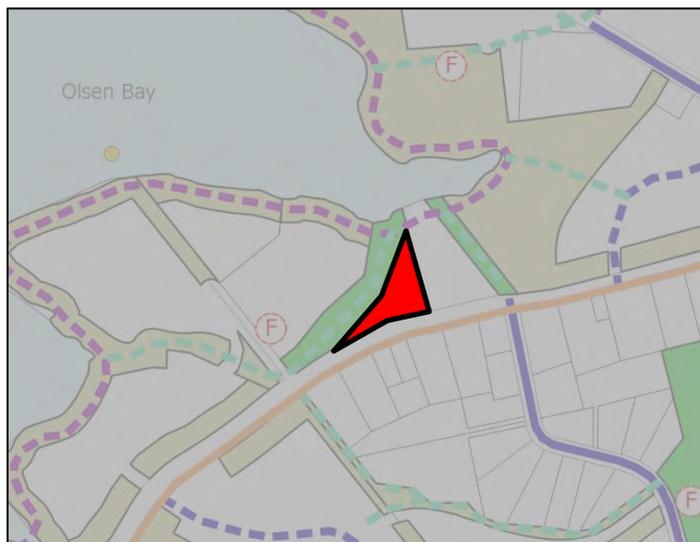


Figure 3: excerpt from Parks and Trails Network plan

Increased activity by people on the subject property – whether residents, employees, customers or kids at the daycare – will increase the likelihood of ad-hoc paths being established to access the stream and shoreline areas. It will be important to establish either proper pedestrian trails or adequate measures to discourage access from the subject property to the adjacent sensitive environmental areas, prior to occupancy. A condition has been added to the DP to add sections of fence or otherwise delineate the park-side edge of the parking and pedestrian areas to discourage unintended impacts (see **Appendix D** and red dots in **Figure 4**).

An existing statutory right-of-way (SRW) surrounds the Peninsula Road sewer pump station located toward the northwest corner of the subject property. Staff suggest that the District request the property owner to consider granting an overlapping SRW for a future pedestrian trail connection. A public trail in this location would have no impact on the proposed development and would enable a possible future path connection to the adjacent park (green line in **Figure 4**), lessening the likelihood of informal stream access.

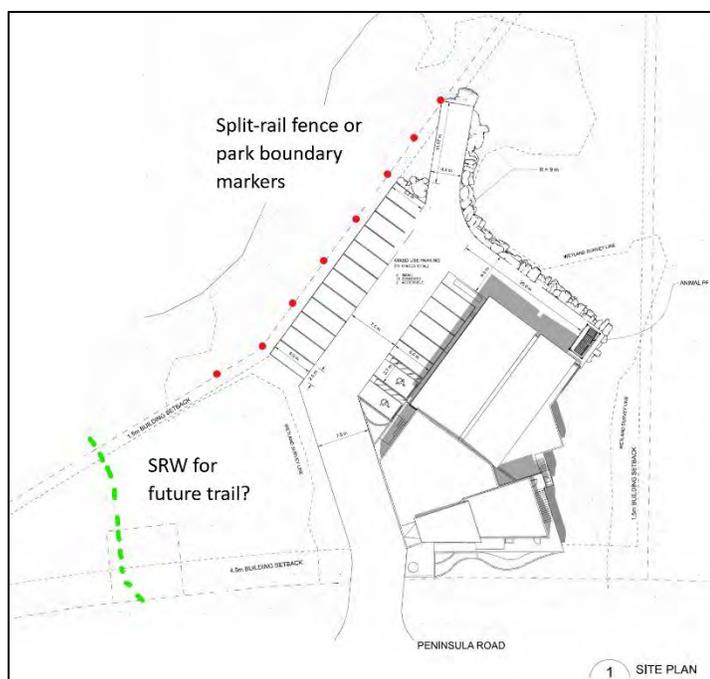


Figure 4

Development Permit - Environmental

Environmental DP guidelines, which are located within the District of Ucluelet's Official Community Plan (OCP), specify the district's objectives to guide development and use land wisely to ensure that the most sensitive environmental features of a site are protected. The [Terrestrial](#) and [Streams and Riparian](#) guidelines are relevant to this application.

Terrestrial

This application will not have a significant impact on mature forests as the applicant has limited the development to the site's previously-disturbed areas.

Streams and Riparian

The subject property contains three wetland areas and one stream plus there is a fish bearing stream within the District of Ucluelet park directly to the northwest. The applicant engaged EDI (Environmental Dynamics Inc) to complete an environmental impact assessment (see **Appendix A**). This assessment reviewed the proposed development and makes recommendations on how the proposed development can proceed while protecting the adjacent wetlands and riparian area. These recommendations can be found in the EDI report dated August 2023 in **Appendix B**.

Zoning

The proposed uses, building size, and siting conform to the properties CS-2 Commercial Service zoning with the exception that the proposed building and parking area disturbance encroaches

to within the required 30m Riparian Setback as required by section 306.2 (1) (b) of Ucluelet zoning bylaw:

(1) No building or structure may be placed, constructed, sunk into, erected, moved, sited, altered or enlarged within:

- (a) 7.5 m (25 ft) on the upland side of the natural boundary of the ocean,*
- (b) 30 m (98.5 ft) of the natural boundary of any other natural watercourse or source of water supply,*

Development Variance Permit

The environmental report (**Appendix B**) lists the appropriate minimum setback distances to the site's riparian areas in which no ground disturbance shall occur as follows:

- Wetland 1: 1.0 m
- Wetland 2: 4.0 m
- Wetland 3: 0.5 m
- Raven Haven Creek: 10.0 m
- Stream 1: 2.0 m

The 30.0 m setback distance in the zoning bylaw was set to mirror provincial riparian regulations and should be considered the baseline limiting distance until a qualified registered professional provides a report that supports a reduction to the setback. The applicant is asking for a DVP (**Appendix C**) to the riparian setbacks listed above and within the EDI environmental report to allow the proposed building and parking improvements.

ANALYSIS OF OPTIONS:

A	Authorize the issuance of DVP23-09 and DP23-01	<u>Pros</u>	<ul style="list-style-type: none"> • Would allow the applicant's proposed development to proceed in a manner which a QEP has deemed consistent with the OCP development permit guidelines.
		<u>Cons</u>	<ul style="list-style-type: none"> • Unknown at this time.
		<u>Implications</u>	<ul style="list-style-type: none"> • Approval will allow the application to proceed. • Upgrades to the District's sanitary systems will need to be including in municipal capital works budget and completed prior to issuance of the occupancy permit.
B	Provide alternative direction	<u>Pros</u>	<ul style="list-style-type: none"> • Achieves the goals and objectives as identified by Council
		<u>Cons</u>	<ul style="list-style-type: none"> • Unknown at this time
		<u>Implications</u>	<ul style="list-style-type: none"> • Dependent on the direction of Council

C		<u>Suggested Motion</u>	THAT Council, with regard to Development Variance Permit 23-09 and Development Permit 23-01, [<i>provide alternative direction here</i>]
	Reject the application	<u>Pros</u>	<ul style="list-style-type: none"> This development will not proceed at this time
		<u>Cons</u>	<ul style="list-style-type: none"> Does not allow the applicant's proposed development to proceed.
		<u>Implications</u>	<ul style="list-style-type: none"> The application would not proceed. Additional staff time will be required to follow up with applicant and consultants.
		<u>Suggested Motion</u>	THAT Council reject the application for DP23-01 because it does not adequately address [<i>quote OCP Bylaw DP guideline section(s) not met</i>].

POLICY OR LEGISLATIVE IMPACTS:

This application is consistent with the *Official Community Plan*, and the *Local Government Act*. It is important to note that the applicant is responsible for ensuring that all Provincial and Federal laws, requirements, and best practices are followed. Notification has been completed for the DVP and Council should consider representations from the public on the requested variances.

NEXT STEPS:

If this application is approved the attached DVP and DP will be signed by the Director of Community Planning, issued to the applicant, and notice will be filed with the Land Title Office.

The applicant or subsequent owners of the subject property will be required to meet all conditions of the permit and any other conditions set out by Council for the proposed development.

Respectfully submitted:

JOHN TOWGOOD, MUNICIPAL PLANNER

BRUCE GREIG, DIRECTOR OF COMMUNITY PLANNING

DUANE LAWRENCE, CAO

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

Date: January 4th, 2023

Attn: Bruce Greig

Re: Development Permit, 2091 Peninsula Road zoned CS-2 Service Commercial

This letter of intent is to inform the District of Ucluelet of plans to develop the property formally described as:

PID018743617, LOT 3, PLAN VIP58757, DISTRICT LOT 284, CLAYOQUOT LAND DISTRICT

Development Permit Goals:

Ucluelet Consumers Co-operative Association is seeking a Development Permit for a mixed use Commercial/Residential building.

The proposed development would be comprised of:

- 3 x 700 sq.ft. Ground oriented commercial/retail lease spaces
- 1 x 2200 sq.ft. Ground oriented Day Care Facility
- 3 x 2 BR Walk up Rental Apartment units
- 3 x 1 BR Walk up Rental Apartment units
- 1 surface parking spaces per apartment unit (6 total spaces)
8 surface parking spaces (incl. 2 Accessible spaces) dedicated to commercial operations.

Project Overview:

The subject property on Peninsula Road is a previously cleared lot on the inlet side. The property contains identified wetland areas which have been surveyed and assessed by EDI Environmental Dynamics Inc. The proposed building has been situated to respect the identified wetland setbacks. A small area has been identified as requiring mitigation to reduce the required setback at the proposed project entrance.

There is currently no significant tree or vegetation located within the proposed development footprint.

Site access has been located to minimize disturbance to wetlands and detailed design will be prepared in accordance with recommendations of the Qualified Environmental Professional engaged on the project.

A paved driveway apron will be maintained to a minimum length of 10m from Peninsula Road. Detailed Design of this access point will be coordinated by Herold Engineering in coordination with Ministry of Transportation to ensure compliance with highway standards.

Landscape:

Proposed landscape areas will be primarily focused on planting beds around the building containing native grasses and ground covers. There are 730 sq.ft. of planting beds containing 81 grasses, ground covers and small shrubs planted at 18" O.C. The plan shows 19 trees lining parking areas and walkways. The preferred tree (Pacific Crabapple) is a native tree that is recognized as a riparian plant that produces fragrant flowers and fragrant blossoms.

Architecture:

The proposed building follows the slope of the land and provide wheelchair accessibility to all ground level commercial spaces and daycare space. Materials are envisioned as a combination of metal siding, timber frame entry posts, cedar siding accents with aluminum and glass railings. The varied roof line and material changes are organized to break up the building form and visual massing into smaller scaled volumes. Douglas Cole Architects will be working with The Design Centre Ucluelet on preparation of construction documents

Waste Management:

Gated animal proof waste bins and recycling rolling bins will be accessible for removal from the existing parking area.

Civil Engineering:

Herold Engineering will be providing the preliminary site servicing report.

Geotechnical Hazard:

Lewkowich Geotechnical has provided the hazard report for the subject property

Environmental Assessment:

EDI Environmental Dynamics Inc. Has provided mapping and will be retained throughout the development process to guide mitigation and restoration efforts as required.

Community Benefit:

Housing is a critical issue facing Ucluelet. This Development will provide 6 units of purpose built rentals and no short term rental options. The apartments are to be owned and operated by Ucluelet Consumers Co-operative Association.

The primary focus of the development is to provide a Daycare Facility covering roughly half of the commercial space proposed to be leased to the Ucluelet Childcare Society. The remainder of the lease space will be offered to the public.

Sincerely

Laurie Gehrke
Ucluelet Consumers Co-operative Association
1580 Peninsula Rd
Ucluelet, BC, V0R 3A0
p: (250)726-3822



CLIENT: UCLUELET CO-OP

DRAWN BY: IK

ISSUE: August 2, 2023

PROJECT:

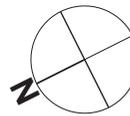
CO-OP MIXED USE BLDG
2091 Peninsula Road
Ucluelet, BC

The Design Centre
RESIDENTIAL & RESORT
PLANNING & DESIGN
1055 South Main Street
Vancouver, BC V6C 2K7



Appendix A
Project 29

ZONING INFORMATION:			
CIVIL ADDRESS:	2091 PENINSULA ROAD, UCLUELET, BC		
LEGAL DESCRIPTION:	PID018743617, LOT 3, PLAN V1P58757, DISTRICT LOT 284, CLAYCOQUIT LAND DISTRICT		
ZONING:	CS2		
LOT AREA:	5057 sq.m. / 54437 sq.ft.		
HEIGHT/SETBACK REQUIREMENTS:			
HEIGHT:	ZONING	PROPOSED	CONFORMING
FRONT YARD SETBACK:	8.5m (28'-0")	8.5m (28'-0")	YES
REAR YARD SETBACK:	4.5m (15'-0")	4.5m (15'-0")	YES
REAR SIDE SETBACK:	3m (10'-0")	7.5m (25'-0")	YES
INTERIOR SIDE SETBACK:	1.5m (5'-0")	1.5m (5'-0")	NA
EXTERIOR SIDE SETBACK:	3m (10'-0")	NA	YES
LOT COVERAGE:	50%	9%	YES
PROPOSED FLOOR AREA:			
1ST FLOOR:	437.7 sq.m (4711 sq.ft.)		
2ND FLOOR:	429.3 sq.m (4622 sq.ft.)		
TOTAL:	867 sq.m (9333 sq.ft.)		
FLOOR AREA RATIO (50):	.17		



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

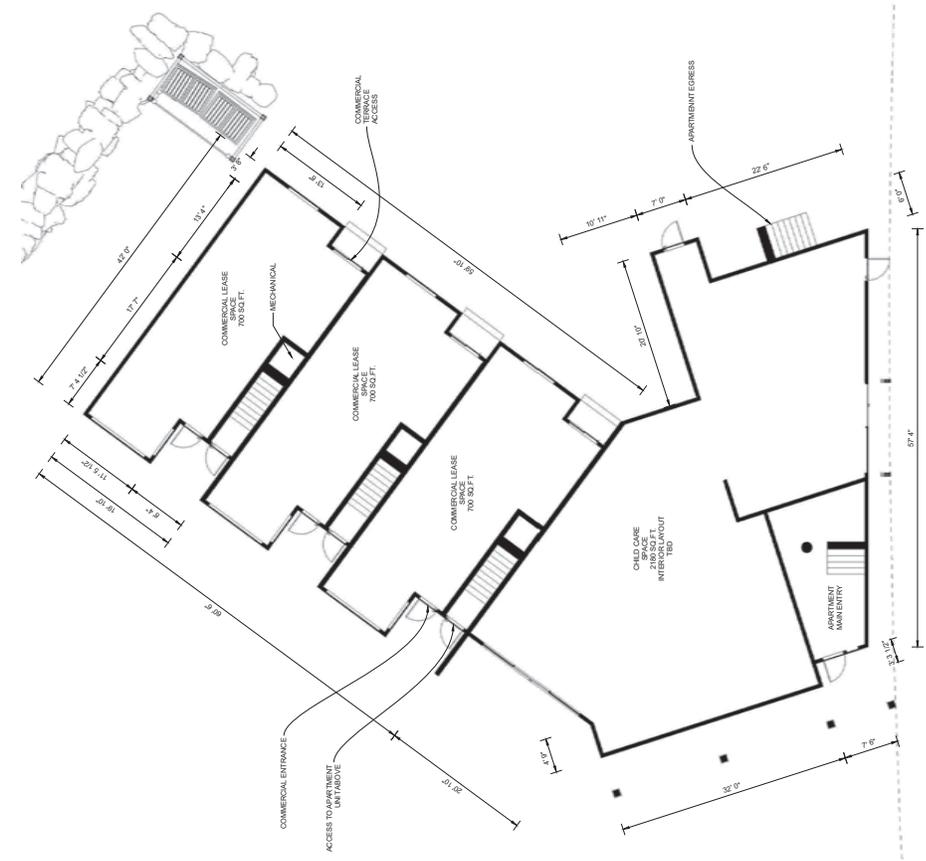


1 ILLUSTRATIVE MASTER PLAN
A.02 Scale: NTS

ISSUE August 2, 2023
DRAWN BY IK

PROJECT 2091 PENINSULA RD
UCHELET, BC

CLIENT UCHELET CO-OP



NOTES:
 DIMENSIONS TO OUTSIDE OF 13.25" WALL THICKNESS

CLIENT
 UCLUELET CO-OP

PROJECT
 2091 PENINSULA RD
 UCLUELET, BC

ISSUE
 AUGUST 2, 2023
 DRAWN BY
 IK



2 NORTHWEST ELEVATION
 A.04 / Scale: 1/8" = 1'-0"



4 SOUTHEAST ELEVATION
 A.04 / Scale: 1/8" = 1'-0"



1 SOUTHWEST ELEVATION
 A.04 / Scale: 1/8" = 1'-0"

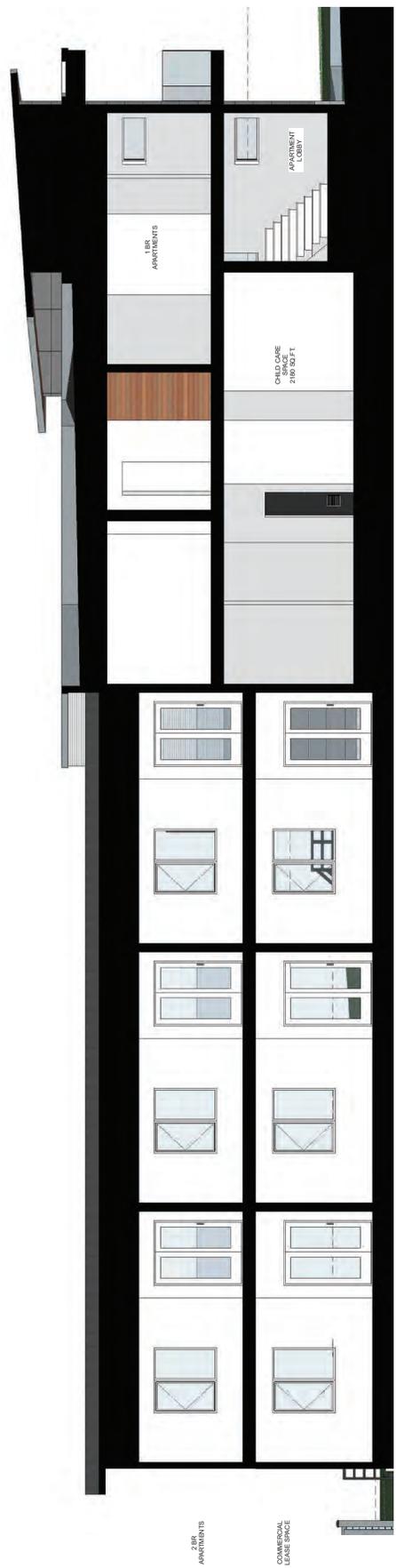


3 NORTHEAST ELEVATION
 A.04 / Scale: 1/8" = 1'-0"

0.00m a.f.f.
 ROOF PEAK (15.00m)
 FINISHED FLOOR (15.00m)
 FINISHED FLOOR (15.00m)
 0.00m a.f.f.
 FINISHED FLOOR 2 (10.00m)
 0.00m a.f.f.
 FINISHED FLOOR 1 (7.00m)
 0.00m a.f.f.
 FINISHED FLOOR 0 (0.00m)



1 SECTION 1
A.05 Scale: 1/4" = 1'-0"



2 SECTION 2
A.05 Scale: 1/4" = 1'-0"

2091 PENINSULA ROAD MIXED-USE DEVELOPMENT 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. The project is located at 2091 Peninsula Road within the District of Ucluelet (DoU). The site is currently zoned CS-2 (Service Commercial) and consists of a vacant lot with previously excavated depressions (Figure 1).

The proposed development for the property consists of a two-storey mixed-use, commercial-residential building.



Figure 1: Existing Site – 2091 Peninsula Road (Ukeemap)

The site and proposed services are shown on the attached drawing SK-1.

2. ROADS AND ACCESS

The subject site is fronted by Peninsula Road to the south (Figure 2) which is also a provincial highway under jurisdiction of the Ministry of Transportation and Infrastructure (MoTI). There is currently no access to the site, therefore, one new access is proposed to be installed from Peninsula Road (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 3.6m wide drive lanes complete with a 3.0m wide asphalt multi-use pathway and landscaped boulevard on the south side of the road, and gravel shoulder, grass boulevard, and ditch 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 along the property frontage.

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



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

3. WATERMAINS

3.1. Water Servicing

There are two existing water mains fronting the property: a 200Ø PVC distribution main on the south side of Peninsula Road and a 350Ø supply main to the north side. Based on District of Ucluelet record drawing information, there does not appear to be an existing water service to the site. 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. Alternatively, the water meter and backflow prevention could be located inside a water-room in the proposed building (see drawing SK-1 for details). The anticipated domestic water demands for the commercial and multi-family portions of the building 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	5,460	0.063
Maximum Daily Domestic Flow	1,135	13,620	0.158
Peak Hour Domestic Flow	1,820	21,840	0.253

* Assumed 2.0 persons per unit for each multi-family residential unit – total of 6 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	180	0.002
Maximum Daily Domestic Flow	22,500	450	0.005
Peak Hour Domestic Flow	36,000	720	0.008

* Daycare Facility classified as “commercial” 22,500 litres per hectare per day per MMCD 2022 Design Guidelines Section 2.4 – total building area 0.02ha (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	0.065
Maximum Daily Domestic Flow	46,300	0.163
Peak Hour Domestic Flow	74,240	0.261

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 71 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 provides 45m coverage to a fire department connection (FDC) on the face of the proposed building.

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 runs along Peninsula Road west 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 0.48L/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.

As part of the DP review process, we request that the DoU confirm that the Peninsula Road 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 drawing SK-1 and is as follows:

5.1. Site Overview

- 1) The overall existing site is approximately 0.51ha in size, and slopes from south to north (falling approximately 7m towards the Ucluelet Inlet). The property is bound on the south

by Peninsula Road, the east and west by residential lots consisting of forested wetlands, and to the north by parkland where Raven Haven Creek drains toward the Ucluelet Inlet.

- 2) There are two existing water courses on the site:
 - a) A small stream and wetland drainage area along the east property line.
 - b) A wetland drainage area to the west leading to Raven Haven Creek to the north (see drawing SK-1).
- 3) The proposed development will be limited to the area between the wetlands mentioned in point #2, within applicable setbacks.
 - a) The “developed area” (2.71ha) consisting of the proposed building area, driveway, parking, and walkways. From a stormwater management perspective, only this area will contribute to the storm sewer system.
 - b) The “undeveloped area” (2.34ha) is proposed to remain undeveloped. This area was not considered from a stormwater management perspective since it is being left undisturbed by the proposed development works. This area will be considered to retain any stormwater that lands directly on it.
- 4) According to DoU Public Works staff, there was a 375Ø HDPE storm sewer installed along the south side of Peninsula Road as part of the multi-use path construction in 2000. This storm infrastructure was installed primarily to drain surface run-off from Peninsula Road and the multi-use trail; however, it appears at least one other development west of 2094 Peninsula Rd has connected to this piped system. There is also an open roadside ditch fronting the property along the north side of Peninsula Road that currently conveys run-off to an existing drainage course heading north to the inlet. A new 200Ø PVC storm service is proposed to service the site, with an outlet into the existing ditch along the north side of Peninsula Road.
- 5) There are various aquatic setbacks on the site. Since these areas are proposed to remain undeveloped as noted in point #3. b, work within the setbacks will be limited to minor surface regrading and protection as required to direct overland flow through the area towards Raven Haven Creek to mimic how the site currently drains. Building perimeter drainage and roof leaders will directly discharge to the wetland area to the northeast of the proposed building.
 - a) Slope erosion protection at the existing outlet location will be reviewed and enhanced in coordination with the geotechnical consultant if required by the proposed site flows.
 - b) An environmental consultant (EDI Environmental Dynamics) has been retained for this project and will continue to provide input on any works within the setback if required, as well as complete the necessary notifications required for environmental approvals.

- 6) 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.
- 7) The site will have some onsite capacity to retain stormwater on site. Approximately 49% of the developed 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

- 8) Per BC MoTI Engineering requirements, the detention storage volume for a 5-year rainfall event for the entire site is 5.38m³. (See attached Detention Calculations). All stormwater that lands on the hard surfaces 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 11.65L/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.
- 9) The orifice-control manhole will also include an overflow to convey larger return period rainfall events up to the 100-year event.
- 10) The proposed 200Ø 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 asphalt driveway and parking surfaces will flow through an oil-water separator before leaving the site to provide water quality treatment.

5.4. Offsite Flows, Overflow, and Major System

- 9) Currently, the 100-year flow path flows overland to the north toward the Ucluelet inlet. The proposed development is not expected to alter this flow path. 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.
- 10) The final servicing option and stormwater management plan for this proposed development will be determined through detailed design 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





FIRE UNDERWRITER'S SURVEY

PROJECT NAME: Mixed Use Development
PROJECT LOCATION: 2091 Peninsula Road
DESIGNED BY: Jake Pinneo, EIT
REVIEWED BY: Patrick Ryan, P.Eng.

HEL PROJECT No.: 2284-004
DATE: 10/03/2023

FIRE AREA CONSIDERED: Building - Mixed Use Condo/Hotel

TYPE OF CONSTRUCTION: TYPE V, WOOD FRAME CONSTRUCTION

FIRST FLOOR AREA: 429 m²
 SECOND FLOOR AREA: 438 m²
 THIRD FLOOR AREA:

CONSTRUCTION COEFFICIENT, C: 1.5

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



TOTAL FLOOR AREA, A: 867 m² FIRE FLOW FROM EQUATION 10000 L/min. a

GROUP C - RESIDENTIAL
 HAZARD Limited Combustible -15% x a -1500 L/min.
 SUBTOTAL 8500 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 -4250 L/min.
 SUBTOTAL 4250 L/min. c

EXPOSURES	DISTANCE					
FRONT	35	ADD	0%			
LEFT	35	ADD	0%			
RIGHT	35	ADD	0%			
BACK	35	ADD	0%			
		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 **4250** L/min.
 or **71** L/Sec.



Stormwater Management
Summary Sheet

PROJECT NAME: Mixed Use Development
PROJECT LOCATION: 2091 Peninsula Road
DESIGNED BY: Jake Pinneo, EIT
REVIEWED BY: Patrick Ryan, P.Eng.

HEL PROJECT No.: 2284-004/03
DATE: 10/03/2023

Predevelopment Area	C	Area (m ²)	Area (ha)
Heavy Soil, Less than 5% Slope	0.25	1000	0.10
Heavy Soil, Greater than 5% Slope	0.35	4100	0.41
Total Average	0.33	5100	0.51

Post Development Area	C	Area (m ²)	Area (ha)
Building Roofs	0.85	553	0.06
Walkways	0.85	161	0.02
Streets	0.90	680	0.07
Landscaping	0.25	3663	0.37
N/A	0.00	0	0.00
Total Average	0.42	5057	0.51

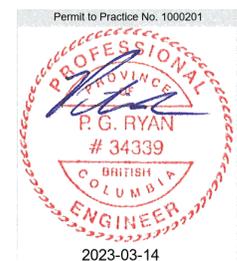
IDF Curve	UCLUELET AMPHITRITE POINT	+10%
------------------	----------------------------------	-------------

Results Summary		
Pre-Development Flow Rate (L/s)	22.32	
Post-Development Flow Rate (L/s)	28.27	5-Year
Total Detention Volume (m ³)	4.29	5-Year

Pages Following:
 5 Year Detention Calculations
 Storage Calculations

Notes:

- 1.10% added to intensities for climate change
2. Based on the Environment Canada 2021 IDF Curves for Amphitrite Point (Ucluelet)
3. Onsite areas taken from Architectural Drawings.
4. Pre-development onsite runoff coefficient taken as per DoU Bylaw No. 521.
5. 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.





Stormwater Management
5-Year Calculation

PROJECT NAME: Mixed Use Development
PROJECT LOCATION: 2091 Peninsula Road
DESIGNED BY: Jake Pinneo, EIT
REVIEWED BY: Patrick Ryan, P.Eng.

HEL PROJECT No.: 2284-004/03
DATE: 10/03/2023

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

Time of Concentration (min)		$R=A \cdot t_c^B$	
t_c (Pre)	10	$A_2=$	22.2
t_c (Post)	10	$B_2=$	-0.373

Predevelopment Area	C	Area (m ²)	Area (ha)	Flow (L/s)
Heavy Soil, Less than 5% Slope	0.25	1000	0.1	3.31
Heavy Soil, Greater than 5% Slope	0.35	4100	0.41	19.01
Total Average	0.33	5100	0.51	22.32

Post Development Area	C	Area (m ²)	Area (ha)	Flow (L/s)
Building Roofs	0.85	553	0.0553	6.23
Walkways	0.85	161	0.0161	1.81
Streets	0.90	680	0.068	8.11
Landscaping	0.25	3663	0.3663	12.13
N/A	0.00	0	0	0.00
Total Average	0.42	5057	0.5057	28.27

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	36.61	10984	6695	4.29
0.100	57.6	34.21	12315	8034	4.28
0.117	54.4	32.30	13564	9373	4.19
0.167	47.6	28.27	16964	13390	3.57
0.250	41.0	24.30	21874	20086	1.79
0.500	31.6	18.77	33781	40171	-6.39
0.750	27.2	16.13	43560	60257	-16.70
1.000	24.4	14.49	52170	80342	

Maximum Storage Required (m³)	4.29
---	-------------

Notes:

- Five Year Detention Storage Per MoTI Engineering Requirements

3701 Shenton Road Nanaimo, BC V9T 2H1 250-751-8558 mail@heroldengineering.com





**STORMWATER MANAGEMENT
DETENTION STORAGE**

PROJECT NAME: Mixed Use Development
PROJECT LOCATION: 2091 Peninsula Road
DESIGNED BY: Jake Pinneo, EIT
REVIEWED BY: Patrick Ryan, P.Eng.

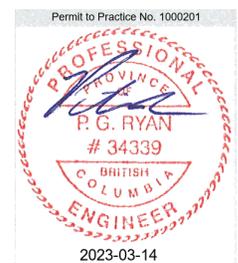
HEL PROJECT No.: 2284-004/03
DATE: 10/03/2023

Required Detention Volume (m³)	4.3
--	------------

Number of Manholes	1
Diameter (m)	1.05
Depth (m)	1.00
Manhole Volume (m³)	0.9

Length (m)	2.45
Width (m)	1.45
Depth (m)	1.00
Tank Volume (m³)	3.6

Total Storage Volume (m³)	4.4
---	------------



PROJECT NAME: Mixed Use Development **IDF LOCATION:** UCLUELET AMPHITRITE POINT **HEL PROJECT No.:** 2284-002
PROJECT LOCATION: 2091 Peninsula Road **RETURN PERIOD:** 5 YEAR **DATE:** 10/03/2023
DESIGNED BY: Jake Pinneo, EIT
REVIEWED BY: Patrick Ryan, P.Eng.

Mannings "n" 0.013 PVC Time of Concentration 10.00 mins
 Mannings "n" 0.024 CSP
 Mannings "n" 0.014 CONC.

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	0.510	0.33	0.168	0.17	10.00	43.31	22.3	2.00	200	PVC	1.48	3	0.03	46.4	
		Post-Development															
		Entire Site	0.510	0.42	0.214	0.21	10.00	43.31	28.4	2.00	250	PVC	1.71	3	0.03	84.1	

Notes:

- Based on the Environment Canada 2021 IDF Curves for Amphitrite Point (Ucluelet)
- Onsite areas taken from Architectural Drawings.
- Pre-development onsite runoff coefficient taken as per DoU Bylaw No. 521.
- 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.
- To be read in conjunction with "Stormwater Management Rationale" prepared by Herold Engineering Ltd.
- 10% added to intensities to for climate change.



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PROJECT NAME: Mixed Use Development **IDF LOCATION:** UCLUELET AMPHITRITE POINT **HEL PROJECT No.:** 2284-002
PROJECT LOCATION: 2091 Peninsula Road **RETURN PERIOD:** 10 YEAR **DATE:** 10/03/2023
DESIGNED BY: Jake Pinneo, EIT
REVIEWED BY: Patrick Ryan, P.Eng.

Mannings "n" 0.013 PVC Time of Concentration 10.00 mins
 Mannings "n" 0.024 CSP
 Mannings "n" 0.014 CONC.

Mannings Formula

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

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	0.510	0.33	0.168	0.17	10.00	48.69	25.1	2.00	200	PVC	1.48	3	0.03	46.4	
		Post-Development															
		Entire Site	0.510	0.42	0.214	0.21	10.00	48.69	31.9	2.00	250	PVC	1.71	3	0.03	84.1	

Rational Formula: Q=CIA^{2.78}

Notes:

- Based on the Environment Canada 2021 IDF Curves for Amphitrite Point (Ucluelet)
- Onsite areas taken from Architectural Drawings.
- Pre-development onsite runoff coefficient taken as per DoU Bylaw No. 521.
- 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.
- To be read in conjunction with "Stormwater Management Rationale" prepared by Herold Engineering Ltd.
- 10% added to intensities to for climate change.



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PROJECT NAME: Mixed Use Development **IDF LOCATION:** UCLUELET AMPHITRITE POINT **HEL PROJECT No.:** 2284-002
PROJECT LOCATION: 2091 Peninsula Road **RETURN PERIOD:** 100 YEAR **DATE:** 10/03/2023
DESIGNED BY: Jake Pinneo, EIT
REVIEWED BY: Patrick Ryan, P.Eng.

Mannings "n" 0.013 PVC Time of Concentration 10.00 mins Mannings Formula
 Mannings "n" 0.024 CSP $V = \frac{R_h^{(2/3)} S^{(1/2)}}{n}$
 Mannings "n" 0.014 CONC.

		Rational Formula: Q=CIA ^{2.78}															
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	0.510	0.33	0.168	0.17	10.00	65.40	33.7	2.00	200	PVC	1.48	3	0.03	46.4	
		Post-Development															
		Entire Site	0.510	0.42	0.214	0.21	10.00	65.40	42.8	2.00	250	PVC	1.71	3	0.03	84.1	

Notes:

- Based on the Environment Canada 2021 IDF Curves for Amphitrite Point (Ucluelet)
- Onsite areas taken from Architectural Drawings.
- Pre-development onsite runoff coefficient taken as per DoU Bylaw No. 521.
- 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.
- To be read in conjunction with "Stormwater Management Rationale" prepared by Herold Engineering Ltd.
- 10% added to intensities to for climate change.



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DISTRICT OF UCLUELET SANITARY SEWER FLOW ANALYSIS - CALCULATION SHEET

Project: Ucluelet Mixed-Use Development Date: 10-Mar-23
 Eng'ng 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

Area	MH No.	Location	Area (Ha)	Units	Density ppu	Equiv. Pop. (ca)	Peak flow Per Capita (L/day)	Sewage Flow		Infiltration & Inflow		Total Flow		Pipe Capacity			
								Peak Flow (L/day)	Peak Flow (ML/day)	Infiltr. (ML/day)	Cum. Infiltr. (ML/day)	Total Flow (ML/day)	Flow (L/s)	Slope (%)	Pipe Diameter (mm)	Velocity (m/s)	Capacity (L/s)
Entire Proposed Development	Pump Station	2091 Peninsula Road	0.51	6	2.0	12	3000	36,000	0.036	0.006	-	0.042	0.482	2.0	150	1.22	21.54

*Assumed

- Notes:
1. Design population computed on the basis of the planned development, assuming 2.0 Person Per Unit (PPU).
 2. Peak sewage flow and peak storm water infiltration calculated as per District of Ucluelet Bylaw No. 521.
 3. To be read in conjunction with "Civil Engineering Site Works & Servicing Report" prepared by Herold Engineering Ltd.



ISSUES	ISSUED FOR
	PERMIT
	PERMIT

DATE

CO-OP MIXED USE BUILDING
 CIVIL WORKS
 2091 PENINSULA ROAD
 UCLEULET, BC
 UCLEULET CONSUMERS CO-OPERATIVE ASSOCIATION

HEROLD ENGINEERING
 3711 Sherman St. Newlands, BC V1T 2H1
 Tel: 250-791-8558 Fax: 250-791-8559
 www.heroldeng.com
 *Professional Engineer's Seal and Stamp
 *Professional Engineer's License No. 12345

DESIGNED	JJP/JPB
DESIGN REVIEW	JJP
DRAWN	JJP
DRAFTING REVIEW	JJP
PER	JJP
CLIENT NO.	2091-004
PROJECT NO.	2091-004
SCALE	AS SHOWN
DATE	11/20/20
HEB DRAWING NO.	SK-1

DESTROY ALL DRAWINGS SHOWING PREVIOUS REVISIONS



ISSUED FOR
 DEVELOPMENT PERMIT

NOT FOR
 CONSTRUCTION



FILE: M:\Projects\2284-004 Ucleulet Co-Op Mixed Use - CIVIL\CD Drawing\2020\2020-11-20\2020-11-20-2020-11-20.dwg

2091 Peninsula Road Environmental Impact Assessment Report



Prepared For

Ucluelet Consumers Co-operative Association
1580 Peninsula Road
Ucluelet, BC, V0R 3A0

Prepared By

EDI Environmental Dynamics Inc.
208A – 2520 Bowen Road
Nanaimo, BC V9T 3L3

EDI Contact

Adam Compton, B.Sc., R.P.Bio.
Senior Biologist/Project Manager

EDI Project

22N0085
August 2023



Down to Earth Biology

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AUTHORSHIP

Team members from EDI Environmental Dynamics Inc. who contributed to preparing this report included:

Pablo Jost, R.P.Bio. Primary Author

Adam Compton, R.P.Bio..... Secondary Author/Senior Review

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1 INTRODUCTION

EDI Environmental Dynamics Inc. was retained by Ucluelet Consumers Co-operative Association (Co-Op) to conduct an environmental impact assessment (EIA), as per the District of Ucluelet requirements to support a development application for 2091 Peninsula Road (the Property), in Ucluelet, BC for a mixed use Commercial/Residential building. The Property is located within the Terrestrial Ecosystems (Mature Forest) Development Permit Area V (DPA V) and the Streams and Riparian Areas Development Permit Area VI (DPA VI), both of which require an EIA to be completed by a Qualified Environmental Professional (QEP) to identify potential environmental constraints including environmentally sensitive areas important wildlife features and to provide recommendations to protect, preserve and restore these features where applicable. The northern tip of the Property also slightly overlaps with the Marine Shoreline Development Permit Area (DPA VII); however, no development activities are planned in that location so that DPA is not further discussed herein.

The Property is a 0.51 hectare parcel located near the northern limit of the developed, central core of the District of Ucluelet. It is located on the north side of Peninsula Road about 100 meters west of Forbes Road. The Property is partially forested around its outer edge with a mixed age class dominated by spruce, western hemlock and western redcedar, typical of this area. A large, southern portion that fronts Peninsula Road was previously cleared and filled. This disturbed area is dominated by shrubs, grasses and invasive species. The Property is bordered on the east and west sides by mapped watercourses that flow north towards Ucluelet Inlet. The proposed development area includes commercial/retail space, day care facility, rental apartments and parking areas (see Site Plan in Appendix A). The proposed development area represents a proportion of the overall parcel and maximises the use of the existing disturbed areas.

The EIA was focused on determining the potential for key species at risk and important habitats and ecosystems that may occur on the Property. This includes identifying sensitive features, watercourses, vegetation, large trees, and wildlife habitat that could be affected by development. In addition to a background review of existing information on potential environmental values at the Property, site visits were conducted by the authors of this report, who are both QEPs (Registered Professional Biologists). The time of year of the site visits were not conducive to conducting certain types of assessments such as rare plant surveys or breeding bird surveys, so findings for these features are limited.

2 METHODS

This EIA was scoped to address the typical biological/environmental information to determine site constraints for development. It consisted of both a background information review and on-site field surveys following the District of Ucluelet guidelines within DPA V and DPA VI.

2.1 BACKGROUND INFORMATION REVIEW

Background information was gathered for aquatics, wildlife and vegetation, including invasive species, using data available through several online databases. Preliminary lists were developed for ecosystem types, known species occurrence records, and potential for species at risk. The databases that were queried included:

- Ministry of Environment BC Species and Ecosystem Explorer (<http://a100.gov.bc.ca/pub/eswp/>)
- EcoCat (Provincial Ecological Reports Catalogue) (<http://www.env.gov.bc.ca/ecocat/>)
- Wildlife Tree Stewardship Atlas (<http://cmnmaps.ca/WITS/>)
- Great Blue Heron Atlas (<http://cmnmaps.ca/GBHE/>)
- BC Conservation Data Centre (BC CDC) (<http://maps.gov.bc.ca/ess/hm/cdc/>)
- Ministry of Environment Habitat Wizard (<https://maps.gov.bc.ca/ess/hm/habwiz/>)

The BC CDC online mapping tool was accessed to determine known locations of all wildlife and plant species and ecological communities at risk in and near the Property, including the occurrence of provincial Red- and Blue-listed species and ecological communities. The search included all listed wildlife, plants, and ecological communities.

The BC Species and Ecosystem Explorer (BCSEE) was searched for rare plant and wildlife species that have the potential to occur in the area. The search for rare plant species included vascular and non-vascular species, and the search for rare wildlife species included vertebrate and invertebrate species. Rare species included those listed on Schedule 1 of the federal *Species at Risk Act* (SARA), and species on the BC Ministry of Environment's provincial Red or Blue lists. The search parameters used to obtain these results were for species occurring in the Alberni-Clayoquot Regional District within the CWH BGC zone in coniferous forested habitats. This list was further refined based on site-specific factors, including habitat types known to occur within the Property, species current known ranges, and Conservation Data Center records in the vicinity of the Property. A search of the BCSEE was also conducted for rare ecological communities that could potentially occur in the Property within the CWHvh1 BGC subzone. This list was also refined based on site-specific factors and known characteristics from the field assessment.

2.2 FIELD ASSESSMENT

EDI biologists, Pablo Jost and Adam Compton, assessed the Property area on March 31, 2022 and focused on the approximate proposed development area and adjacent areas (Appendix A). A site visit was also conducted by Mr. Compton on May 25th to further review some areas in consideration of a more detailed development plan. Any environmentally sensitive features were recorded, photographed and georeferenced. An aquatic, vegetation and ecosystem assessment was completed, and ecosystems were documented and characterized according to the Biogeoclimatic Ecosystem Classification (BEC) system (Green and Klinka 1994).

Evidence of wildlife utilization was recorded including direct observations of individuals, vocalizations, tracks, game trails, scat, browsed vegetation, bones, feathers and nests, large tree.

Raven Haven Creek was assessed in accordance with the provincial Riparian Areas Protection Regulation (RAPR). While the RAPR does not apply to the District of Ucluelet, it provides a practical, science-based methodology for assessing streams and determining appropriate riparian setbacks that are meant to protect the features, functions and conditions of riparian fish habitat.

3 RESULTS

3.1 BACKGROUND INFORMATION REVIEW

The *CDC iMap* identified a single rare element occurrence overlapping the Property area (Figure 1). There are two mapped Element Occurrences of seaside centipede lichen approximately 420 m northwest and 450 m to the northeast of the Property. In addition, Critical Habitat for Marbled Murrelet has been delineated on the Property under the Species at Risk Act. Table 1 provides a summary of key findings from the background information review. The Parcel is within the Coastal Western Hemlock Very Wet Hypermaritime (CWHvh1) subzone.

Table 1. Summary of Results from the Background Information Review.

Information Source	Key Findings
Wildlife Tree Stewardship Atlas	No known Bald Eagle or Osprey nests within or adjacent to the Property area. The 3 nearest mapped nests are > 1100 m east, southeast and west of the Property.
Great Blue Heron Atlas	No known heron colonies in the area.
Habitat Wizard & BC CDC iMap	Federally designated Critical Habitat for Marbled Murrelet has been delineated on the Property. A setback of a mapped occurrence (135575) of tall woolly-heads (<i>Psilocarphus elatior</i>), which is federally Endangered and provincial Red-listed, occurs on the Project area. Occurrence 28392 of seaside centipede lichen (<i>Heterodermia sitchensis</i>), which is federally Threatened and provincially Red-listed is ~420 m northwest and ~450 northeast to the Property (Figure 1). No fish habitat or watercourses identified within or beside the Property.
EcoCat	No studies or other documented occurrences identified on the subject Property.



Figure 1. Element Occurrence 135575 tall woolly-heads (dark green) and element occurrence 28392 seaside centipede (2 light green polygons) along with Critical Habitat for Marbled Murrelet (black outline) occur on or near the Property (approximate location outlined in blue).

The BC Species and Ecosystem Explorer (BCSEE) identified four vascular and three non-vascular plant species at risk that have the potential to occur within the Property (Table 2).

Table 2. Plant species at risk with potential for occurrence within the Property.

Common Name	Scientific Name	COSEWIC	SARA	BC List
felted elf	<i>Leioderma solediatum</i>			Blue
California wax-myrtle	<i>Myrica californica</i>			Blue
redwood sorrel	<i>Oxalis oregana</i>			Blue
Smith's fairybells	<i>Prosartes smithii</i>			Blue
oldgrowth specklebelly	<i>Pseudocypbellaria rainierensis</i>	SC (Apr 2010)	1-SC (Jul 2012)	Blue
Pacific golden dock	<i>Rumex persicarioides</i>			Red
Oregon selaginella	<i>Selaginella oregana</i>			Red

* COSEWIC/SARA Codes: SC: Special Concern; T: Threatened; NAR: Not at Risk; E: Endangered.

The BC Species and Ecosystem Explorer (BCSEE) identified a total of 15 at risk wildlife species including, three amphibian species, five avian species, four mammal species and three invertebrate species at risk that have the potential to occur within the project area (Table 3).

Table 3. Wildlife species at risk with potential for occurrence within the project area.

Common Name	Scientific Name	COSEWIC*	SARA*	BC List
American Water Shrew, <i>brooksi</i> subspecies	<i>Sorex palustris brooksi</i>	-	-	Red
Autumn Meadowhawk	<i>Sympetrum vicinum</i>	-	-	Blue

Band-tailed Pigeon	<i>Patagioenas fasciata</i>	SC (Nov 2008)	1-SC (Feb 2011)	Blue
Barn Swallow	<i>Hirundo rustica</i>	T (May 2011)	-	Blue
Ermine, <i>anguinae</i> subspecies	<i>Mustela erminea anguinae</i>			Blue
Great Blue Heron, <i>fannini</i> subspecies	<i>Ardea herodias fannini</i>	SC (Mar 2008)	1-SC (Feb 2010)	Blue
Little Brown Myotis	<i>Myotis lucifugus</i>	E (Nov 2013)	1-E (Dec 2014)	Yellow
Northern Pygmy-Owl, <i>swarthi</i> subspecies	<i>Glaucidium gnoma swarthi</i>			Blue
Northern Red-legged Frog	<i>Rana aurora</i>	SC (May 2015)	1-SC (Jan 2005)	Blue
Townsend's Big-eared Bat	<i>Corynorhinus townsendii</i>			Blue
Wandering Salamander	<i>Aneides vagrans</i>	SC (May 2014)		Blue
Warty Jumping-slug	<i>Hemphillia glandulosa</i>	SC (Apr 2013)	1-SC (Jan 2005)	Red
Western Screech-Owl, <i>kennicottii</i> subspecies	<i>Megascops kennicottii kennicottii</i>	T (May 2012)	1-SC (Jan 2005)	Blue
Western Thorn	<i>Carychium occidentale</i>			Blue
Western Toad	<i>Anaxyrus boreas</i>	SC (Nov 2012)	1-SC (Jan 2005)	Blue

* COSEWIC/SARA Codes: SC: Special Concern; T: Threatened; NAR: Not at Risk; E: Endangered; DD: Data Deficient.

The background review identified a total of 9 at risk forested or floodplain ecological communities that have the potential to occur within the project area (Table 4). Dry forests were excluded due to the known site-specific characteristics of the Project area. It should be noted that an occurrence of the listed site series does not indicate an occurrence of the associated ecological community; rather, it identifies the potential for that ecological community to occur there, which typically occurs at the climax state. In forested ecosystems, this is represented by old forest stands.

Table 4. Ecological communities at risk with potential for occurrence within the project area

Common Name	Scientific Name	BC List	BGC Unit	Ecosystem Group
Sitka spruce / slough sedge	<i>Picea sitchensis</i> / <i>Carex obnupta</i>	Blue	CWHvh1/18	Terrestrial - Forest: Coniferous - moist/wet
Sitka spruce / false lily-of-the-valley Very Wet Hypermaritime 1	<i>Picea sitchensis</i> / <i>Maianthemum dilatatum Very Wet Hypermaritime 1</i>	Red	CWHvh1/08	Terrestrial - Flood: Flood (Highbench); Terrestrial - Forest: Coniferous - mesic
Sitka spruce / Pacific crab apple	<i>Picea sitchensis</i> / <i>Malus fusca</i>	Blue	CWHvh1/19	Terrestrial - Forest: Coniferous - moist/wet
Sitka spruce / sword fern	<i>Picea sitchensis</i> / <i>Polystichum munitum</i>	Blue	CWHvh1/17	Terrestrial - Forest: Coniferous - moist/wet
Sitka spruce / tall trisetum	<i>Picea sitchensis</i> / <i>Trisetum canescens</i>	Red	CWHvh1/09	Terrestrial - Flood: Flood (Mediumbench); Terrestrial - Forest: Coniferous - moist/wet
western redcedar - Sitka spruce / skunk cabbage	<i>Thuja plicata</i> - <i>Picea sitchensis</i> / <i>Lysichiton americanus</i>	Blue	CWHvh1/13	Terrestrial - Forest: Coniferous - moist/wet; Wetland - Mineral: Wetland Swamp (Ws)

Common Name	Scientific Name	BC List	BGC Unit	Ecosystem Group
western redcedar - Sitka spruce / devil's club Very Wet Hypermaritime 1	<i>Thuja plicata</i> - <i>Picea sitchensis</i> / <i>Oplopanax horridus</i> Very Wet Hypermaritime 1	Blue	CWHvh1/07	Terrestrial - Forest: Coniferous - moist/wet
western redcedar - Sitka spruce / sword fern	<i>Thuja plicata</i> - <i>Picea sitchensis</i> / <i>Polystichum munitum</i>	Blue	CWHvh1/05	Terrestrial - Forest: Coniferous - dry; Terrestrial - Forest: Coniferous - mesic
western hemlock - Sitka spruce / lanky moss	<i>Tsuga heterophylla</i> - <i>Picea sitchensis</i> / <i>Rhytidiadelphus loreus</i>	Blue	CWHvh1/04	Terrestrial - Forest: Coniferous - mesic

3.2 FIELD ASSESSMENT

The field assessment included a general characterization of the proposed development area within the Property and surrounding area. The characterization included documenting existing ecosystem condition, wildlife habitat, wildlife use observations, large trees, identification of plant and wildlife species encountered.

The Property is fairly flat with a central location that has been filled, it gently slopes to the north. Wetlands are located on the west and north sides of the property, a small drainage is located on the eastern boundary, and a stream locally known as Raven Haven Creek is within the adjacent property to the west (Figure 2 in Appendix C).

3.2.1 AQUATIC AND RIPARIAN FEATURES

The site assessment conducted by EDI identified several streams and interconnected wetlands within the Study Area. Some of these aquatic features provide habitat to fish; however, fish sampling was not conducted during the assessment.

3.2.1.1 Raven Haven Creek

Raven Haven Creek is a small stream that flows from the north end of Forbes Road and into Ucluelet Inlet. This creek is a known fish-bearing stream. Previous project work conducted by EDI upstream of Peninsula Road resulted in observations of juvenile coho salmon (*Oncorhynchus kisutch*). The creek is within a small ravine immediately west of the western property boundary. The top of ravine bank is just outside of the property. The portion of the creek adjacent to the Property had a riffle-pool morphology with an average channel width of 2.0 m and an average stream gradient of 2%. The stream had good quality rearing and overwintering habitats (deep pools, large woody debris, overhanging vegetation). Some pockets of suitably sized substrates were present for salmonid spawning. Given the proximity to Ucluelet Inlet, the presence of good quality habitats and the observation of coho upstream, the stream is likely used by coho for spawning and is also likely to contain other locally common species such as cutthroat trout (*O. clarkii clarkii*).

The riparian area of the creek consisted of naturally forested areas within the ravine. The treed overstory was dominated by western redcedar and western hemlock along with a smaller amount of red alder. The understory consisted of species typical for this area including salal, salmonberry, evergreen huckleberry, deer fern, slough

sedge and skunk cabbage (in low areas beside the creek). Most of the trees were maturing second growth but a few older, larger diameter western redcedar trees were present at the north end of the study area.

3.2.1.2 Wetland 1

Wetland 1 is a treed swamp dominated by mature red alder with an understory of salmonberry, slough sedge and skunk cabbage. At the north end of the swamp, a drainage path allows water to trickle out from the wetland, down the small ravine of Raven Haven Creek which borders the north side of the wetland. At the time of assessment (early spring), there was very little ponding water within the wetland and the outlet drainage contained a trickle of flow. During extended wet weather periods that often occur during the late fall to early spring seasons, it's likely that shallow water would extend across much of the wetland. Peninsula Road borders the south side of the wetland. The east border of the wetland is adjacent to and/or defined by the fill that has been placed within the Property several years ago.

3.2.1.3 Wetland 2

Wetland 2 is a relatively undisturbed treed swamp dominated by maturing Sitka spruce and western redcedar with high canopy closure the understory consists of small western redcedar trees, salal, swordfern, and deer fern with pockets of slough sedge and skunk cabbage. It is a low-lying floodplain area with elevated mounds where the conifers grow. At the time of assessment (early spring), there was some ponding water and channels where there was evidence of flooding. During extended wet weather periods and higher flows that often occur during the late fall to early spring seasons, it's likely that water would extend across much of the area. To the north end the wetland abuts the upper intertidal zone and estuary dominated by grasses. A raised mound forms a boundary between Wetland 1 and Wetland 3 with an opening on the east side where it connects and receives water from Stream 1.

3.2.1.4 Wetland 3

Wetland 3 is a modified wetland area that occurs in the central portion of the parcel which has been affected by infilling and excavation. It is surrounded by disturbed upland areas on the north, south and west sides and is connected to Wetland 2 at the east side. Some of the upland areas appeared to be associated with infilling but it was not clear what the natural topography of this area may have been and whether this wetland was created by fill blocking drainage and/or excavation to create a low area. The east half of the wetland area appeared more natural and had abundant downed woody debris and ponding water for a portion of the year with depths of 30-50 cm at the time of the assessment. The western half of the wetland contained wet, but hard, disturbed soils with scattered puddles. The wetland is filled with abundant sedge, rush and other wetland-associated plants. There is potential for some amphibian species to use the eastern part of the wetland for breeding.

3.2.1.5 Stream 1

Located along the east boundary of the Parcel, Stream 1 flows north into Wetland 2. It is a small, ditched drainage feature located at the toe of infilling along the east boundary of the property. It receives flow from the ditch that drains west along the north side of Peninsula Road. This ditch and Stream 1 appear to convey flow from groundwater as well as surface runoff from Peninsula Road. Stream 1 flows into another small stream draining from the southeast a short distance after draining into Wetland 2. Stream 1 has poor quality fish habitat: there are no deep pools, the channel is narrow (0.3 to 0.75 m) and shallow and there is typically little flow. Maturing red alder trees are present along the west edge of Stream 1.

3.2.2 VEGETATION AND ECOLOGICAL COMMUNITIES

The Property site is located in the Western Vancouver Island Ecoregion and the Windward Island Mountains Ecoregion. According to the BC biogeoclimatic ecosystem classification system, it is located within the Coastal Western Hemlock Southern Very Wet Hypermaritime unit (CWHvh1 – Green and Klinka, 1994). This unit is cool with very little snowfall and temperatures moderated by the Pacific Ocean. Forests are dominated by western hemlock and western redcedar in the tree layer and salal, evergreen huckleberry, red huckleberry, deer fern, step moss and lanky moss in the understory.

The forested component of the site consisted of a heterogeneous area that was intermittent between the moist and rich site series and could not be classified to a single unit. Generally, it is a medium to high bench floodplain, coniferous dominated, old forest with some potential influence of the foreshore old marine deposits. Sitka spruce (*Picea sitchensis*), western redcedar (*Thuja plicata*) with some western hemlock (*Tsuga heterophylla*) are the canopy species. The understory was moderately developed and consisted of a shrub layer of salal (*Gaultheria shallon*), salmonberry (*Rubus spectabilis*), regenerating western redcedar and red huckleberry (*Vaccinium parvifolium*) with pockets of coarse woody debris, snags and stumps. Herb species included deer fern (*Blechnum spicant*) and sword fern (*Polystichum munitum*) with wetter areas having skunk cabbage (*Lysichiton americanus*) and sedge (*Carex sp.*). The planned development area is disturbed, consisting mainly of regenerating shrub species, including salmonberry, invasives (primarily Scotch broom) and grasses with a fringe of regenerating red alder (*Alnus rubra*).

One large Sitka spruce (95 cm diameter at breast height), and 4 medium-sized Sitka spruce were located within Wetland 2 at the northern end of the property. One large western redcedar (97 cm diameter at breast height) and several medium-sized western redcedar were documented during the field survey. These trees represent an older age class of tree that provides higher intrinsic, aesthetic and wildlife habitat values. The diameter at breast height (DBH) ranged from 50 cm to 97 cm for these trees. All of these trees were located outside of the planned development site.

Invasive plants were found throughout the site, primarily in the disturbed and filled areas. These included Scotch broom, Himalayan blackberry and a small patch of bamboo.

3.2.3 WILDLIFE

Overall, limited sign or observations of wildlife were made on the Property. Bird species observed included Chestnut-backed Chickadee, Pacific Wren, Varied Thrush, Song Sparrow, Anna's Hummingbird and Spotted Towhee. All of these birds are considered migratory birds. Due to time of year and time of day of the field assessments, bird observations were limited. Several other species of migratory bird are expected to use the site, and several species may use the site for breeding.

During the assessment it was concluded that there are no raptor or heron nests within or near the development area, but a few trees have moderate potential to support stick nests of some bird species. The potential for Bald Eagle nests to be constructed on the Property in the near future is moderate as the site is adjacent to the marine environment and there are some large trees with suitable nesting branches. Few wildlife trees and snags containing natural cavities were observed near the planned development areas. The Critical Habitat designation for Marbled Murrelet was assessed but the area where the polygon overlaps is a cleared area and does not provide the biophysical attributes to be considered as potential nesting habitat for Marbled Murrelets, which require old growth trees with large mossy platforms.

No well-defined game trails were found on the Property; however, some black bear tracks and deer tracks were noted in the riparian area closer to the north part of the property. Both these species are likely using the area forested riparian area north of the site for foraging, cover and transit between adjacent forested areas and the seashore.

4 DISCUSSION/RECOMENDATIONS

The primary objective of the EIA is to identify key environmental features so developments are planned to minimize the potential for negative impacts to sensitive ecosystems and important habitat features. Based on the background review and field assessments, some specific sensitive environmental features were identified that warrant consideration:

- The proposed development area represents a relatively small proportion of the overall parcel and is planned to maintain contiguous forest and connectivity with riparian areas. When developing the Property care should be taken to maintain and enhance native species and their habitats where possible.
- Upon completion of our field review, all flagged watercourse boundaries (high water mark) were surveyed by AG Surveys so that the development could be planned to avoid watercourses and intact riparian areas. It was recommended that all development occur within the existing disturbed areas of the site and outside of any watercourses and wetlands. Specific setbacks widths extending into the previously disturbed portions of the site were not recommended for the wetlands as it was not deemed necessary. EDI worked with the Project team to prepare a development plan that avoided all watercourses, while providing some undeveloped riparian areas to remain between watercourses and planned development. Provision of these riparian protection areas will allow vegetation to grow and provide a protective buffer between the development and the adjacent

watercourses. While minimal in some locations, it is our opinion that these buffers are adequate given that the development site is already disturbed and given that where the buffers are small, they are adjacent to minor watercourse features such as the ditched stream and forested swamps that do not warrant significant buffers. The riparian protection areas provided and accepted by EDI are depicted on Figure 2 and are as follows:

- Wetland 1: 2.6 to 5.5 m width between wetland boundary and edge of paved driveway and parking areas.
- Wetland 2: 5.2 to 15.8 m width between wetland boundary and edge of paved driveway and pull out areas.
- Wetland 3: 0.5 to 8 m width between wetland boundary and edge of rock slope or lock block wall adjacent to paved driveway and pull-out areas.
- Raven Haven Creek: 10 m riparian setback, plus ensure development does not damage roots of mature trees within the 10 m setback (stream boundary is 12.4 m away from the closest portion of development (paved parking area).
- Stream 1: 3.6 to 6.9 m width between wetland boundary and east side of building site.
- The planned development has been located entirely within the previously disturbed portion of the property and over half of the property will not be developed due to the constraints associated with watercourses and riparian areas. The naturally forested portions of the property, including most large trees are outside of the proposed development. One large western redcedar is located along the north property boundary and may need to be removed to accommodate the northern pullout (Figure 2 shows the approximate location). If possible, this tree should be retained but we have assumed it may need to be removed.
- The 10 m setback recommended for Raven Haven Creek is important to achieve as it is a fish bearing creek. It will not be difficult to accommodate as the closest portions of the property are over 10 m from the creek (except at one single location that is 9.9 m) and there is only one large tree adjacent to the property line beside the planned development.
- Construction activities should be carefully managed such that encroachment beyond the development limits and toward watercourses and riparian protection areas does not occur. All development and stockpiling shall occur within the proposed development area. Prior to construction, the outer limits of the planned development site shall be surveyed and identified with snow fencing such that accidental disturbance and damage outside of these areas does not occur.
- Any necessary, temporary disturbance outside of the development footprint limits identified in the Aug. 2, 2023 Site Plan prepared by The Design Centre (Appendix A) that are necessary for construction shall be revegetated following construction. For example, there may need to be a minor amount of ground disturbance beyond the development footprint limits shown to allow for necessary earthworks associated with construction of paved areas and buildings. Removal of trees within riparian protection area boundaries shall only be done where it is necessary to address a hazardous condition. Any trees removed within the identified riparian protection areas shall be replaced following the provincial tree replacement criteria as a guide

(<https://www.env.gov.bc.ca/wld/documents/bmp/treereplcrit.pdf>). The minimum setback distances in which no ground disturbance shall occur represents the maximum setback variance for each watercourse feature as follows:

- Wetland 1: 1.0 m
 - Wetland 2: 4.0 m
 - Wetland 3: 0.5 m
 - Raven Haven Creek: 10 m
 - Stream 1: 2 m
- No disturbance within any flagged wetlands or streams are planned and none shall occur without the appropriate permitting for Changes in and About a Stream under the BC Water Sustainability Act (WSA). It is noted that the Civil Engineering Site Works & Servicing Report prepared by Herold Engineering Ltd. (Oct. 2022) indicates that stormwater will be directed to the ditch along Peninsula Road (not into one of the streams on the property). As such, a WSA Section 11 Notification for construction of a new stormwater outfall into a stream will not be necessary. In addition, the planned stacked rock or lock block wall along the north edge of the driveway at the north side of the building will need to be designed such that it does not require construction within the flagged wetland area (minimum setback in which no soil disturbance may occur is 0.5 m as noted above).
 - Where feasible, plantings with native trees and/or shrubs shall be incorporated into the planned stacked rock wall along the north edge of the driveway at the north side of the building such that the area greens up and provides some vegetative cover along the wetland edge.
 - Stick nests of species such as Bald Eagle and herons are offered protection under the provincial *Wildlife Act*, while the nests of migratory birds are protected under the federal *Migratory Bird Convention Act*. Although no eagle nests were identified, and the potential is low, new nests are possible. Any future Bald Eagle nest trees must not be cleared or disturbed without approval under the *Wildlife Act*, and suitable buffers and other measures should be established to avoid disturbance. Any eagle or raptor nests discovered prior to, or during the course of development should be addressed on a case-by-case basis to determine the appropriate protection and impact mitigation measures.
 - If possible, any land clearing activities should be planned outside of the breeding bird window for eastern Vancouver Island, which extends from March 1 to August 31. Any clearing activities that are planned in this period should be preceded by preclearing nest surveys. Active nest sites must be identified and flagged so that the nest and the appropriate adjacent area can be left undisturbed until the young birds have fledged and left the nest.
 - Invasive species, such as Scotch broom and Himalayan blackberry, should be managed where practical, using the recommended methods for each species from the Invasive Plant Council of BC. To further offset the planned, minor riparian encroachments and to prevent the spread of invasive shrub species into adjacent forested areas we recommend the following:

- Prior to completing construction, retain an appropriately qualified professional to remove the following invasive shrubs from the property: Scotch broom, Himalayan blackberry and bamboo.
- In the small area north of the planned parking lot that is overgrown with Scotch broom and is lacking native plants, plant 10 native conifers (western redcedar, western hemlock, Sitka spruce). These shall each be at least 5 Gallon pot size. Planting should occur in the early fall following completion of construction.
- Construction shall occur in a manner that does not result in the introduction of sediment laden runoff into adjacent streams and wetlands. As indicated in the Civil Engineering Site Works & Servicing Report prepared by Herold Engineering Ltd. (Oct. 2022), an Erosion and Sediment Control Plan will be prepared and submitted with the building permit application.
- A Qualified Environmental Professional (QEP) should be retained prior to construction to assist with implementing the above recommendations. At a minimum, the QEP shall:
 - Conduct a pre-construction survey of the Project area prior to mobilizing equipment to determine if bird nesting or other habitat features of concern are present within or adjacent to the Project area. This may include but is not limited to: amphibians, wildlife dens, hibernacula, and stick nests or cavity nests of bird species protected year round by the BC Wildlife Act or federal Migratory Birds Regulations, 2022.
 - Ensure limits of development are flagged/fenced to prevent encroachment into the identified riparian protection areas.
 - Provide detailed recommendations and/or oversight of invasive species removals.
 - Verify the Erosion and Sediment Control Plan is being implemented and is adequate to prevent mobilization of sediment laden runoff into watercourses.
 - Provide detailed recommendations for tree planting and vegetation management aspects.

5 REPORT LIMITATIONS

This report was prepared exclusively for Ucluelet Consumers Co-operative Association by EDI Environmental Dynamics Inc. The quality of information, conclusions and estimates contained therein are consistent with the level of effort expended and is based on: i) information available at the time of preparation; ii) data collected by EDI Environmental Dynamics Inc. and/or supplied by outside sources; and iii) the assumptions, conditions and qualifications set forth in the report. The report is intended to be used by Ucluelet Consumers Co-operative Association for the intended purpose as outlined by this report. Any other use or reliance on this report by any third party is at that party's sole risk.

The recommendations made in this report are not meant to satisfy any potential slope stability, flood hazard or climate change considerations.

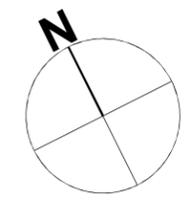
6 REFERENCES

Green, R.N. and K. Klinka. 1994. A field guide for site identification and interpretation for the Vancouver Forest Region. Land Management Handbook Number 28. BC Ministry of Forests. Victoria, B.C.

APPENDIX A SITE PLAN

Appendix B

ZONING INFORMATION:			
CIVIC ADDRESS:	2091 PENINSULA ROAD, UCLUELET, BC		
LEGAL DESCRIPTION	PID018743617, LOT 3, PLAN VIP58757, DISTRICT LOT 284, CLAYOQUOT LAND DISTRICT		
ZONING:	CS2		
LOT AREA:	5057 sq.m. /54437 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")	7.5m (25'-0")	YES
INTERIOR SIDE SETBACK:	1.5m (5'-0")	1.5m (5'-0")	YES
EXTERIOR SIDE SETBACK:	3m (10'-0")	NA	NA
LOT COVERAGE:	50%	9%	YES
PROPOSED FLOOR AREA:			
1ST FLOOR:	437.7 sq.m (4711 sq.ft.)		
2ND FLOOR:	429.3 sq.m (4622 sq.ft.)		
TOTAL:	867 sq.m (9333 sq.ft.)		
FLOOR AREA RATIO (.50):	.17		



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

APPENDIX B SITE PHOTOS



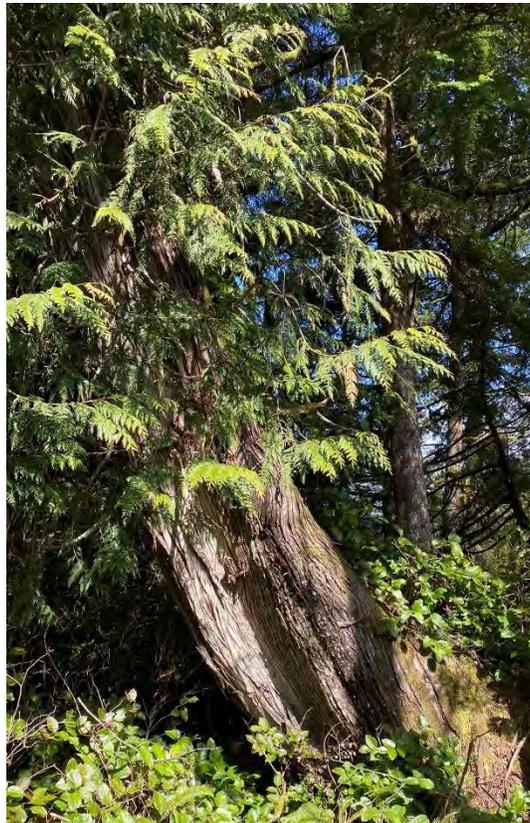
Appendix Photo 1. View of road front of property looking east along Peninsula Road, disturbed infill area in foreground with alder fringe and forest in background.



Appendix Photo 2. View looking west towards Wetland 1 from the edge of the disturbed area.



Appendix Photo 3. View of modified Wetland 3 with coarse woody debris and open water.



Appendix Photo 4. Large Western redcedar outside of development area.



Appendix Photo 5. Patch of invasive bamboo along north property boundary.



Appendix Photo 6. Black bear track in riparian area.



Appendix Photo 7. Sitka spruce approximately 95 cm DBH at north end of parcel within Wetland 2.



Appendix Photo 8. Upstream view of Raven Haven Creek within adjacent property to the north.



Appendix Photo 9. Downstream view of Stream 1 and alder dominated riparian area adjacent to planned development site.

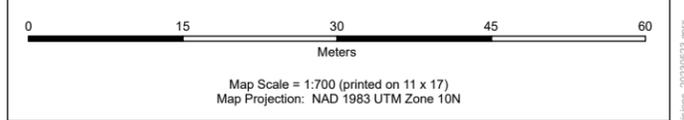
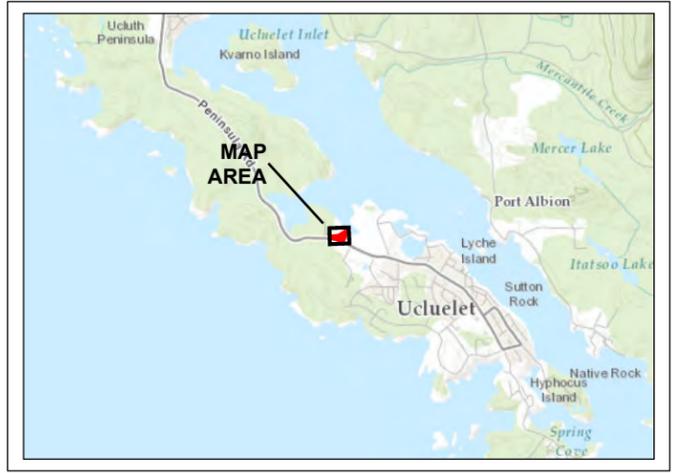


Appendix Photo 10. Looking northeast at Scotch broom infested area north of planned development site (west of Wetland 3)

APPENDIX C FIGURE 2

Figure 2. 2091 Peninsula Road Sensitive Features and Setbacks

- Project Area
- 🌲 Large Western Redcedar - Approximate Location
- 🌳 Larger Tree Patch- survey not required
- Wetland
- Modified Wetland
- Parcels
- Not Verified/Assessed Area
- Development Footprint
- Riparian Protection Area
- High Water Mark
- Raven Haven Creek 10m Setback
- Stream - Not Surveyed
- ➔ Stream/Wetland Drainage



Data Sources

Disclaimer
 EDI Environmental Dynamics Inc. has made every effort to ensure this map is free of errors. Data has been derived from a variety of digital sources and, as such, EDI does not warrant the accuracy, completeness, or reliability of this map or its data.

Drawn: AR	Checked: AC	Drawing: 1	Date: 2023-05-24
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DEVELOPMENT VARIANCE PERMIT DVP23-09

Pursuant to section 498 of the Local Government Act, R.S.B.C 2015 C.1 as amended:

1. This Development Variance Permit is issued to:

Ucluelet Consumer's Co-Operative Association, Po Box 100, Ucluelet, BC, V0R 3A0

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

2091 Peninsula Road; PID 018743617, Lot 3, Plan VIP58757, District Lot 284, Clayoquot Land District

3. The work authorized by this Permit may only be carried out in compliance with the requirements of the District of Ucluelet Zoning Bylaw No. 1160, 2013, except where specifically varied or supplemented by this development variance permit and in compliance with all federal, provincial, and municipal statutes, regulations, and bylaws.

4. This permit authorizes the following variance specific to the plans attached as Schedule "A":

A minimum riparian setback of:

- a. *1.0 m to Wetland 1*
- b. *4.0 m to Wetland 2*
- c. *0.5 m to Wetland 3*
- d. *10.0 m to Raven Haven Creek*
- e. *2.0 m to Stream 1*

whereas section 306.2 (1) (b) of Ucluelet Zoning bylaw No. 1160, 2013 specifies a minimum setback of 30 m to the natural boundary of any natural watercourse or source of water supply.

5. The above variance is granted for the proposed structures and use of the land as shown on Schedule A and within the environmental report attached as schedule B. Should the buildings be later removed or destroyed, this Development Variance Permit shall cease to apply and the zoning requirements in effect at the time shall apply.
6. 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.
7. This Permit is NOT a Building Permit.



Schedule B – EDI environmental Impact Assessment Report Dated August 2023

DEVELOPMENT PERMIT DP23-01

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 Consumer's Co-Operative Association, Po Box 100, Ucluelet, BC, V0R 3A0
(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:
2091 Peninsula Road; PID 018743617, Lot 3, Plan VIP58757, District Lot 284, Clayoquot Land District (The “**Lands**”).
3. This Permit authorizes the construction of a two-storey 9,333ft² Mixed Commercial/Residential building and associated landscape and hardscape works.
4. These improvements apply 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 requirements and conditions of **Schedule 2**.
6. The permit holder must adhere to all conditions of the Qualified Environmental Professional report attached to this Permit as **Schedule 3**.
7. Prior to any site disturbance or contractor mobilization, the permit holder must erect fencing or otherwise demarcate the no-disturbance area consistent with the distances listed in **Schedule 3** and contact the District of Ucluelet to arrange a pre-construction inspection.
8. 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.
9. 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 and a marked pedestrian crossing to the satisfaction of the Ministry of Transportation and Infrastructure (MoTI). The Owner is responsible for complying with any permit requirements from MoTI.
10. 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.
11. Upon completion of all proposed works, the Owner shall provide a letter from a QEP to the District of Ucluelet confirming that the work done under permit was completed meeting the conditions listed below.
12. This Permit is NOT a Building Permit.
13. Prior to submitting a Building Permit for the proposed development, the Owner’s engineer shall confirm that adequate water and sanitary sewer services are available or will be available prior to occupancy to adequately service the development on the Lands.



- 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. 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 day of , 2023.

ISSUED the day of , 2023.

Bruce Greig
 Director of Community Planning



Schedule 1

(See Appendix A)

Schedule 2 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.

Based on the background review and field assessments, some specific sensitive environmental features were identified that warrant consideration:

1. *The proposed development area represents a relatively small proportion of the overall parcel and is planned to maintain contiguous forest and connectivity with riparian areas. When developing the Property care should be taken to maintain and enhance native species and their habitats where possible.*
2. *Upon completion of our field review, all flagged watercourse boundaries (high water mark) were surveyed by AG Surveys so that the development could be planned to avoid watercourses and intact riparian areas. It was recommended that all development occur within the existing disturbed areas of the site and outside of any watercourses and wetlands. Specific setbacks widths extending into the previously disturbed portions of the site were not recommended for the wetlands as it was not deemed necessary. EDI worked with the Project team to prepare a development plan that avoided all watercourses, while providing some undeveloped riparian areas to remain between watercourses and planned development. Provision of these riparian protection areas will allow vegetation to grow and provide a protective buffer between the development and the adjacent watercourses. While minimal in some locations, it is our opinion that these buffers are adequate given that the development site is already disturbed and given that where the buffers are small, they are adjacent to minor watercourse features such as the ditched stream and forested swamps that do not warrant significant buffers. The riparian protection areas provided and accepted by EDI are depicted on Figure 2 and are as follows:*
 - *Wetland 1: 2.6 to 5.5 m width between wetland boundary and edge of paved driveway and parking areas.*
 - *Wetland 2: 5.2 to 15.8 m width between wetland boundary and edge of paved driveway and pull out areas.*
 - *Wetland 3: 0.5 to 8 m width between wetland boundary and edge of rock slope or lock block wall adjacent to paved driveway and pull-out areas.*
 - *Raven Haven Creek: 10 m riparian setback, plus ensure development does not damage roots of mature trees within the 10 m setback (stream boundary is 12.4 m away from the closest portion of development (paved parking area).*
 - *Stream 1: 3.6 to 6.9 m width between wetland boundary and east side of building site.*
3. *The planned development has been located entirely within the previously disturbed portion of the property and over half of the property will not be developed due to the constraints associated with watercourses and riparian areas. The naturally forested portions of the property, including most large trees are outside of the proposed development. One large western redcedar is located along the north property boundary and may need to be removed to accommodate the northern pullout (Figure 2*

shows the approximate location). If possible, this tree should be retained but we have assumed it may need to be removed.

4. The 10 m setback recommended for Raven Haven Creek is important to achieve as it is a fish bearing creek. It will not be difficult to accommodate as the closest portions of the property are over 10 m from the creek (except at one single location that is 9.9 m) and there is only one large tree adjacent to the property line beside the planned development.
5. Construction activities should be carefully managed such that encroachment beyond the development limits and toward watercourses and riparian protection areas does not occur. All development and stockpiling shall occur within the proposed development area. Prior to construction, the outer limits of the planned development site shall be surveyed and identified with snow fencing such that accidental disturbance and damage outside of these areas does not occur.
6. Any necessary, temporary disturbance outside of the development footprint limits identified in the Aug. 2, 2023 Site Plan prepared by The Design Centre (Appendix A) that are necessary for construction shall be revegetated following construction. For example, there may need to be a minor amount of ground disturbance beyond the development footprint limits shown to allow for necessary earthworks associated with construction of paved areas and buildings. Removal of trees within riparian protection area boundaries shall only be done where it is necessary to address a hazardous condition. Any trees removed within the identified riparian protection areas shall be replaced following the provincial tree replacement criteria as a guide (<https://www.env.gov.bc.ca/wld/documents/bmp/treereplcrit.pdf>). The minimum setback distances in which no ground disturbance shall occur represents the maximum setback variance for each watercourse feature as follows:
 - Wetland 1: 1.0 m
 - Wetland 2: 4.0 m
 - Wetland 3: 0.5 m
 - Raven Haven Creek: 10 m
 - Stream 1: 2 m
7. No disturbance within any flagged wetlands or streams are planned and none shall occur without the appropriate permitting for Changes in and About a Stream under the BC Water Sustainability Act (WSA). It is noted that the Civil Engineering Site Works & Servicing Report prepared by Herold Engineering Ltd. (Oct. 2022) indicates that stormwater will be directed to the ditch along Peninsula Road (not into one of the streams on the property). As such, a WSA Section 11 Notification for construction of a new stormwater outfall into a stream will not be necessary. In addition, the planned stacked rock or lock block wall along the north edge of the driveway at the north side of the building will need to be designed such that it does not require construction within the flagged wetland area (minimum setback in which no soil disturbance may occur is 0.5 m as noted above).
8. Where feasible, plantings with native trees and/or shrubs shall be incorporated into the planned stacked rock wall along the north edge of the driveway at the north side of the building such that the area greens up and provides some vegetative cover along the wetland edge.
9. Stick nests of species such as Bald Eagle and herons are offered protection under the provincial Wildlife Act, while the nests of migratory birds are protected under the federal Migratory Bird Convention Act. Although no eagle nests were identified, and the potential is low, new nests are

possible. Any future Bald Eagle nest trees must not be cleared or disturbed without approval under the Wildlife Act, and suitable buffers and other measures should be established to avoid disturbance. Any eagle or raptor nests discovered prior to, or during the course of development should be addressed on a case-by-case basis to determine the appropriate protection and impact mitigation measures.

- 10. If possible, any land clearing activities should be planned outside of the breeding bird window for eastern Vancouver Island, which extends from March 1 to August 31. Any clearing activities that are planned in this period should be preceded by preclearing nest surveys. Active nest sites must be identified and flagged so that the nest and the appropriate adjacent area can be left undisturbed until the young birds have fledged and left the nest.*
- 11. Invasive species, such as Scotch broom and Himalayan blackberry, should be managed where practical, using the recommended methods for each species from the Invasive Plant Council of BC. To further offset the planned, minor riparian encroachments and to prevent the spread of invasive shrub species into adjacent forested areas we recommend the following:*
 - Prior to completing construction, retain an appropriately qualified professional to remove the following invasive shrubs from the property: Scotch broom, Himalayan blackberry and bamboo.*
 - In the small area north of the planned parking lot that is overgrown with Scotch broom and is lacking native plants, plant 10 native conifers (western redcedar, western hemlock, Sitka spruce). These shall each be at least 5 Gallon pot size. Planting should occur in the early fall following completion of construction.*
- 12. Construction shall occur in a manner that does not result in the introduction of sediment laden runoff into adjacent streams and wetlands. As indicated in the Civil Engineering Site Works & Servicing Report prepared by Herold Engineering Ltd. (Oct. 2022), an Erosion and Sediment Control Plan will be prepared and submitted with the building permit application.*
- 13. A Qualified Environmental Professional (QEP) should be retained prior to construction to assist with implementing the above recommendations. At a minimum, the QEP shall:*
 - Conduct a pre-construction survey of the Project area prior to mobilizing equipment to determine if bird nesting or other habitat features of concern are present within or adjacent to the Project area. This may include but is not limited to: amphibians, wildlife dens, hibernacula, and stick nests or cavity nests of bird species protected year round by the BC Wildlife Act or federal Migratory Birds Regulations, 2022.*
 - Ensure limits of development are flagged/fenced to prevent encroachment into the identified riparian protection areas.*
 - Provide detailed recommendations and/or oversight of invasive species removals.*
 - Verify the Erosion and Sediment Control Plan is being implemented and is adequate to prevent mobilization of sediment laden runoff into watercourses.*
 - Provide detailed recommendations for tree planting and vegetation management aspects.*
- 14. Prior to occupancy, the Owner shall delineate the property boundary adjacent to the municipal park along the edge of site bordering the parking and access areas by split-rail fence, wooden park boundary posts (set not more than 9m apart), or similar means. Type and location of boundary markers to be reviewed and approved by the District prior to installation.*



Schedule 3 QEP Report

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.



REPORT TO COUNCIL

Council Meeting: October 10, 2023
500 Matterson Drive, Ucluelet, BC V0R 3A0

FROM: JOHN TOWGOOD, MUNICIPAL PLANNER

FILE NO: 3060-20 DP23-05

SUBJECT: DEVELOPMENT PERMIT FOR 2094 PENINSULA ROAD

REPORT NO: 23-135

ATTACHMENT(S): APPENDIX A – APPLICATION
APPENDIX B – DEVELOPMENT PERMIT 23-05

RECOMMENDATION(S):

THAT Council, with regard to the proposed health care services building and associated site works at 2094 Peninsula Road, authorize the Director of Community Planning to execute and issue Development Permit 23-05.

BACKGROUND:

This Development Permit (DP) application was received in September of 2023, for the property located at 2094 Peninsula Road; PID 018-743-650, Lot 7, District Lot 284, Clayoquot District, Plan VIP58757 (the “**subject property**”). The subject property is a rectangular lot that is currently vacant with no environmental features that would pose a constraint to future development (see environmental report within **Appendix A**). The property directly to the east of the subject property is the Raven Lodge multi-family housing, to the west is a vacant lot, and directly across Peninsula Road is the C&N Backpackers’ Hostel and a vacant lot owned by the Ucluelet CO-OP.

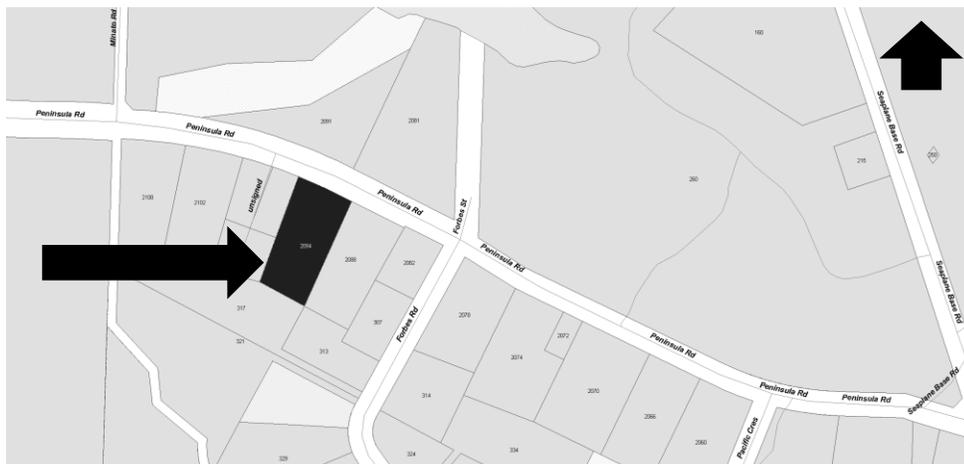


Figure 1 – Subject Property

The subject property lies within the following DP areas:

- Development Permit Area II- Peninsula Road (Form and Character)
- Development Permit Area IV- Multi-Family / Commercial / Mixed Use (Form and Character)

The two DP areas listed above will be encompassed into a single permit.

DISCUSSION

Form and Character DP guidelines located within the District of Ucluelet's Official Community Plan (OCP), specify the district's objectives for the form and character of the built environment within Ucluelet. The [General](#), [Peninsula Road \(DPAII\)](#) and [Multi-Family / Commercial / Mixed Use \(DPAIV\)](#) guidelines are specifically relevant to this application.

Building Form

The applicant is proposing a two-storey building with a total floor area of 1,000m² (10,774ft²) specifically designed in collaboration with Island Health as a Primary Care Network Clinic containing a medical clinic, a laboratory, mental health offices, counselling offices, and other health care service space. The building is fully accessible with an elevator located in the central or common ground-floor access point.



Figure 2 – building front

The building is located in the front half of the property with parking located between the building and Peninsula Road. Although a parking lot in front is not ideal, the site is sloped

and constrains how the site development can accommodate pedestrian and vehicle access.

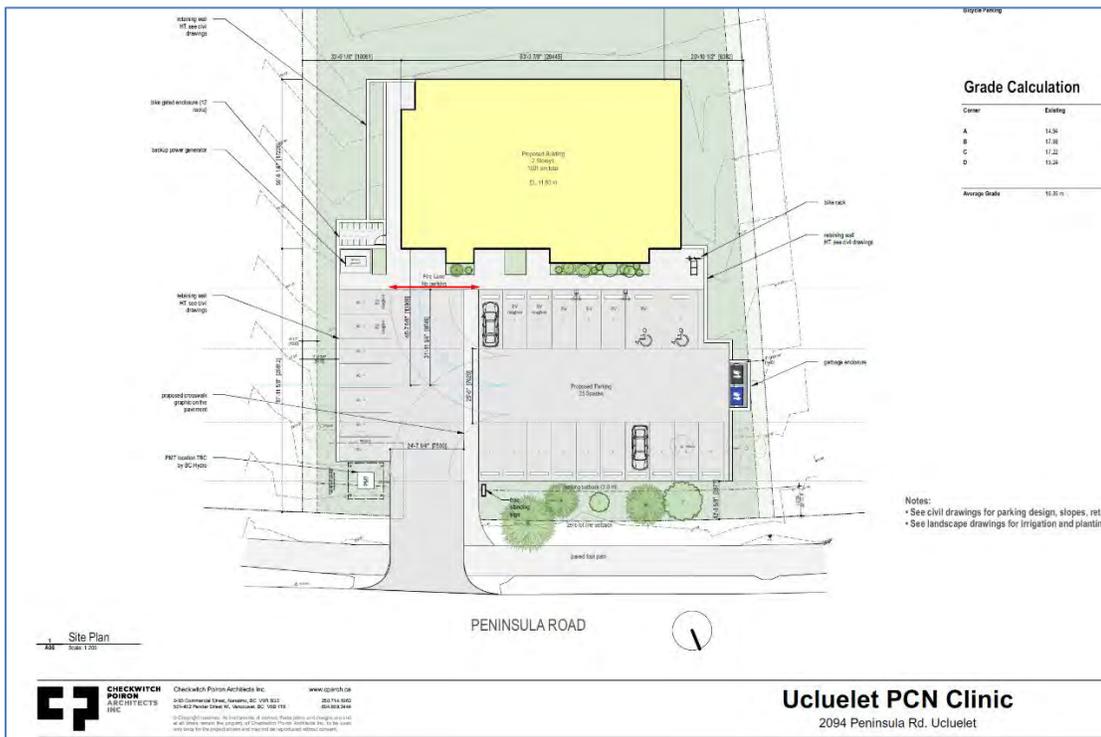


Figure 3 – partial Site Plan

The building is cut into the slope to lower the ground floor access; this also lowers the massing of the building as it is viewed from the Peninsula Road frontage.

The building’s low-slope roof lines and stepped back building faces give the building an active façade. The applicant is proposing multiple exterior materials such as metal and cedar to emulate a cedar log with rich wood in the building’s notches and more bark-like metal on the outward finishes. The materials are all consistent with the applicable form and character guidelines.

Landscaping

The development of the site focuses on the front half of the property and the proposed building and parking areas will occupy the majority of that space. The edges around that development will be fully landscaped and two existing trees on the frontage are to be retained and the site will be hydroseeded where disturbed. For more details on the proposed landscaping see the landscape plan forming part of **Appendix A**.

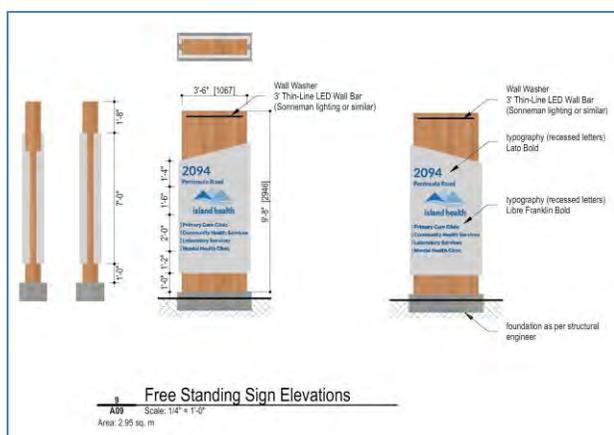


Figure 4 – freestanding sign

Pedestrian Connectivity

The frontage currently contains the paved Multi-Use Path (MUP), and this section of the pathway is in good condition. The applicant is proposing to connect directly to this path and paint an accessible pedestrian route to the building. The applicant is also proposing both interior and exterior bike racks to encourage cycling to the clinic.

Emergency Access

The applicant has worked with the Ucluelet Fire Department on fire access and turnaround. The proposed site plan attached within **Appendix A** has received Fire Department approval.

Engineering and Public Works

The applicant engaged Koers Engineering to complete a full servicing review of the proposal (see Appendix A). The building utility demands and municipal utility servicing availability have been analyzed in preparation for this development permit. The available capacity at the property line for the municipal potable water, sprinkler water and sanitary sewer system are as follows:

Potable water:

- The property will be serviced by the District's highway reservoir which will provide an estimated 64 psi at the property main line municipal connection, which is adequate to service the property without upgrade.
- The capacity of the service and building lines will be conducted at the building permit stage.

Sprinkler water:

- Fire flow demand for the proposed building is not known as the building design is still in progress.

- If a design fire flow greater than 200 lps is required, additional offsite improvements will be required.
- Two fire hydrants are located near the site:
 - Peninsula Rd, northwest corner of 2094 Peninsula Rd
 - Peninsula Rd, at 2081 Peninsula Rd (near Forbes Road intersection)

Sanitary sewer

- The existing 250 mm diameter main on Peninsula Road is adequate to service the proposed development.
- A review of the lift stations downstream of the property indicate they are not capable of handling the calculated peak design flow from the proposed development. Upgrades to the municipal sanitary system must be completed prior to bringing the building online.

Upgrades to the sanitary sewer system will be required prior to occupancy for new developments in this area of the system. Work is underway to identify options for short-, medium- and long-term system upgrades, cost implications and funding strategies. Separate reports will be presented to Council on this subject. While related, the adequacy of site services can be considered separate from the requested DP. A condition of the DP would allow the project to proceed, while ensuring that a solution is in place prior to building occupancy.

Zoning

The property is zoned CS-2 “Commercial Service”: the proposed uses, building size, and siting conform to the applicable zoning regulations.

ANALYSIS OF OPTIONS:

A	Authorize the issuance of DP23-05	<u>Pros</u>	<ul style="list-style-type: none"> • Allows the applicant’s proposed development to proceed in a manner consistent with the OCP development permit guidelines.
		<u>Cons</u>	<ul style="list-style-type: none"> • None anticipated
		<u>Implications</u>	<ul style="list-style-type: none"> • Approval will allow the application to proceed. • Upgrades to the Districts sanity systems will need to be including in municipal capital works budget and completed prior to issuance of the occupancy permit.
B	Provide alternative direction	<u>Pros</u>	<ul style="list-style-type: none"> • Achieves the goals and objectives as identified by Council
		<u>Cons</u>	<ul style="list-style-type: none"> • Unknown at this time
		<u>Implications</u>	<ul style="list-style-type: none"> • Dependent on the direction of Council.
		<u>Suggested Motion</u>	<ul style="list-style-type: none"> • THAT Council, with regard to Development Permit 23-05, [<i>provide alternative direction here</i>]

C	Reject the application	<u>Pros</u>	<ul style="list-style-type: none"> This development will not proceed at this time
		<u>Cons</u>	<ul style="list-style-type: none"> Does not allow the applicant's proposed development to proceed.
		<u>Implications</u>	<ul style="list-style-type: none"> The application would not proceed. Additional staff time will be required to follow up with applicant and consultants.
		<u>Suggested Motion</u>	THAT Council reject the application for DP23-05 because it does not adequately address [<i>quote OCP Bylaw DP guideline section(s) not met</i>].

POLICY OR LEGISLATIVE IMPACTS:

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

NEXT STEPS:

If this application is approved the attached DP will be signed by the Director of Community Planning, issued to the applicant, and notice will be filed with the Land Title Office.

The applicant or subsequent owners of the subject property will be required to meet all conditions of the permit and any other conditions set out by Council for the proposed development.

Respectfully submitted:

JOHN TOWGOOD, MUNICIPAL PLANNER

BRUCE GREIG, DIRECTOR OF COMMUNITY PLANNING

DUANE LAWRENCE, CAO

CHECKWITCH
POIRON
ARCHITECTS
INC

25/08/2023

Attn: John Towgood and Bruce Greig
District of Ucluelet Planning Department
200 Main Street, PO Box 999
Ucluelet, BC V0R 3A0

RE: Development Permit (DP) 2094 Peninsula Road. Zoned CS-2 Service Commercial - Development Area Two (DPA-II Peninsula Road)

Project Overview

The proposed project is a PCN Clinic (Primary Care Network Clinic) in collaboration with Island Health. The facility will include laboratory space and mental health counselling space, contributing to the community's healthcare services. The building a two-story wood frame structure, encompassing a gross floor area of 1001 square meters. To accommodate visitors and staff, the site will provide a minimum of 25 parking spots, including 2 accessible spots. Additionally, provisions will be made for 12 secured and enclosed bicycle racks. The project also incorporates essential features such as an exterior bike rack, a backup generator, and an enclosed area for waste management, accessible from the main parking area.

Landscape

The site survey from AG surveys (dated 2019.09.25) identified seven trees of significant size on the site. Our plan is to retain two of these trees, thereby ensuring a seamless transition between the natural forested environment and the surrounding town. Additional trees and site restoration measures are included in the Landscape drawings.

F.11.7 - Street trees should be used along the entire length of Peninsula Road, on both sides, thereby creating a sense of enclosure and cohesion to the street.

The building and parking lot will be located on an elevation as close as possible to Peninsula Road to promote the pedestrian accessibility. However, due to the steep slope of the site, it will be necessary to utilize retaining walls. Our aim is to limit the exposed wall height to a maximum of 1.25m at any location of the parking area. The development is only affecting half of the site; the remainder of the property will be kept in its natural state, with only invasive species being removed.

Architecture

The architectural design of the building will adhere to a contemporary West Coast style, with the building cladding emulating the appearance of tree bark within a rainforest. This concept will be achieved through the use of metal planks with a unique texture, which offers the advantage of low maintenance costs. At each of the building's main entrances, the mass of the building is notched out, similar to when exposing the inner wood of log. These areas will incorporate natural cedar cladding, creating a warm and traditional texture in harmony with the local architectural heritage and natural environment.

F1 - Building design, layout, finish and colour should be of a high quality that reflects traditional (e.g., fishing village) or contemporary West Coast architectural styles.

Waste Management

To address waste management requirements, we have allocated a gated enclosure at the end of the parking aisle. This area will contain animal-proof waste bins and recycling facilities, ensuring proper waste disposal within the premises.

Parking

The use of the building is primarily Office and we will provide at least 1 parking spot per 40 sq. m of Gross Floor Area.

Civi Engineering

We have engaged Herold Engineering to provide preliminary site serving and grading for the project. Their expertise will ensure the implementation of appropriate engineering measures to support the development's infrastructure requirements. This includes incorporating an accessible path from the street to the entrances of the building.

Environmental Assessment

Aquaparian Environmental Consulting has provided preliminary Environmental Assessment. The report concludes the following:

The property is not subject to any of the District of Ucluelet's environmental DAs and the preliminary site inspection did not identify any terrestrial environmental features that would pose a constraint to future development of the proposed Healthcare Centre. However, downstream stormwater discharge enters freshwater fish habitat and flows through ecologically sensitive riparian and saltmarsh ecosystems. Stormwater management plans for the new development must consider protective measures to ensure that water quality from the parking lot run-off is safe for fish and that mitigation measures are in place to protect fish habitat from deleterious substances or sediment input during all stages of construction and operation and that works are in compliance with the Fisheries Act.

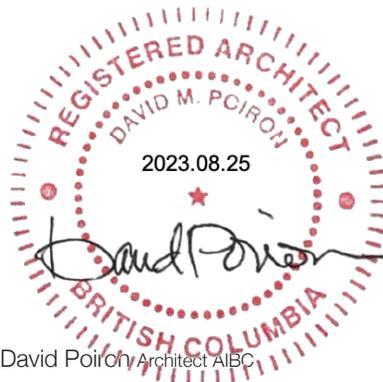
The project includes an underground detention system for the stormwater drainage.

Conclusion

In conclusion, we respectfully request the Planning Department's review and consideration of the attached development permit application for 2094 Peninsula Road. We believe that our project aligns with the objectives of the zoning regulations and contributes positively to the community's healthcare infrastructure. We are committed to complying with all relevant guidelines and regulations to ensure the successful implementation of the project.

Sincerely,

CHECKWITCH POIRON ARCHITECTS INC.



David Poiron Architect AIBC

Location Plan



Existing Images

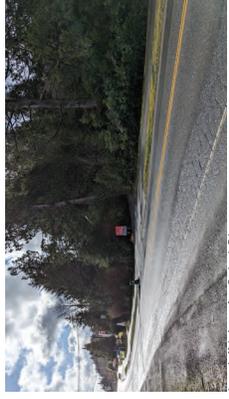


Image 1 - Main Access from Peninsula Rd.



Image 2 - Existing Trailer at the back of the property



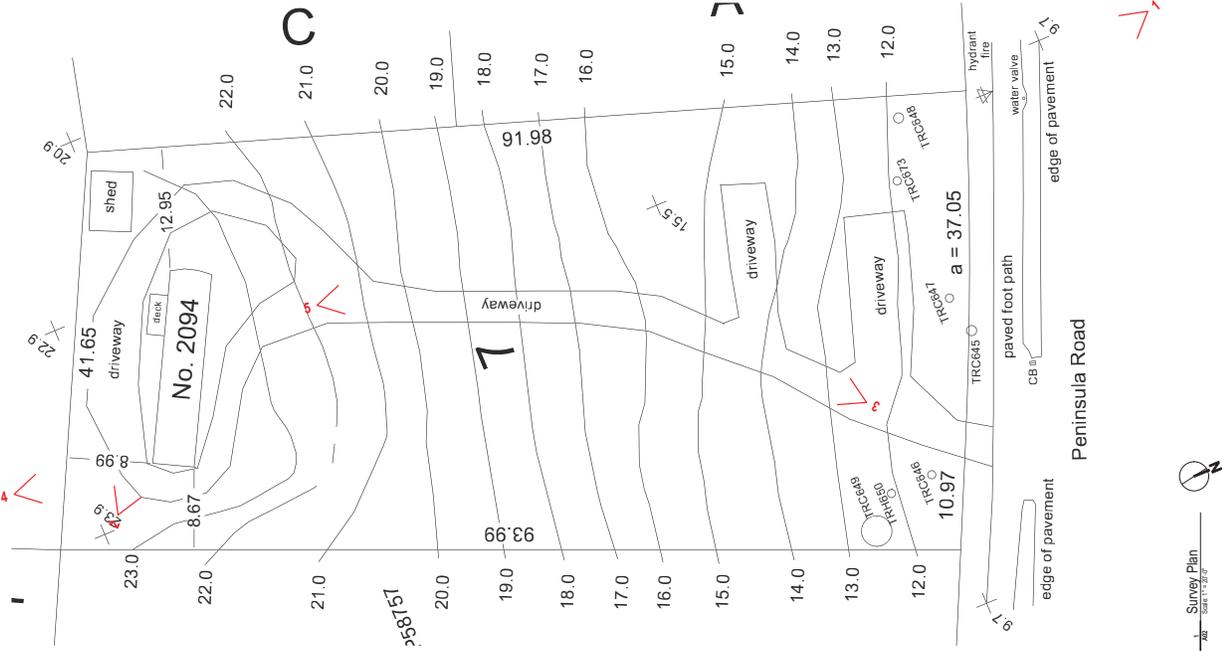
Image 3 - Access road from Peninsula Rd.



Image 4 - Back Property limit



Image 5 - Existing vegetation



See civil drawings for parking and utility design

SURVEY BASED ON: U.S. Geology
 FILE NUMBER: 1014 Peninsula
 DATE: September 25, 2019
 Topographic Survey Lot 7, District Lot 284, Chequamegon District, Plan Y1908 57
 Civil Address: 2094 Peninsula Road, Ucluelet

See civil drawings for parking and utility design



Ucluelet PCN Clinic
 2094 Peninsula Rd., Ucluelet

Client: Ucluelet PCN Clinic
 Project: Ucluelet PCN Clinic
 Location: Ucluelet, BC
 Location Plan, Survey, Existing Conditions
 2019
 Date: 2023.08.25
 Scale: 1" = 20'
 Drawn By: HA
 Checked By: DP
 Development Permit

NOT FOR CONSTRUCTION. DRAW ONLY

Site Plan of:
**Lot 7, District Lot 284,
 Clayoquot District, Plan VIP58757**
 Parcel Identifier: 018-743-650
 Civic Address: 2094 Peninsula Road, Ucluelet

S C A L E - 1 : 7 5 0



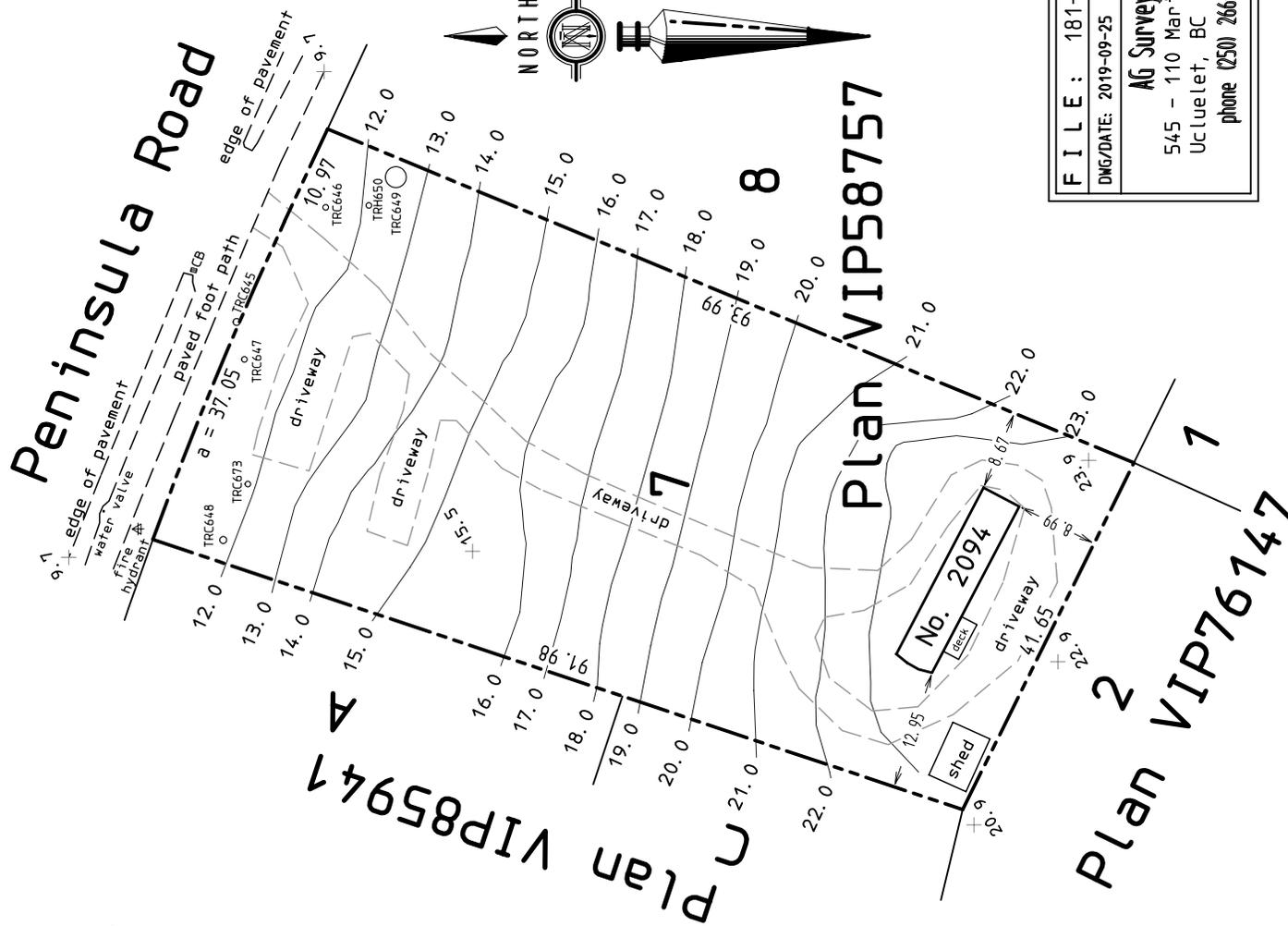
(plot on 8.5" x 11" sheet)

LEGEND

Geodetic elevations are shown + (in Meters)
 Tree bases approximately to scale.
 Contours are descriptive and are accurate to +/- 1/2 meter contour interval
where tree location is critical, tree species and canopy should be confirmed by qualified arborist.

- TRC ○ - denotes cedar tree
- TRH ○ - denotes hemlock tree
- TRS ○ - denotes spruce tree
- CB ■ - denotes catch basin

The following non-financial changes are shown on the current title and may affect the property
 EH5/14/3 - Covenant
 EH5/14/4 - Covenant
 Parcel dimensions shown hereon are derived from Land Title Office records.



Appendix A

FILE: 181-Peninsula
DWG/DATE: 2019-09-25

AG Surveys
 545 - 110 Marine Drive
 Ucluelet, BC V0R 3A0
 phone (250) 266-4536



GEOTECHNICAL HAZARD ASSESSMENT

Proposed Resort Development
2094 Peninsula Road, Ucluelet, BC

Legal Address:
Lot 7, District Lot 284, Clayoquot District,
Plan VIP58757
PID: 018-743-650

Prepared For:
AFC Construction
111-2459 Cousins Avenue
Courtenay, BC
V9N 3N6

Attention:
Mr. Guthrie LeFevre
guthrie@afconstruction.com

January 10, 2022

File No.: E0514.01
Revision No.: 00
Prepared by:
Paul Fraser, B.A., CTech
Chris Hudec, M.A.Sc., P.Eng.

Lewkowich Engineering Associates Ltd.
1900 Boxwood Road
Nanaimo, BC, V9S 5Y2
250-756-0355 (Office)
250-756-3831 (Fax)
www.lewkowich.com
geotech@lewkowich.com

Permit to Practice Number: 1001802



DISCLAIMER

1. Lewkowich Engineering Associates Ltd. (LEA) acknowledges that this report, from this point forward referred to as “the Report,” may be used by the District of Ucluelet (DoU) as a precondition to the issuance of a development and/or building permit. It is acknowledged that Approving Officers and/or building Officials of the DoU may rely on this Report when making a decision on application for development of the land. It is also acknowledged that this Report and any conditions contained herein may be included in a restrictive covenant under Section 56 of the Community Charter and registered against the title of the property at the discretion of the DoU.
2. This Report has been prepared in accordance with standard geotechnical engineering practice solely for and at the expense of AFC Construction, as requested by Mr. Guthrie LeFevre.
3. The conclusions and recommendations submitted in this Report are based upon information from relevant publications, a visual site-assessment of the property, anticipated and encountered subsurface soil conditions, current construction techniques, and generally accepted engineering practices. No other warrantee, expressed or implied, is made. Subgrade conditions are known only at the test pit locations and have been used to infer conditions throughout the site in preparation of this Report. If unanticipated conditions become known during construction or other information pertinent to the structure becomes available, the recommendations may be altered or modified in writing by the undersigned.
4. This Report was authored, to the best of our knowledge at the time of issuance, with considerations for local requirements specific to the Authority Having Jurisdiction (AHJ) and their standards for the preparation of such reports, the 2018 British Columbia Building Code (BCBC), and current engineering standards. Updates to municipal bylaws, policies, or requirements of the AHJ, or updates to the BCBC and/or professional practice guidelines may impact the validity of this Report.
5. This Report has been prepared by Mr. Paul Fraser, B.A., CTech, and Mr. Chris Hudec, M.A.Sc., P.Eng. Messrs. Fraser and Hudec are both adequately experienced and are also members in good standing with their respective associations, Mr. Fraser with the Applied Science Technologists & Technicians of British Columbia (ASTTBC), and Mr. Hudec with the Engineers and Geoscientists of British Columbia (EGBC).

EXECUTIVE SUMMARY

1. The following is a brief synopsis of the property, assessment methods, and findings presented in the Report. The reader must read the Report in its entirety; the reader shall not rely solely on the information provided in this summary.
2. The subject property, 2094 Peninsula Road, Ucluelet, BC, from this point forward referred to as “the Property,” is located on the west coast of Vancouver Island within the jurisdictional boundaries of the DoU. At the time of this Report, the proposed resort development consists of two fourplex buildings, 8 cabins, one operations building, and one amenity building. We expect the buildings would be of conventional construction methods, preferably supported by a cast-in-place concrete foundation system, with slab-on-grade flooring systems and steel or wood-framed superstructures.
3. A site-specific assessment was conducted to review existing site conditions and identify potential geotechnical hazards for the subject Property and the proposed development. Our assessment determined the primary geotechnical hazard that may impact the proposed development is the risk of tsunami inundation from the Ucluelet Inlet. Steep slopes <3.0m in height were identified across the Property; however, these slopes will not impact the development of this Property.
4. A subsurface investigation by way of test-pitting was also conducted to determine the depth to suitable bearing soils on the Property. In general, fill materials were encountered overlying dense sand and gravel deposits. Depth of the encountered fill materials varied from 0.5m to in excess of 3.0m. During the preliminary clearing/construction phase LEA recommends conducting a supplementary test-pitting investigation to delineate and remediate areas of fill on the Property.
5. The findings confirm the development is considered safe as proposed.

List of Abbreviations Used in the Report

Abbreviation	Title
ASTTBC	Applied Science Technologists and Technicians of British Columbia
AHJ	Authority Having Jurisdiction
BCBC	British Columbia Building Code
DoU	District of Ucluelet
DPA	Development Permit Area
EGBC	Engineers and Geoscientists of British Columbia
FCL	Flood Construction Level
GD	Geodetic (CGVD2013)
LEA	Lewkowich Engineering Associates Ltd.
OCP	Official Community Plan
SLS	Service Limit State
ULS	Ultimate Limit State

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1.0 INTRODUCTION

1.1 General

- a. As requested, LEA has carried out a geotechnical assessment with respect to the above noted development. This Report provides a summary of our findings and recommendations.

1.2 Background

- a. The Property is currently developed with a manufactured home and associated outbuildings. Our review revealed previous site clearing and manipulation approximately 15-20 years ago.
- b. The proposed development for the Property, at the time of this Report, consists of a motel resort with two fourplex buildings, 8 cabins, one operations building, and one amenity building. The buildings are expected to be of conventional construction methods preferably supported by a cast-in-place concrete foundation system, with slab-on-grade flooring systems and concrete, steel or wood-framed superstructures.
- c. The Property is located on the west coast of Vancouver Island, within the northwestern region of Ucluelet, BC. See Figure 1.2 below.

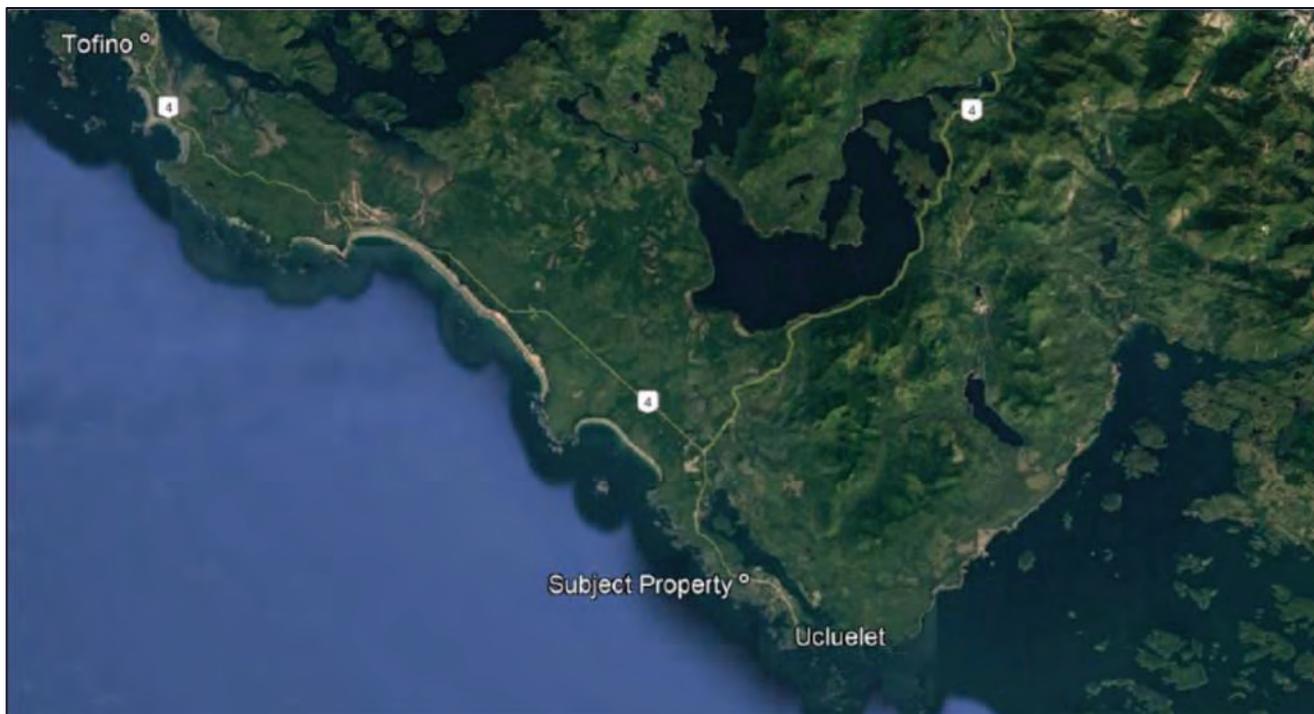


Figure 1.2 – Large Scale Location Plan (Satellite Imaging from Google Earth^{®1})

- d. As per the current 2011 DoU OCP, the Property is located within the #7 Peninsula Road DPA². The objectives of DPA No. 7 are to protect the natural environment, revitalize commercial use in the area, and establish form and character of development in the resort region. The updated 2020 OCP, currently issued

as a draft version, indicates the Property is located within a DPA for Hazardous Conditions (shown on the Schedule 'G' map³), specifically for steep slopes greater than 30°.

1.3 Covenant Review

- a. As part of our assessment, we have reviewed the documents registered on the legal title of the Property, specifically, any restrictive covenants registered against the Property that may relate to the conclusions and recommendations provided in this Report.
- b. Current to the date of this Report, there are two covenants under Section 215 of the Land Title Act registered against the Property that relates to the comments, conclusions and recommendations in this Report; reference covenant documents EH51473 and EH51474.
- c. Covenant EH51473 (1994) is based on limited information from the 1964 tsunami event in Alaska and relates to oceanic and seasonal flooding, stating no building shall be constructed nor mobile home located:
 - i. *within 30.0m of the natural boundary of the sea, or within 15.0m of the natural boundary of any nearby watercourse, whichever is greater;*
 - ii. *at an elevation less than 4.0m above the natural boundary of the sea, or at an elevation less than 1.5m above any nearby watercourse, whichever is highest.*
- d. Covenant EH51474 (1994) states:

"no building shall be constructed nor mobile home located, nor shall there be any removal of vegetation or other changes by the hand of man made within 7 metres from the high water mark of the Ucluelet Inlet or creek or stream without the prior written permission of the Regional Manager of the Fish and Wildlife, Ministry of Environment, Lands and Parks."

1.4 Assessment Methodology

- a. A subsurface geotechnical investigation was carried out on December 7, 2021 using a Hitachi EX50 excavator provided by Mr. Dave Edwards. A total of seven TPs (TP 21-01 and TP 21-07) were advanced at accessible locations to provide good general coverage of the development area. All TPs were backfilled upon completion of our investigation.
- b. A site plan showing the location of the TPs (Drawing E0514-01) is attached, following the text of this Report.
- c. LEA also reviewed topographical information provided by the DoU LIDAR map.

2.0 SITE CONDITIONS

2.1 Physical Setting

- a. The Property is identified with the following civic and legal address:
 - i. 2094 Peninsula Road, Ucluelet, BC; Lot 7, District Lot 284, Clayoquot District, Plan VIP58757
PID: 018-743-650
- b. The Property is located in the northwestern region of the DoU, south of Peninsula Road and west of Forbes Road. The site can be accessed from the Peninsula Road frontage. The location of the subject Property is shown below in Figure 2.1.

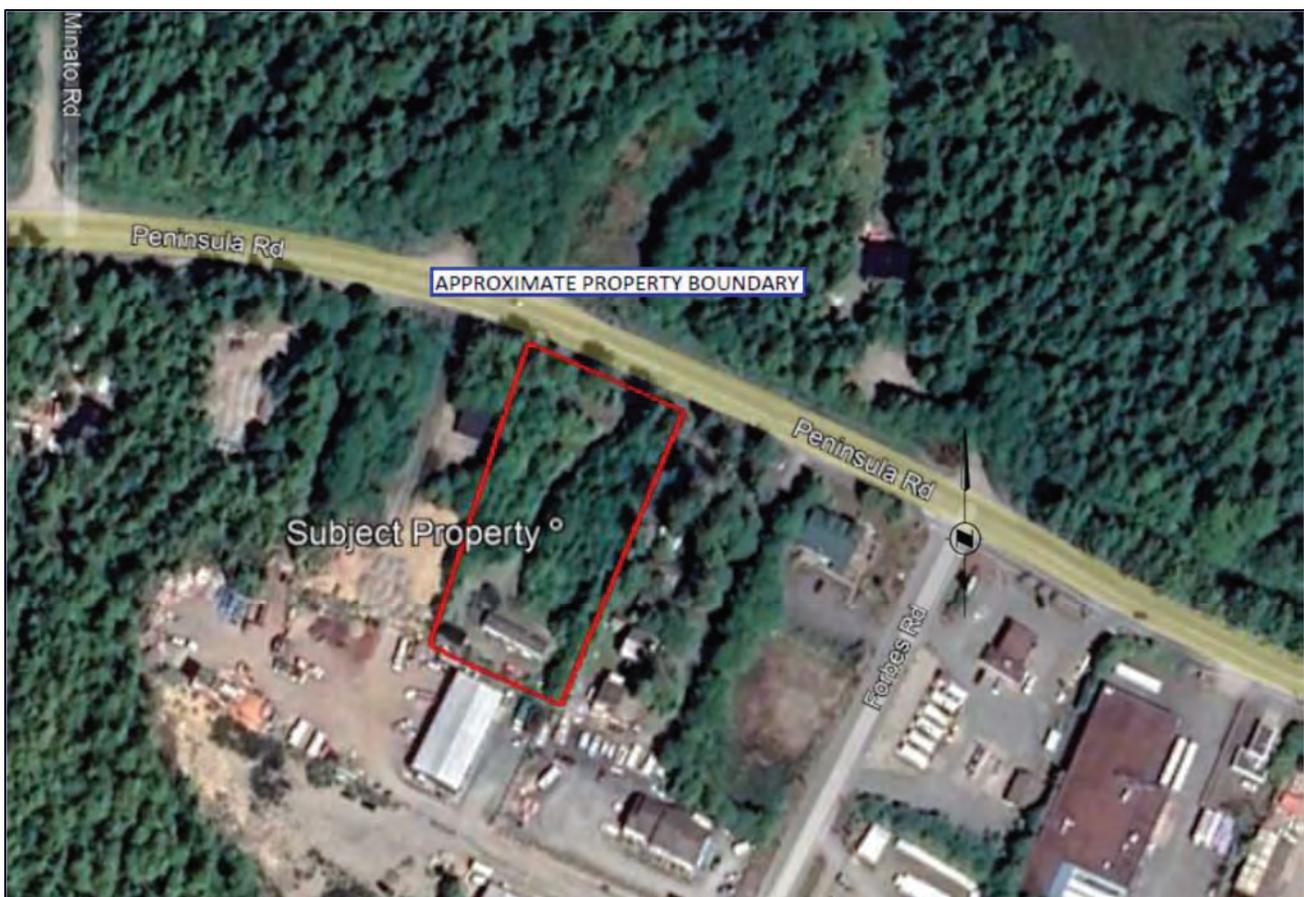


Figure 2.1 – Small Scale Location Plan (Satellite Imaging from Google Earth^{®1})

- c. The Property is currently zoned as “Service Commercial” (CS-2), and is bound by other CS-2 properties to the west, “High Density Residential” (R-3) property to the east, “Eco-Industrial Park” (CD-1) properties to the south, and Peninsula Road to the north⁴.

2.2 Terrain and Features

- a. The terrain inclines gently from the Peninsula Road frontage to the south extent of the Property. Isolated berms located along the west property line and sporadically across the site indicate a moderate

amount of previous earthworks and site manipulation. The maximum height of encountered slopes on the Property was less than 3.0m inclined no greater than 30°. Total relief is estimated to be approximately 14m, north to south across the Property.

- b. LEA noted a stacked block retaining wall on the adjacent parcel near the south property line. The wall appeared to be approximately 1.0m to 1.5m in height above the lower grade of the neighboring property. The wall retains a vegetated soil slope inclined at 2 Horizontal to 1 Vertical (2H:1V) that meets the upper grade of the subject parcel.
- c. Moderate to dense vegetation covers the majority of the Property to the east and west of the existing driveway.
- d. A review of historical satellite imagery provided by Google Earth® indicates the site was partially cleared and manipulated approximately 15-20 years ago. Figure 2.2 and 2.3 below show general site conditions in 2005 and 2010.



Figure 2.2 – General Site Conditions in 2005 (Satellite Imaging from Google Earth®¹)



Figure 2.2 – General Site Conditions in 2010 (Satellite Imaging from Google Earth^{®1})

2.3 Regional Geology

- a. Surficial geology for the area is classified as shallow colluvium, comprised of sediments generally less than 1.0m thick, overlying bedrock⁵.
- b. Bedrock geology for the area is classified as undivided volcanic rocks part of the Pacific Rim Complex, and date back to the Triassic to Cretaceous period⁶.

2.4 Soil Conditions

- a. Varying soil strata were encountered during the subsurface investigation. In general, fill materials were encountered overlying dense sand and gravel deposits at depths varying from 0.5m to in excess of 3.0m.

- b. The main strata are discussed in general below. Detailed descriptions of the subsurface conditions are provided on the attached test pit logs (TP 21-01 to TP 21-07).
- c. Miscellaneous fill soils comprised of loose to compact, sand, gravel and cobbles, with organic debris (roots, wood, logs), or minor variations thereof, was encountered in the majority of the excavated test pits at depths ranging from 0.0m to 3.0m+, with an average thickness of 1.4m.
- d. Dense, naturally deposited fine to coarse sand and gravel, or minor variations thereof, was encountered in TP 21-03, TP 21-04, and TP21-07, at depths ranging from 0.4m to 1.5m, with an average depth of 1.0m.
- e. Typical soil conditions are shown in Figures 2.4.1 and 2.4.2.



Figure 2.4.1 – Typical Subsurface Conditions (TP 21-02)



Figure 2.4.2 – Typical Subsurface Conditions (TP 21-03)

- f. Generally, the deeper fill materials were encountered within the northwest corner of the Property (TP 21-02) and along the northwest edge of the existing driveway turnaround (TP 21-05).
- g. Depths are referenced to the existing ground surface at the time of our field investigation. Soil classification terminology is based on the Modified Unified classification system. The relative proportions of the major and minor soil constituents are indicated by the use of appropriate Group Names as provided in ASTM D2488-93 and/or D2487 Figures 1a, 1b, and 2. Other descriptive terms generally follow conventions of the Canadian Foundation Engineering Manual.

2.5 Surface and Groundwater Conditions

- a. No surface or ponded water was observed during our reviews of the subject Property. No evidence of abnormal groundwater conditions was observed during our field review.
- b. Groundwater levels can be expected to fluctuate seasonally with cycles of precipitation. Groundwater conditions at other times and locations can differ from those observed within the test pits at the time of our assessment. If groundwater flows or conditions are different than those encountered during the test pitting investigation, additional measures may be required during construction.

3.0 DISCUSSIONS AND RECOMMENDATIONS

3.1 Natural Hazards

- a. Based on the field reconnaissance, subsurface investigation, and a desktop review of available information, it is the opinion of LEA that the risk of tsunami inundation is the only potential geotechnical hazard for the Property.

3.2 Covenant Discussions

- a. The information provided in covenant documents EH51473 and EH51474 speak to coastal setbacks and FCLs for the parent parcel, DL 284. The language in these documents is outdated, does not align with current best practices, and should not apply to the subject Property.
- b. The information provided in this Report supersedes these covenants; therefore, at the discretion of the DoU, this Report may be appended to the land title to replace covenants document No. EH51473 and EH51474.

3.3 Tsunami Hazard

- a. Tsunami waves may be created by earthquakes or landslides that rapidly displace a large mass of water. While the severity and frequency of tsunamis are difficult to predict, there is geological evidence to indicate large tsunamis originating from both distant and nearby sources have historically impacted the westcoast of Vancouver Island. Therefore, coastal communities along BC's westcoast are considered at high risk of flood hazard and inundation caused by tsunamis due to the tectonically unstable Pacific Rim.
- b. Tsunami wave heights and inundation can vary significantly due to source location, alignment and shape of the coastline, offshore bathymetry and inland topography, as well as weather and water levels at the time of the event. At present, there is insufficient historical information to formulate a magnitude-frequency relation for locations on the BC coast.
- c. The Property is located inland with a minimum elevation of approximately 10.5m GD (CGVD2013); however, Ucluelet is directly bordering the Pacific Ocean and in the designated "Open Coast" coastal region of BC. Therefore, the associated flood risk due to tsunami inundation would be considered moderate to high.
- d. Current provincial guidelines state that tsunami setbacks and associated FCL elevations are only required for new lots created through the subdivision approval process. Therefore, there are no design or mitigation measures provided in this Report relative to potential tsunami impacts. Best-practices for construction within a defined tsunami zone are to follow procedures outlined by the provincial and local authorities.

- e. We understand the DoU has implemented a Tsunami Warning System and evacuation plan for the community. If a Tsunami Warning is issued for the area, evacuation procedures provided by local and provincial government agencies should be followed.

4.0 DESIGN PHASE

4.1 Foundation Design and Construction

- a. Prior to construction, the building areas should be stripped to remove all unsuitable materials to provide an undisturbed natural subgrade for the footing support.
- b. Based on the encountered soils it is LEA's opinion a supplementary test-pitting investigation should be conducted during the site clearing phase to delineate the extent of the encountered fill areas relative to the proposed cabin /building locations. As the extent of fill material s is unknown we expect significant excavation and removal of fill materials in the vicinity of TP 21-02, followed by a program of engineered fill placement and compaction to support the proposed cabin building.
- c. Foundation loads should be supported on natural undisturbed material approved for use as a bearing stratum by our office or structural fill and may be designed using the following values.
 - i. For foundations constructed on approved structural fill, as outlined in Section 5.2 of this Report, an SLS bearing pressure of 150 kPa, and a ULS bearing pressure of 200 kPa may be used for design purposes. These values assume a minimum 0.45m depth of confinement or cover.
 - ii. For foundations constructed on the dense sand and gravel stratum, an SLS bearing pressure of 100 kPa, and a ULS bearing pressure of 130 kPa may be used for design purposes. These values assume a minimum 0.45m depth of confinement or cover.
- d. Exterior footings should be provided with a minimum 0.45m depth of ground cover for frost protection purposes.
- e. Prior to placement of concrete footings, any bearing soils that have been softened, loosened, or otherwise disturbed during the course of construction should be removed, or else compacted following our recommendations for structural fill. Compaction will only be feasible if the soil has suitable moisture content and if there is access to heavy compaction equipment.
- f. Settlements should be within the ranges considered "Normal and Tolerable" for typical construction of this nature. These ranges are usually taken as being 20mm to 25mm total, and 10mm to 15mm differential between typical column spacing.
- g. The Geotechnical Engineer should evaluate the bearing soils at the time of construction to confirm that footings are based on appropriate and properly prepared founding material.

4.2 Seismic Criteria

- a. No compressible or liquefiable soils were encountered during the test-pitting investigation.
- b. Based on the 2018 BCBC, Division B, Part 4, Table 4.1.8.4.A, "Site Classification for Seismic Site Response," the soils and strata encountered during the test-pitting investigation would be "Site Class D" (Stiff Soils).

4.3 Foundation Drainage

- a. Conventional requirements of the 2018 BCBC pertaining to building drainage are considered suitable at this site.

4.4 On-Site Infiltration and Stormwater Disposal

- a. As part of the geotechnical investigation, field observations of the subgrade soil conditions with respect to the on-site infiltration and disposal of stormwater were carried out.
- b. In general, subgrade soil conditions consist of miscellaneous fill materials overlying alluvial deposits of sand and gravel.
- c. Site conditions may be conducive to the installation of on-site stormwater infiltration, retention, or detention. If on-site stormwater management measures are preferred, please contact the undersigned for additional information.

5.0 CONSTRUCTION PHASE

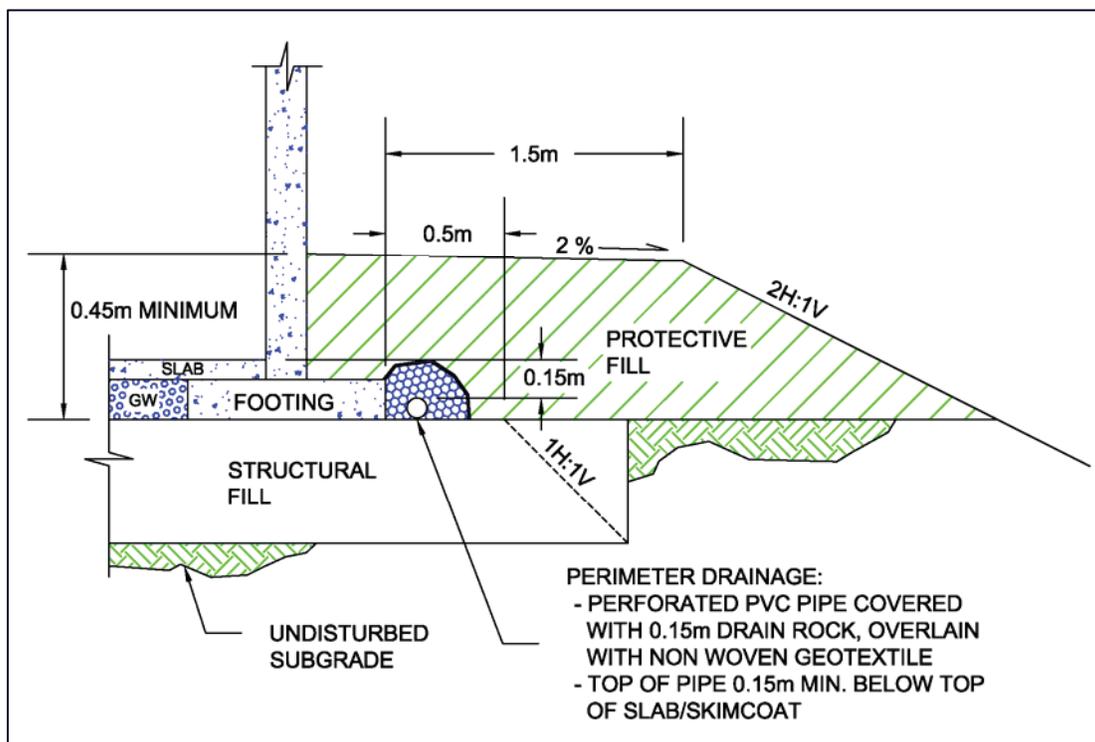
5.1 General Excavation – Future Building Sites

- a. Prior to construction, all unsuitable materials should be removed to provide a suitable base of support. Unsuitable materials include any non-mineral material such as vegetation, topsoil, peat, fill or other materials containing organic matter, as well as any soft, loose, or disturbed soils, including any existing fills.
- b. Unsuitable materials, including existing fill soils, were encountered in the majority of the subsurface explorations from depths of 0.5m to 3.0m+. Further investigation and/or excavation monitoring should be expected at the site clearing stage.
- c. Groundwater ingressing into any excavations should be controlled with a perimeter ditch located just outside of the building areas, connected to positive drainage.
- d. The Geotechnical Engineer is to confirm the removal of unsuitable materials and approve the exposed competent inorganic subgrade prior to fill placement and/or foundation construction.
- e. Conventions outlined in the Occupational Health and Safety Regulations under Part 20, Sections 20.78 through 20.95 should be adhered to for any excavations on site that are greater than 1.2m in depth. Where excavations scenarios are not clearly defined under these regulations, the Geotechnical Engineer

should be consulted to assess potential hazards and provide recommendations.

5.2 Structural Fill

- Where fill is required to raise areas that will support buildings, slabs, or pavements, structural fill should be used. The Geotechnical Engineer should first approve the exposed subgrade in fill areas, to confirm the removal of all unsuitable materials.
- Structural fill should be inorganic sand and gravel. If structural fill placement is to be carried out in the wet season, material with a fines content limited to 5% passing the 75µm sieve should be used, as such a material will not be overly sensitive to moisture, allowing compaction during rainy periods of weather.
- Structural fill should be compacted to a minimum of 95% of Modified Proctor maximum dry density (ASTM D1557) in foundation and floor slab areas, as well as in paved roadway and parking areas.
- Structural fills under foundations, roadways, and pavements should include the zone defined by a plane extending down and outward a minimum 0.5m from the outer edge of the foundation at an angle of 45 degrees from horizontal to ensure adequate subjacent support. This support zone is shown below in Figure 4.2.



- Compaction of fill should include moisture conditioning as needed to bring the soils to the optimum moisture content and compacted using vibratory compaction equipment in lift thicknesses appropriate for the size and type of compaction equipment used.

- f. A general guideline for maximum lift thickness is no more than 100mm for light hand equipment such as a “jumping-jack,” 200mm for a small roller and 300mm for a large roller or heavy (>500 kg) vibratory plate compactor or a backhoe mounted hoe-pac or a large excavator mounted hoe-pac, as measured loose.
- g. It should be emphasized that the long-term performance of buildings, slabs, and pavements is highly dependent on the correct placement and compaction of underlying structural fills. Consequently, we recommend that structural fills be observed and approved by the Geotechnical Engineer. This would include approval of the proposed fill materials and performing a suitable program of compaction testing during construction.

5.3 Pavement Design – Private Works

- a. Any organic or deleterious material should be removed from beneath the designated roadway, driveway, or parking areas prior to subgrade preparation. If fill is required to bring the subgrade up to the desired elevation, structural fill should be used.
- b. The subgrade should be proof-rolled after final compaction and any areas showing visible deflections should be inspected and repaired. The Geotechnical Engineer shall review parking and roadway subgrade conditions during the course of excavation.
- c. The parking subgrade and pavement should be sloped to provide adequate drainage as per the design and direction of the Civil Consultant.
- d. An estimated soaked California bearing ratio of 30% and a 20-year design life have been used in the calculated pavement designs. See Tables 5.3.1 and 5.3.2 below.

Table 5.3.1 – Pavement Design Recommendations for Light Traffic/Low Volume Areas

Areas Subject to Cars and Small Trucks	
Estimated Equivalent Single-Axle Load: 2×10^4	
Asphaltic Concrete Pavement	50mm
19mm Well-Graded Granular Base Course	100mm
75mm Select Granular Subbase (SGSB)	250mm

Table 5.3.2 – Pavement Design Recommendations for Heavy Traffic/High Volume Areas

Areas Subject to Large Trucks	
Estimated Equivalent Single-Axle Load: 2×10^5	
Asphaltic Concrete Pavement	75mm
19mm Well-Graded Granular Base Course	150mm
75mm Select Granular Subbase (SGSB)	300mm

- e. It is recommended that a reinforced concrete slab be utilized where garbage dumpsters are located. The slab should be large enough to contain the disposal unit and front tires of the garbage truck during

disposal operations.

- f. The above recommendations for general stripping, granular and pavement structure are in accordance with current best-practices. If the recommendations provided here prove cost-prohibitive or restrictive, alternative options may be considered through a balance of reduced preparation efforts, with a corresponding reduction in pavement design life.

6.0 CONCLUSIONS

6.1 Local Government Conformance Statement

- a. LEA confirms that the recommendations made in this Report conform to the guidelines and objectives expressed under DoU OCP Bylaw No. 1140 (2011)⁷, and the proposed draft DoU OCP Bylaw 1236 (2020)⁸, as well as applicable guidelines and best practices current to the date of this Report.
- b. All construction/development shall be carried out in conformance within the requirements of the DoU or jurisdictional limitations, as applicable.
- c. Provided the recommendations in this Report are followed, we confirm that from a geotechnical point of view the site is considered safe and suitable for the proposed resort development and associated buildings, with the probability of a geotechnical failure resulting in property damage of less than:
 - i. 2% in 50 years for geotechnical hazards due to seismic events, including slope stability; and,
 - ii. 10% in 50 years for all other geotechnical hazards.
- d. Due to the Property location within a tsunami-prone area, the associated tsunami risk is considered to be moderate to high. As the magnitude-frequency relation for tsunami-related flooding is unknown, we recommend following evacuation procedures provided by local and provincial government agencies for the area.

6.2 Geotechnical and Quality Assurance Statement

- a. The 2018 BCBC requires that a geotechnical engineer be retained to provide Geotechnical Assurance services for the construction of buildings that are outside of Part 9 of the BCBC. Geotechnical Assurance services include review of the geotechnical components of the plans and supporting documents, and responsibility for field reviews of these components during construction.

7.0 CLOSURE

- a. Lewkowich Engineering Associates Ltd. appreciates the opportunity to be of service on this project. If you have any comments, or additional requirements at this time, please contact us at your convenience.

Respectfully Submitted,
Lewkowich Engineering Associates Ltd.



Paul Fraser, B.A., CTech
Senior Technician



Chris Hudec, M.A.Sc., P.Eng.
Senior Project Engineer

8.0 ATTACHMENTS

1. Test Pit Location Plan, LEA Drawing No. E0514-01
2. Test Pit Logs, TP 21-01 to TP 21-07

9.0 REFERENCES

1. Google Earth Pro, Accessed January 2022, Image date 2021.
2. District of Ucluelet map titled "Official Community Plan BYLAW No **** - Schedule 'C', Development Permit Areas," Dated October 4, 2011.
3. District of Ucluelet map titled "Official Community Plan, Schedule G, Development Permit Areas for Hazardous Conditions," Dated February 2, 2021.
4. District of Ucluelet map titled "Zoning Bylaw No.1160, 2013 – Consolidated Schedule A – Zoning Map of the District of Ucluelet," revised April 2021.
5. Ministry of Environment Mapping, Produced by R.H. Guthrie and C.R. Penner, titled "*Vancouver Island Geology.*"
6. Geoscience BC map titled "*Map 2013-NVI-1-1, Geology, Northern Vancouver Island Project,*" Dated January 2013.
7. District of Ucluelet, "Official Community Plan Bylaw No. 1140", dated October 5, 2011.
8. District of Ucluelet, "Official Community Plan Bylaw No. 1236, 2020 Draft Version", Accessed June, 2021.

Peninsula Rd

- TP 21-02
- TP 21-01
- TP 21-03
- TP 21-04
- TP 21-05
- TP 21-06
- TP 21-07

		REV No.	DATE	BY	P.Eng.	REVISION DESCRIPTION	
DRAWING TITLE TEST PIT LOCATION PLAN		ENGINEER'S SEAL			PLOT DATE 2022-01-05	DRAWN BY PF	
PROJECT NAME 2094 PENINSULA ROAD, UCLUELET, BC					REVIEWED BY CH	SCALE n/a	
LEGAL DESCRIPTION Development Permit for 2094 Peninsula Road John Towgood, Municipal Plann.					PROJECT No. E0514	DRAWING No. E0514-01	





TEST PIT LOG

File Number: E0514
 Client: AFC Construction
 Project: 2094 Peninsula Road
 Location: Ucluelet, BC

TP21-01

Depth (m)	Soil Symbol	Description
0.0		Ground Surface
0.0-0.2m		Organic silt, some sand (fine), some organic debris (roots, topsoil, brush), soft, dark brown, moist (fill)
0.2-0.5m		Sand (fine), some silt, trace organic debris (roots), loamy, loose, brown, moist (fill)
0.5-1.5m		Sand (fine), some silt, some gravel, dense, light brown, moist
1.5		No appreciable fill materials encountered No groundwater seepage observed Encountered buried water service at 0.6m End test pit at 1.5m
2.0		
2.5		
3.0		
3.5		
4.0		
4.5		
5.0		

Logged By: Paul Fraser, CTech
 Reviewed By: Chris M. Hudec P.Eng.
 Digging Method: Bobcat E50 Mini-Excavator

Date: December 7, 2021
 Page 1 of 1

1900 Boxwood Road
 Nanaimo, British Columbia, V9S 5Y2
 Phone: 250-756-0355
 Fax: 250-756-3831
 Email: geotech@lewkowich.com



TEST PIT LOG

File Number: E0514
 Client: AFC Construction
 Project: 2094 Peninsula Road
 Location: Ucluelet, BC

TP21-02

Depth (m)	Soil Symbol	Description
0.0		Ground Surface
0.0-0.2m		Organic silt, some sand (fine), some organic debris (roots, topsoil, brush), soft, dark brown, moist (fill)
0.2-0.5m		Sand (fine), some silt, trace organic debris (roots), loamy, loose, brown, moist (fill)
0.5-2.0m		Sand (fine), some silt, some gravel, some organic debris (roots, wood at 1.2m), compact, light brown to grey, moist (fill)
2.0-3.0m		Organic silt, and organic debris (logs, wood, roots), some sand (fine), soft, dark brown, moist (fill)
3.0m to 5.0m		Fill materials from 0.0m to 3.0m+ No groundwater seepage observed Moderate sloughing from 0.6m End test pit at 3.0m due to large organic debris

Logged By: Paul Fraser, CTech
 Reviewed By: Chris M. Hudec P.Eng.
 Digging Method: Bobcat E50 Mini-Excavator

Date: December 7, 2021
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TEST PIT LOG

File Number: E0514
 Client: AFC Construction
 Project: 2094 Peninsula Road
 Location: Ucluelet, BC

TP21-03

Depth (m)	Soil Symbol	Description
0.0		Ground Surface
0.0-0.2m		Organic silt, some sand (fine), some organic debris (roots, topsoil, brush), soft, dark brown, moist
0.2-0.4m		Sand (coarse), some gravel, trace silt, compact, brown, moist
0.4-1.2m		Sand (coarse), and gravel, dense, grey, moist
1.2-1.5m		No appreciable fill materials encountered No groundwater seepage observed End test pit at 1.2m
1.5-2.0m		
2.0-2.5m		
2.5-3.0m		
3.0-3.5m		
3.5-4.0m		
4.0-4.5m		
4.5-5.0m		

Logged By: Paul Fraser, CTech
 Reviewed By: Chris M. Hudec P.Eng.
 Digging Method: Bobcat E50 Mini-Excavator

Date: December 7, 2021
 Page 1 of 1

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TEST PIT LOG

File Number: E0514
 Client: AFC Construction
 Project: 2094 Peninsula Road
 Location: Ucluelet, BC

TP21-04

Water Level	Depth (m)	Soil Symbol	Description
			Ground Surface
	0.0		0.0-0.2m Organic silt, some sand (fine), some organic debris (roots, topsoil, brush), soft, dark brown, moist (fill)
	0.5		0.2-0.7m Sand (coarse), some gravel, trace silt, compact, grey-brown, moist (fill)
	1.0		0.7-1.1m Organic silt, and organic debris (wood, roots), some sand (fine), soft, dark brown, moist (fill)
	1.5		1.1-1.5m Sand (coarse), and gravel, compact, red-brown, moist
	2.0		1.5-1.8m Sand (coarse), and gravel, dense, grey and light brown, moist
	2.0		Fill materials from 0.0m to 1.1m Minor groundwater seepage at 1.1m End test pit at 1.8m
	2.5		
	3.0		
	3.5		
	4.0		
	4.5		
	5.0		

Logged By: Paul Fraser, CTech
 Reviewed By: Chris M. Hudec P.Eng.
 Digging Method: Bobcat E50 Mini-Excavator
 Date: December 7, 2021
 Page 1 of 1

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TEST PIT LOG

File Number: E0514
 Client: AFC Construction
 Project: 2094 Peninsula Road
 Location: Ucluelet, BC

TP21-05

Depth (m)	Soil Symbol	Description
0.0		Ground Surface
0.0-0.6m		Organic silt, some sand (fine), some organic debris (roots, topsoil, brush), soft, dark brown, moist (fill)
0.6-2.4m		Sand (fine to medium), some gravel, some organic debris (roots, wood), some cobbles, compact, grey, moist (fill)
2.4m to 5.0m		Fill materials from 0.0m to 2.4m+ No groundwater seepage observed End test pit at 2.4m due to organic debris

Logged By: Paul Fraser, CTech
 Reviewed By: Chris M. Hudec P.Eng.
 Digging Method: Bobcat E50 Mini-Excavator

Date: December 7, 2021
 Page 1 of 1

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TEST PIT LOG

File Number: E0514
 Client: AFC Construction
 Project: 2094 Peninsula Road
 Location: Ucluelet, BC

TP21-06

Depth (m)	Soil Symbol	Description
0.0		Ground Surface
0.0-0.8m		Sand (fine), some gravel, trace organic debris (roots, topsoil), soft, dark brown to grey, moist (fill)
0.8-0.9m		Organic silt, some sand (fine), some organic debris (roots, topsoil, brush), soft, dark brown, moist (fill)
0.9-1.8m		Sand (coarse), and gravel, dense, red-brown to grey-brown, moist
2.0		Fill materials from 0.0m to 0.9m No groundwater seepage observed End test pit at 1.8m
2.5		
3.0		
3.5		
4.0		
4.5		
5.0		

Logged By: Paul Fraser, CTech
 Reviewed By: Chris M. Hudec P.Eng.
 Digging Method: Bobcat E50 Mini-Excavator

Date: December 7, 2021
 Page 1 of 1

1900 Boxwood Road
 Nanaimo, British Columbia, V9S 5Y2
 Phone: 250-756-0355
 Fax: 250-756-3831
 Email: geotech@lewkowich.com



TEST PIT LOG

File Number: E0514
 Client: AFC Construction
 Project: 2094 Peninsula Road
 Location: Ucluelet, BC

TP21-07

Depth (m)	Soil Symbol	Description
0.0		Ground Surface
0.0-0.3m		Sand (fine), some gravel, trace organic debris (roots, topsoil), loose to compact, dark brown, moist (fill)
0.3-0.5m		Fractured rock (shale), some gravel, some silt, compact, dark grey, moist (fill)
0.5-1.3m		Sand (coarse), and gravel, compact, red-brown, moist
1.3-1.8m		Sand (coarse), and gravel, dense, grey-brown, moist
2.0		Fill materials from 0.0m to 0.5m No groundwater seepage observed End test pit at 1.8m
2.5		
3.0		
3.5		
4.0		
4.5		
5.0		

Logged By: Paul Fraser, CTech
 Reviewed By: Chris M. Hudec P.Eng.
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 Page 1 of 1

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 Email: geotech@lewkowich.com



May 25, 2023

Darren Moss
Tectonica Management Inc.
#201-890 Creace St.
Nanaimo BC, V8R 2T3

Via Email: darren@tectonica.ca

**RE: 2094 PENINSULA ROAD, UCLUELET BC
PROPOSED HEALTHCARE CENTRE
PRELIMINARY ENVIRONMENTAL ASSESSMENT**

1.0 INTRODUCTION

Aquaparian was retained by Tectonica Management Inc. (Tectonica) to complete a preliminary environmental assessment of 2094 Peninsula Drive for a proposed new Healthcare Centre in Ucluelet BC. The subject parcel is zoned CS-2 (Commercial Services) and legally identified as follows:

LOT 7, PLAN VIP 58757, DISTRICT LOT 284, CLAYOQUOT LAND DISTRICT
(PID 018743650).

Aquaparian completed a preliminary site survey of the subject parcel on May 8, 2023. A site location map is included with this report as Figure 1 and a selection of photographs taken by Aquaparian during the site visit is included as Appendix A. The intent of this summary report is to provide a brief overview of the findings from a background review of government databases, maps and a site visit including an inventory of the environmental features that exist on the property and to determine if there are any sensitive environmental features that may pose a constraint for future development. A focus of the study was to assess preliminary stormwater discharge plans and to determine if there are any downstream watercourses that may require mitigation measures to protect them. This report is not to be considered a detailed environmental assessment.

203-321 Wallace St. Nanaimo, BC V9R 5B6, 250-591-2258

Cell SARAH BONAR 250-714-8446 CHRIS ZAMORA 250-714-8864

Development Permit for 2094 Peninsula Road John Towgood, Municipal Plann...

2.0 REGULATORY FRAMEWORK

The following is a review of federal provincial and municipal regulations that may apply to the proposed development of the property:

Federal Fisheries Act Section 36: Environment and Climate Change Canada administers Section 36 of the *Fisheries Act*, the key pollution prevention provision, prohibiting the deposit of deleterious substances into waters frequented by fish, unless authorized by regulations under the *Fisheries Act* or other federal legislation. A deleterious substance can be any substance that, if added to any water, would degrade or alter its quality such that it could be harmful to fish, fish habitat or the use of fish by people.

Federal Migratory Birds Convention Act, 1994. Most species of birds in Canada are protected under this act. “Migratory birds” are defined by Article I of the Convention which names the families and sub-families of birds protected and provides some clarification of the species included. In general, birds not falling under federal jurisdiction within Canada include grouse, quail, pheasants, ptarmigan, hawks, owls, eagles, falcons, cormorants, pelicans, crows, jays, kingfishers, and some species of blackbirds. Timing for vegetation clearing should be planned to avoid impacts to migratory birds. The bird nesting season on Vancouver Island is recognized to be between March 15th and August 15th of a given year.

Section 34 of the Provincial Wildlife Act, states that a person commits an offence if the person, except as provided by regulation, possesses, takes, injures, molests or destroys:

- (a) a bird or its egg,
- (b) the nest of an eagle, peregrine falcon, gyrfalcon, osprey, heron or burrowing owl, or
- (c) the nest of a bird not referred to in paragraph (b) when the nest is occupied by a bird or its egg.

Heritage Conservation Act. All archaeological sites, recorded or not, are protected under the *Heritage Conservation Act* and must not be altered or damaged without a site alteration permit from the Archaeology Branch.

3.0 BACKGROUND REVIEW

A review of the District of Ucluelet Official Community Plan (OCP) map “Schedule ‘E’ – Environmental Development Permit Areas” (DPAs) did not identify any DPAs associated with the subject parcel; however, it does identify that there are two mapped watercourses directly north across the road from the parcel that drain into a small bay. The District’s map showing the watercourses is included as Figure 2. Schedule E classifies them as “fish streams” and they have an associated Riparian DPA. Land located across Peninsula Road includes a continuous mapped Terrestrial DPA which includes wetlands, mature forests and sensitive ecosystems and



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a Marine Foreshore DPA along the shoreline. Though the subject parcel does not have any DPAs this indicates that the parcel is in close proximity to potentially sensitive areas.

A review of the provincial BC Conservation Data Centre did not identify any relevant mapped rare species occurrence polygons. No rare species or critical habitat elements for Species-at-Risk were observed during the site assessment. A review of the Wildlife Tree Stewardship (WiTS) atlas did not identify any bald eagle nest trees within or adjacent to either site. A review of the BC Great Blue Heron Atlas did not identify any great blue heron nests or nest colonies within or adjacent to either site. Site reconnaissance confirmed that no trees supporting heron or eagle nests appear to exist on or in close proximity to the subject parcels.

4.0 SITE ASSESSMENT

The subject parcel is rectangular in shape, approximately 0.45 ha (1.12 acres) in area, and bounded by Peninsula Road to the north, other CS-2 zoned properties to the east and west, and CD-1 (Comprehensive Development) zoned properties to the south. The parcel slopes up from the road at an average slope of 12% and as steep as 23% in the centre of the parcel. It is mostly forested with a regenerating mixed forest that includes some old growth trees and snags at the northeast corner of the parcel and is partially developed with a gravel driveway, a small mobile home and a workshop. Large old growth trees are western redcedar (*Thuja plicata*). The regenerating forest canopy is dense and includes cedar, western hemlock (*Tsuga heterophylla*), shore pine (*Pinus contorta*), red alder (*Alnus rubra*) with an understory of salal (*Gaultheria shallon*), salmonberry (*Rubus spectabilis*), willows (*Salix* spp.), evergreen huckleberry (*Vaccinium ovatum*) and thimbleberry (*Rubus parviflorus*).

The parcel does not have any watercourses within it. There is a small, mesh-covered storm drain at the north side of the parcel east of the driveway that drains north under the road, a small PVC pipe storm drain centrally located in the parcel and a municipal storm drain located along the roadside. It was unclear if the property's storm drains are functional. The road slopes gently north and there are no roadside ditches. Along the north side of the road is a vegetated slope with a small wetland catchment area that forms small outlet creeks downstream that flow north into the nearby bay. Road surface runoff flows overland into this area, and it appears that storm water is discharged into this area; a storm manhole was observed within the dense vegetation near the top of the small slope on the north side of the road and it is presumed to have connectivity to the storm drain observed on the south side of the road. Several small dendritic channels flow into a saltmarsh. No obstructions to fish passage were identified. One larger channel was observed to have suitable fish habitat that would be expected to support some salmonid species. Riparian vegetation of the wetland and watercourses includes red alder, salmonberry, slough sedge (*Carex obnupta*), deer fern (*Blechnum spicant*), skunk



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2094 Peninsula Road, Ucluelet BC
Preliminary Findings Memo
May 2023

4

cabbage (*Symplocarpus foetidus*), common horsetail (*Equisetum arvense*), Himalayan blackberry (*Rubus armeniacus*), false lily of the valley (*Maianthemum dilatatum*) and common rush (*Juncus effusus*). The marsh is dominated by sweet gale (*Myrica gale*) and Lyngby's sedge (*Carex lyngbyei*) with common horsetail and silverweed (*Potentilla anserina*).

5.0 CONCLUSION

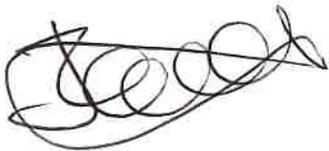
The property is not subject to any of the District of Ucluelet's environmental DPAs and the preliminary site inspection did not identify any terrestrial environmental features that would pose a constraint to future development of the proposed Healthcare Centre. However, downstream stormwater discharge enters freshwater fish habitat and flows through ecologically sensitive riparian and saltmarsh ecosystems. Stormwater management plans for the new development must consider protective measures to ensure that water quality from the parking lot run-off is safe for fish and that mitigation measures are in place to protect fish habitat from deleterious substances or sediment input during all stages of construction and operation and that works are in compliance with the *Fisheries Act*.

Aquaparian trusts that the information provided in this report meets your requirements. Any questions regarding information provided in this document, please contact the undersigned at (250) 591-2258.

Regards,

AQUAPARIAN ENVIRONMENTAL CONSULTING LTD

Prepared by:



Jeni Rowell, B.Sc., BIT
Biologist-in-Training

<https://netorg5387218.sharepoint.com/sites/Shared/Shared Documents/Documents/Projects/Projects/N1054 Ucluelet Health Centre/2094 Peninsula Road Preliminary Findings May 2023.docx>

Reviewed/Revised by:



Sarah Bonar B.Sc., R.P.Bio
Biologist/Principal



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FIGURE 1
SITE LOCATION MAP



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FIGURE 1 – SITE LOCATION MAP

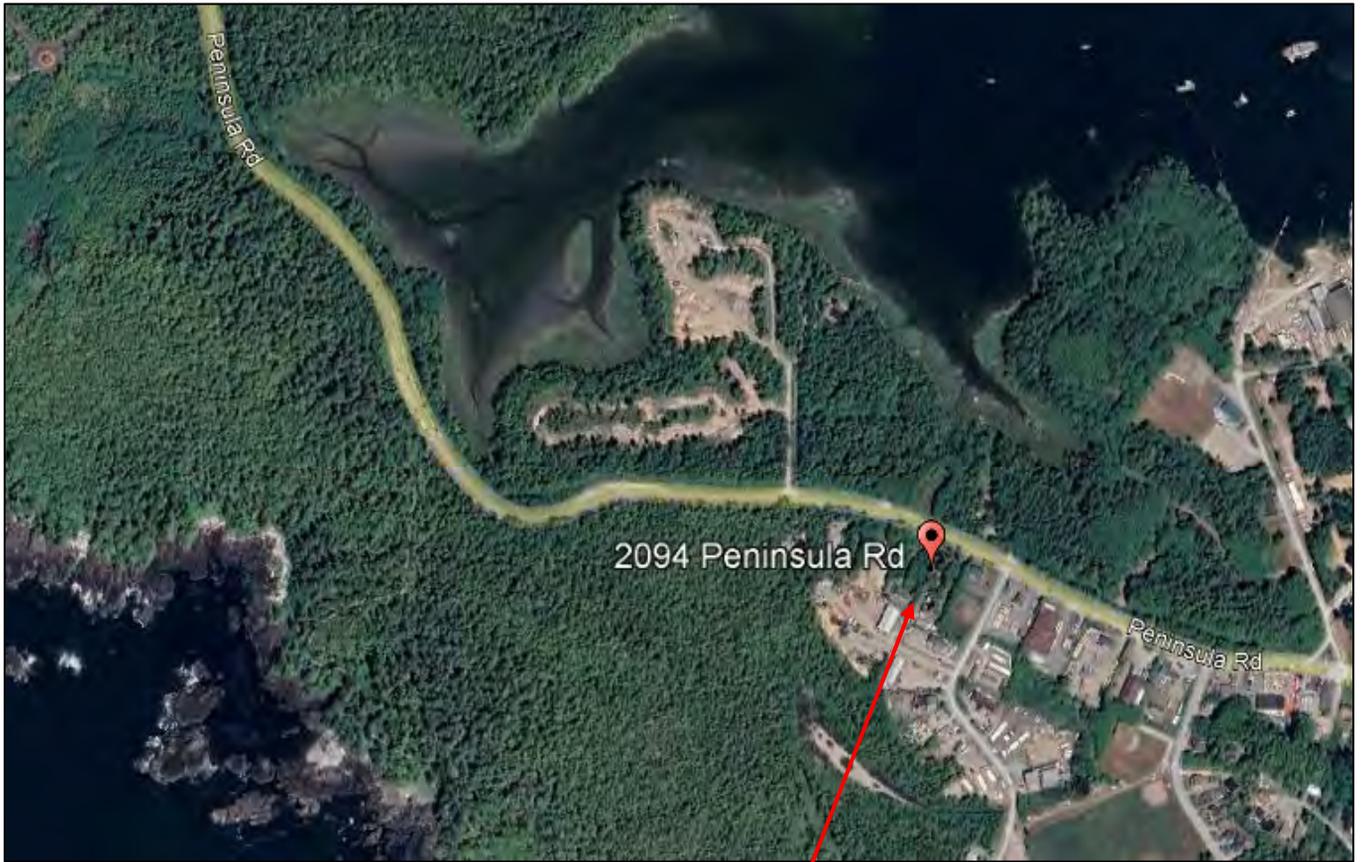


FIGURE 2
DISTRICT OF UCLUELET DPA MAP



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FIGURE 2 – DISTRICT OF UCLUELET DPA MAP
 OCP SCHEDULE 'E'



UCLUELET WATERCOURSES

1	- NOT IDENTIFIED	11	1.75m - FISH STREAM
2	0.75m - NON-FISH STREAM	12	1.25m - FISH STREAM
3	1.5m - FISH STREAM	13	1.0m - FISH STREAM
4	1.5m - FISH STREAM	14	1.0m - FISH STREAM
5	1.0m - FISH STREAM	15	- FISH STREAM
6	- NON-FISH STREAM	16	0.7m - NON-FISH STREAM
7	- NON-FISH STREAM	17	- FISH STREAM
8	- NON-FISH STREAM	18	- FISH STREAM
9	0.75m - NON-FISH STREAM	19	- NOT IDENTIFIED
10	1.5m - FISH STREAM	20	- NOT IDENTIFIED

**DISTRICT OF
UCLUELET**

Official Community Plan

SCHEDULE 'E'

**Environmental
Development Permit Areas**

Terrestrial Development Permit Area

- Wetlands
- Mature Forests
- Sensitive Ecosystems

30m Marine Shoreline Development Permit Area

- Includes 30m on Interstitial Area

30m Riparian Development Permit Area

Appendix A

APPENDIX A
SITE PHOTOGRAPHS



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APPENDIX A – SITE PHOTOGRAPHS



Photo 1: Looking south into the subject parcel from Peninsula Road.

Photo 2: Looking north down gravel driveway from within property. Dominated by dense, regenerating forest cover.



Photo 3: Existing mobile home.



Photo 4: Small mesh-covered storm drain located in northeast corner of parcel.

Photo 5: Small PVC pipe storm drain located centrally within parcel.



Photo 6: Municipal storm drain located northwest of parcel along roadside.



Photo 7: Storm water from road flows overland down this vegetated slope on the north side of Peninsula Road, and storm drains *appear* to discharge into this area.



Photo 8: Storm water manhole located on north side of Peninsula Road along vegetated slope to wetland area.



Photo 9: Storm water flows down slope into wetland area.



Photo 10: Wetland forms small channels downstream that flow towards saltmarsh.



Photo 11: One larger creek observed appears to have fish habitat and would be expected to support some salmonid species.



Photo 12: Showing channels flowing out of forest into saltmarsh (facing southwest).



Photo 13: Saltmarsh looking north into bay.

DEVELOPMENT PERMIT DP23-05

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:

Checkwitch Poiron Architects and Tectonic Management; Owner Agent (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:

2094 Peninsula Road; PID 018-743-650, Lot 7, District Lot 284, Clayoquot District, Plan VIP58757 (The "Lands").

3. This Permit authorizes the construction of a two storey, 10,774sqft, Community Use building and associated landscape and hardscape works.
4. These improvements apply only in the locations indicated, and otherwise in accordance with, the drawings and specifications attached to this Permit as **Schedule 1**.
5. This permit is subject to submission of a final landscape plan, cost estimate and deposit of 125% of the value of the proposed landscape and hardscape frontage improvements.
6. Prior to submitting a Building Permit for the proposed development, the Owner's engineer shall confirm that adequate water and sanitary sewer services are available or will be available prior to occupancy to adequately service the development on the Lands.
7. 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 and entry signage to the satisfaction of the Ministry of Transportation and Infrastructure (MoTI). The Owner is responsible for complying with any permit requirements from MoTI.
8. 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.
9. 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.
10. The Owner shall substantially commence the development within 24 months of the date of issuance, after which this permit shall be null and void.
11. This Permit is NOT a Building Permit.
12. 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 _____ day of _____, 2023.



ISSUED the day of , 2023.

Bruce Greig
Director of Community Planning

Schedule 1
(See Appendix A)



REPORT TO COUNCIL

Council Meeting: October 23rd, 2023
500 Matterson Drive, Ucluelet, BC V0R 3A0

FROM: RICK GEDDES, FIRE CHIEF **FILE No: 0810-20**
SUBJECT: FIREHALL REPLACEMENT **REPORT NO: 23- 136**
ATTACHMENT(S): APPENDIX A – FIREHALL FEASIBILITY STUDY (2022)

RECOMMENDATION(S):

THAT Council considers allocating up to \$100,000.00 to engage a consultant to provide detailed design drawings and a construction cost estimate for a new firehall in the 2024 to 2028 financial plan.

THAT Council consider including the construction cost of a new firehall in the 2024 to 2028 financial plan.

BACKGROUND:

Due to the age and condition of the firehall and emergency operations centre, we must plan for its replacement. Liberty Construction Management Inc. was previously commissioned to undertake a Firehall Feasibility Study (“the Study”). The objectives included:

- An assessment of the condition of the firehall;
- Provide a general location assessment to determine a preferred location; and
- Investigate and review the current and future needs of the fire department to determine an approximate project budget based on a basic conceptual design and requirements assessment.

The Study provided general observations and a conditions assessment of the existing facility, as well as information on the following options for an emergency services building:

- A major renovation of the current facility;
- Tear-down and rebuild on the present site; and
- New construction on an alternate site.

The Study notes that, “the existing firehall is rapidly deteriorating and is no longer capable of meeting the minimum service requirements for public safety” and that, “The community has an immediate need for an aerial apparatus however, an aerial apparatus will not fit in the existing firehall.”

The Study did provide conceptual drawings based on a space needs assessment including a conceptual site plan. These conceptual drawings show the minimum size that a potential new facility should be to adequately serve the District while allowing for future growth.

Some other areas of concern noted in the Study include the following:

- Numerous building code, life safety, and occupancy access and egress issues are observed.
- The building does not have an adequate diesel particulate exhaust ventilation system. Exposure to diesel exhaust emissions increase the frequency of cancer.
- Firefighter turnout gear should be stored in a separate room, away from apparatus exhaust. The present layout does not allow for this.
- There is no clean room for self-contained breathing apparatus.
- The existing washroom does not serve as an adequate decontamination shower.
- The vinyl cladding has surpassed its life cycle and needs to be replaced.
- The second-level exterior exit staircase poses a significant safety hazard and should not be used. (Initial planning for replacement has begun).
- Due to the materials and, methodology used in construction.... The yearly operating costs are excessively high.
- The interior stair width, rise and run, and headroom dimensions are not compliant with the BC Building Code (2018).
- The airspace above the apparatus bay ceiling may allow for vehicle exhaust gases to collect.
- The (second story) beam to floor system bearing is not adequate and is not seismically tied or braced.
- The building lacks required wall, floor, and opening fire ratings and separation between building component and occupancy types.
- The main floor electrical systems are exposed along the apparatus bay walls.
- The main floor drain system is not adequate.
- The apparatus bays are too small to accommodate proper separation of rooms from the apparatus.
- The absence of a fire suppression system and wall / floor fire ratings poses a high fire hazard risk to the entire facility.
- The functional components of this building contain numerous personnel safety issues such as inadequate vehicle exhaust extraction.

As well as the above-noted safety and code compliance issues, there are numerous other issues with the current facility including:

- Due to outdated construction practices, thermoregulation is challenging at best. In the warm months, the upstairs temperature is often unbearable and not conducive to a productive work area.
- In the winter, the opposite occurs, often a jacket is required to maintain a comfortable temperature.
- Storage space is inadequate.
- There is no private office space for the newly hired Deputy Fire Chief. A space for confidential meetings and storage of personal records is required.

- The fire department’s training capabilities are severely hampered due to the lack of adequate space at the present facility.

A modern firehall would align with following objectives of the District of Ucluelet’s Official Community Plan (OCP):

- Part 3, Objective 3B states, “Increase community capacity to respond to emergencies.”
- Policy 3.3 of the OCP states, “Provide emergency services facilities, equipment and resources that are adequate and affordable for the size of the local and visitor populations.”
- Policy 3.4 states, “Identify and prioritise any infrastructure gaps which could affect the ability to respond to emergencies.”
- Objective 3C states, “Ensure all buildings within the municipality meet the minimum health and safety standards set by the BC Building Code to ensure they are safe for their intended use.”
- Objective 3D states, “Ensure the use of land and buildings within the municipality complies with provincial and municipal standards, in order to lower risks to the community, protect the environment and ensure the safety of first responders.”

The findings were presented to the previous Council in 2022. In June of 2022, a grant funding stream for firehall replacement became available. Council supported the application for the funding but the District was not successful in its application. We will continue to seek grant opportunities to assist in funding a new facility although opportunities such as this are rare, and we must proceed forward under the assumption that no grant funding is available. At that time, Council did not provide additional direction on a path forward for firehall replacement.

As part of Councils 2023 Strategic Priorities a plan for the firehall replacement was a top priority for the Fire and Emergency Services Department.

ANALYSIS OF OPTIONS:

The first step in the replacement of the firehall is to engage a consultant to provide detailed design drawings and a construction cost estimate for a new post-disaster firehall. If supported, consultant costs will be included in the 2024 budget for Council’s consideration.

A new facility will provide for the long-term safety of our residents and visitors, while providing a safer workplace for employees and volunteers. In the long-term, a new facility will also aid in the recruitment and retention of firefighters.

If future grants become available, a completed design will improve the District’s chance of success in the application process. Additionally, the District will be able to have conversations with the ACRD and UFN with respect to possible cost sharing or contribution agreements. Currently the District’s fire service agreements do not address future capital investments required to maintain an active fire department. Some potential sources of funding for the planning of a new facility include Barkley Community Forest funds, Canada Community Building Fund (formerly known as Gas Tax), or through taxation.

Although capital and maintenance investments into the firehall may extend the life of the facility, operational and maintenance costs will continue to escalate. Deferring the replacement of the firehall will result in increased investments into the facility and escalating costs for the future replacement of the building.

The existing facility does not meet post-disaster construction standards. There is a high probability that in the event of a moderate to major earthquake that the facility would not survive, resulting in the inability of the District to provide emergency response.

Fire Underwriters is a national organization that provides data on public fire protection to insurance companies. Insurance grades are then created based on this data. Grades are based on several things such as community fire risk, the fire department (including type and number of apparatus, pumping capacity, condition, and age of apparatus), water supply and communications.

Fire Underwriters states that, “Response areas with five buildings that are 3 stories or more in height, or districts that have a basic fire flow greater than 3 300 gallons per minute, or any combination of these criteria, should have a ladder company”.

Within the District, we currently have at least thirteen structures that fit into the category of “3 stories or more or fire flow requirement of 3 300 gallons per minute”. More buildings in this category are in the planning stages ie: the Lot 16 apartments, Whiskey Landing Phase 2, and the proposed health centre.

The District of Ucluelet has traditionally relied on the response of Tofino’s aerial apparatus. This arrangement is not ideal in that it takes approximately one hour from the time of call-out to arrival on scene. With today’s open concept construction, having apparatus arrive an hour after call-out typically will have no benefit to fire suppression. Tofino’s aerial apparatus has a limited reach of stream (65 ft. in height) and is therefore not ideal for the larger buildings that have been built in Ucluelet.

Besides the fact that an aerial apparatus should help improve our insurance grade and thus rates, there are many other benefits to having one. Aerial apparatus are beneficial for rescuing people above the reach of ground ladders, providing elevated water streams for suppression, and providing horizontal reach to buildings where road access and terrain create problems (ie: Water’s Edge). Aerial apparatus are expensive and should be planned for within the capital replacement plan. Port Alberni recently purchased a 30-metre platform apparatus for \$1.8 million.

A	Allocate funds for firehall design, budget, and firehall replacement	<u>Pros</u>	<ul style="list-style-type: none"> • This will prepare the District to formally move forward with facility replacement. • This will align with the Official Community Plan’s objectives. • This will align with Council’s 2023 Strategic Priorities Summary.
		<u>Cons</u>	<ul style="list-style-type: none"> • The present facility will require repairs and / or renovations in the meantime. The cost vs. benefit of this must be considered.
		<u>Implications</u>	<ul style="list-style-type: none"> • The longer that repair / renovation / replacement is delayed, the more expensive it will be. • The District will need to borrow capital to facilitate the replacement of the firehall which will require approval of the electors.

B		<ul style="list-style-type: none"> The cost of a new facility is estimated at \$8 million.
	<u>Pros</u>	<ul style="list-style-type: none"> None identified. Lower capital investments.
	<u>Cons</u>	<ul style="list-style-type: none"> The current firehall will most likely not withstand a seismic event of any significance. This could render the District incapable of responding to an incident. The current firehall will continue to deteriorate with increased maintenance and operational costs. Fire department membership may be impacted. Insurance rates will show a significant increase due to the lack of an aerial apparatus because the present facility does not have space to store one.
	<u>Implications</u>	<ul style="list-style-type: none"> The longer that repair / renovation / replacement is delayed, the more expensive it will be. Operating and maintenance costs will continue to rise.
	<u>Suggested Motion</u>	No motion is required.

NEXT STEPS:

- If approved, funding to develop detailed design drawings will be included in the 2024 financial plan and replacement of the firehall will be included in the 2024-2028 financial plan.
- A request for proposal for detailed design drawings and construction costs will then be advertised in 2024.

Respectfully submitted: Rick Geddes, Fire Chief
 Duane Lawrence, CAO

DISTRICT OF UCLUELET

Fire Hall Feasibility Study

Re: Ucluelet Fire Hall - New Construction
Or Addition & Renovation Project Planning

January, 2022

Attention: Rick Geddes, Fire Chief

Liberty Contract Management Inc.

Primary Contact:

Scott Zukiwsky
Vice President

E scott@lcmconstruction.ca
T (604) 534.3412

Secondary Contact:

Todd Zukiwsky
Pre-Construction Manager

E todd@lcmconstruction.ca
T (604) 534.3412

www.libertyconstructiongroup.ca
#316 - 19292 60th Avenue, Surrey BC, V3S 3M2

Instagram: @libertyconstructiongroup





Ucluelet Fire Hall Feasibility Study Submission

1.0

Introduction & Executive Summary



ISSUED FOR REVIEW R3 - JANUARY 2022

RE: FEASIBILITY STUDY

UCLUELET FIRE RESCUE FACILITY UPGRADES

FIRE HALL NEW CONSTRUCTION OR ADDITION & RENOVATION

Attention: Fire Chief Rick Geddes, Council/ Study Review Committee, Et.: All,

INTRODUCTION

Liberty Construction Group (Liberty) was referred to complete a needs assessment of the Ucluelet Fire Rescue Service which has served the community since 1949. Liberty was asked to prepare a feasibility study report for the District of Ucluelet's Council review.

Liberty has completed over 20 Public Safety building facilities with involvement in all aspects of design and construction and has programs for integrated design and construction assistance. Liberty utilizes the professional experience and expertise of its team along with the guidance and input from registered professionals such as Architects and Engineers to guide stakeholders through the early stages of a project to the completion of construction.

By the request of The District of Ucluelet and Rick Geddes, Fire Chief of The Ucluelet Fire Rescue, Liberty was engaged to conduct a fire services building feasibility and options study for their service area. The study would mainly serve as an investigation of the existing Ucluelet Fire Rescue facility to determine any immediate or future upgrade requirements. This study should assist the District of Ucluelet with future emergency services planning through a review of the options contained herein.

The study would be completed through a program of interviews (in person and virtual), in person site evaluations, and a building condition assessment. The specific needs and best practices of the Ucluelet Fire Department would be reviewed according to information provided by the Fire Chief and his emergency services experience. Liberty's Public Safety knowledge and expertise would be utilized for data collection and recommendations. A meeting would be conducted with the District planning department to gather information and context regarding the District's community building and disaster preparedness plans.

Liberty Construction Group would like to acknowledge the collaboration work of Fire Chief Rick Geddes which aided in the preparation of this study.

See Executive Summary on next page.



EXECUTIVE SUMMARY

In order to provide a thorough and accurate study of the existing Ucluelet Fire Rescue facility, Liberty team personnel conducted in person reviews of the community, site, existing building, as well as alternate siting options. This in person review along with remote planning meetings provided multiple points of data for review. Factors reviewed focused on:

The Building

- Safety of the structure (post-disaster operations requirements)
- Current and future personnel requirements
- Protection of High Occupancy/ Medium-High Risk Buildings (multi-storey buildings)
- Incident Response (facility function to and from an emergency call)
- Community Cost Impact

The Site

- Disaster zone
- Location (access/egress and response time to an emergency call)
- Population (current and future community growth plans and requirements)
- Capabilities for on-site training purposes
- Capabilities for expansion
- Community cost impact
- Access to utilities

This feasibility study contains overall observations and a conditions assessment of the existing Fire Hall facility. This study also includes addition and renovation or new construction preliminary budgets, department space planning and design requirements, conceptual design options, a preliminary construction schedule, and a summary review of the studied alternate siting options for the Fire Hall location.

The above items have been prepared based on parameters provided by Fire Chief Rick Geddes. The needs of the Ucluelet Fire Department are to have a 10,000 s.f. (929 m²) facility for 24-26 volunteers plus 1-2 full-time personnel (Fire Chief/ Deputy Chief). This includes capacity for interior and exterior training, Emergency Operations, and possibly the integration of the Ucluelet Ambulance Service.

While the options for an addition and renovation or new construction project with various location options have been presented within this study, the final site and construction type should be determined based on factors identified in this study by the Fire Department (i.e. functional programming requirements), with consideration of the current and future needs of the community.

The findings (feasibility review and recommendations sections) of this study and subsequent report indicate that the existing lot and Tugwell site could accommodate a 10,000 s.f. (929 m²) Fire Hall for a budget of approximately \$5M. It is anticipated that the information contained in this study may be used to pursue project funding or proceed through an 'AAP'.



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Appendix A Documents - Existing Conditions Photo Report

Appendix B Documents - Alternate Site Considerations

Appendix C Documents - BC Emergency Health Services

Fort Langley Fire Hall, Langley BC - New Fire Hall Project

2.0

Background

The existing Ucluelet Fire Rescue Facility is the only Fire Service Operations Facility servicing The District of Ucluelet. The next closest Fire Service Operations Facility is in Tofino. The Ucluelet Fire Brigade has been serving a population of 1,717 (2016 survey statistics). To support a 1.5-2% year over year population growth in the District of Ucluelet and surrounding community, it has been noted that the existing Fire Hall Facility is rapidly deteriorating and is no longer capable of meeting the minimum service requirements for public safety. The 48+ year old facility has received three additions, renovations, and patchwork upgrades through its building lifespan. These addition and renovation projects have increased the Fire Hall capacity with the ability to house a third truck (apparatus bay added). The community has an immediate need for an aerial apparatus to service in town multi-storey commercial/ residential structures. However, an aerial apparatus will not fit in the existing Fire Hall.

Despite minor upgrades and repairs, the existing building has not been brought to a point where the building is BC Building Code 2018 (current building code) compliant. As it is, the building will not sustain future community growth or increased service demands during tourism seasons where the District population swells and emergency service needs increase exponentially.

Natural disasters including earthquakes, tsunamis, and wildfires are a growing concern due to global climate change which is affecting Vancouver Island. The District of Ucluelet is situated within an earthquake/ tsunami hazard zone. In recent years, the Fire Chief has assisted with some wildfire fighting services. Disaster and emergency services have been operating from a Fire Hall Facility that does not meet minimum post-disaster requirements. Therefore, emergency operations and the function of the Fire Department may be severely affected in the event of a natural disaster.

It has been noted that as part of an emergency preparedness plan, the District of Ucluelet needs a post-disaster Emergency Operations Center. A fully upgraded Fire Hall Facility through a major addition and renovation project or new build would accomplish this requirement with the added ability to on-board and train additional Department members (volunteers), and increase the overall allowable building occupancy when needed to serve as an official Emergency Operations Center (EOC).

3.0

Objectives

The primary objective of this study is to benefit The District of Ucluelet with an enhanced planning strategy in terms of required current and future Fire Hall Facility improvements that would increase Emergency Fire Service training and response capabilities in the community. Primary objective ex:

- Provide a general location assessment to determine a preferred location.
- Investigate and review the current and future needs of the Fire Department to determine an approximate project budget based on a basic conceptual design and requirements assessment.

The District owns multiple portions of land and needs a new post-disaster Fire Hall that will also serve as an Emergency Operations Facility. Since the District does not know the cost implications or best Fire Hall location within the community, the overall objective of this feasibility study will be to review a set of options and guide the District through these options and costs of a major Fire Hall Facility addition and renovation or new build project to meet the current and future needs of the region. Although the needs for Fire Hall upgrades are immediate, the goal of this study is to assist the District in planning for when the community may be able to financially support a project of this size and nature (i.e. within 2, 5, or 10 years) from planning through to construction completion.



CONSTRUCTION GROUP

4.0

EXISTING CONDITIONS

OBSERVATIONS

The District of Ucluelet presents itself as a trendy fishing village set on the edge of Vancouver Island's West Coast setting where the ocean, mountains, and forests meet. The surrounding community appears to be a pleasant mix of established community areas and new growth. The demographic appears to support both an older community as well as a growing youthful/ family oriented, trendy/ artistic culture.

EXISTING SITE ACCESS AND EGRESS

The existing Fire Hall located at 1520 Peninsula Road is accessed by one formal concrete driveway apron directly from the District's main thoroughfare. Additional gravel parking and training area is also accessible adjacent the main apron.

The site access is not formally delineated from the road or sidewalks by any sort of concrete letdown or curb. The road and sidewalk allowance are delineated by painted white lines along the main concrete apron street frontage.

While the existing Fire Hall site has good roadway frontage, all emergency vehicles access and exit the site via the main front apron onto Peninsula Road. Upon return, emergency vehicles must reverse into the facility.

No major elevation change, slope differential, or other grading challenge is observed from the roadway to the site. The generally flat, level site poses no emergency vehicle approach, departure, or break over angle issue.

ROADWAY LIMITATIONS AND HAZARDS

When responding to emergency call-outs, Fire Department vehicles must approach and enter uncontrolled pedestrian walking lanes and vehicular north/ southbound traffic lanes. Upon return from emergency call-outs, Fire Department vehicles must obstruct traffic lanes for a period of time while reversing to park vehicle within the facility.

Pedestrian and passenger vehicle traffic in the area increases during school drop-off and pick-up hours particularly at the intersection of Peninsula Road and Matterson Drive where the Ucluelet Secondary School's new driveway access is being placed.



SITE SERVICES

The existing facility is fully serviced. It is assumed that no major infrastructure upgrades would be required to support a new facility.

Electrical - overhead connection available at site.

Water/ fire suppression - The existing facility is not sprinklered. Water pressure investigation (testing) is required for sprinkler design adequacy. Water service connection available at site.

Sewer - connection available at site.

Storm service - some perimeter drainage connections are observed available at site. Improvements are required for adequate site storm water management. Some downspouts surface drain onto concrete splash pads. On site storm water management solutions may be desired to limit burden on the municipal system.

NOISE AND LIGHT POLLUTION

The building demographic in the area along Peninsula Road and Matterson Drive appears to be low to high occupancy buildings being occupied during day, evening, and nighttime hours.



CONSTRUCTION GROUP

4.0

EXISTING CONDITIONS

OBSERVATIONS



Although the site neighbours are accustomed to the Fire Hall and its operations, noise and light pollution does pose an audible and visual distraction from the window site lines of the adjacent school (USS). Emergency vehicle lights and sirens would also continue to disturb residential neighbours at this site location.

THE SITE

The existing Fire Hall lot sits directly adjacent to The Francis Boutique Inn to the North (separated by trees, other foliage, and an elevation difference) and a re-purposed community recreation building known as the Ucluelet Athletic Club (UAC), to the south (with no lot separation).

The overall site is good and is relatively flat from a constructibility perspective and the site location itself is fairly central in the surrounding developed area allowing for reasonable emergency response times.

The site sub-grade and soils below is assumed conducive to building. However, there is concern as much surface concrete cracking and deterioration is observed. The Fire Chief reported that the North parking area is not usable during wet winter months due to soft soils and frost heaving. Geotechnical investigation of the site should be conducted and/ or updated to determine structural requirements. The site grading may require minimal

adjustment to create a positive slope at Peninsula, however the impacts of grade changes need to be reviewed for any adverse affects to the neighbouring properties.

The current site does not provide adequate space for on site truck turning, parking, and training. The Ucluelet Athletic Club (UAC) building appears to be in the same or worse condition compared to the Fire Hall. The UAC site would provide optimal space for building expansion. Acquisition and use of this lot in combination with the existing Fire Hall lot would ensure adequate lot space for an addition and renovation or new build project that includes the capability for drive through apparatus bays, on site truck turning, parking, and training.

Future expansion may be accommodated but may require tree removal and installation of a retaining wall along the North property line.

The site currently has limited signage or fencing for safety and security. Pedestrians and vehicles may be kept off site with the addition of property line fencing as well as soft and hard landscaping along street frontages.

FUTURE FLOOD/ TSUNAMI HAZARD IMPACT POTENTIAL

The existing site is well outside of the 'Tsunami Flood Hazard Zone'



4.0

EXISTING CONDITIONS

OBSERVATIONS

(studied and identified by others) and could be recommended as an acceptable post-disaster Fire Hall or Emergency Response Facility location.

THE EXISTING FACILITY

See Appendix A - Existing Conditions Photo Report

Building Envelope

The general condition and layers of additions to the original building create an aesthetic that is due for refreshment and modernization.

The complete building envelope including the roofing appears to show significant signs of weathering and deterioration. The exterior cladding, fascias, doors, and windows no longer appear to provide proper weather protection. The building envelope shows signs of water penetration, air tightness, and thermal performance issues. Construction design and detail issues are evident around window and door headers and jambs. Signs of rot and deterioration are observed behind vinyl wall cladding and at wood door jambs. It appears that the exterior weather barrier behind the cladding has deteriorated and/ or is missing in multiple areas causing failure and rot to the exterior plywood wall sheathing.

The vinyl cladding itself has surpassed the end of its life-cycle and performance capabilities and needs to be replaced. Cladding for this type of facility should be highly durable, low maintenance, and composed of a non-combustible material.

The overhead doors are sufficient for emergency vehicle access and egress, however they are undersized compared to current minimum Fire Department dimensions for vehicular access and egress and are more suited to a residential garage or shop space.

The second level exterior exit stairs pose a significant safety hazard and emergency egress concern and should not be used.

The overall building mounted site lighting appears to be inadequate and poses a safety and site functionality concern.

It is assumed that due to the materials and methodology used in construction of the existing facility, (i.e. the 2x4 vs. 2x6 exterior walls only allow for R12 vs. R20 insulation) the yearly building operating costs are high. Improved foundation, floor, wall, and mechanical systems could greatly reduce yearly expenses while providing better occupant comfort and a 'greener' building footprint.

Building Interior

Architectural design, layout and aesthetic - The overall building interior is observed to be an outdated patchwork of materials and additions and renovations. The facility no longer has an adequate layout to function and flow as an Emergency Response Facility. The interior layout needs a complete redesign.

Numerous building code, life safety, and occupancy access and egress issues are observed. Presence of hazardous materials such as asbestos or mold is assumed but cannot be confirmed without further testing.

Main Floor Level:

Access, egress and security - The main entry door is accessed by a key pad and handle lock-set and does not have any emergency exiting panic hardware device.

The hallway wood stairs leading to the second level rooms have adequate tread nosing and each step is marked by a yellow strip. The stair width, rise and run, and headroom dimensions are not to code. Handrails do occupy both sides of the stairwell which is acceptable but not necessary for this stair width.

The main floor finish is concrete which shows signs of patchwork, stains, and discolouration. A concrete seal coat does not appear to be present.

The main floor wall finishes are a patchwork of materials such as OSB plywood which is not suitable as a finish material and does not provide a pleasing and cohesive interior aesthetic.

The main floor ceiling finish is generally acoustic ceiling tile which is suspended by a t-bar grid system. This ceiling finish is enclosing the underside of the floor structure with a few inches of open air space. The ceiling finish does not appear to be seismically restrained. The airspace above the ceiling finish may also allow for vehicle exhaust gases to collect without the ability to freely clear the interior airspace. The air is partially cleaned with a centrally located vehicle exhaust air scrubber.

Structure - The exterior main and upper floor walls appear to be 2x4 wood studs. The second floor appears to be supported by a dimensional wood floor system with no visible engineered wood or steel supporting beams (visible beam members are multi-ply built up beams with an unknown fastening pattern). While the general condition of the wood floor joists appears to be good, the structural acceptability cannot be verified.

The supporting interior column structure is comprised of rough-sawn wood columns. The structural acceptability cannot be verified. It also appears that the beam to floor system bearing is not adequate and is not seismically tied or braced for adequate shear resistance.



4.0

EXISTING CONDITIONS

OBSERVATIONS

Fire Ratings - There is no underside of floor structure fire-rating. The building itself lacks required wall, floor, and opening fire ratings and separations between building components and occupancy groups.

The main floor electrical systems are generally exposed along the apparatus bay walls. Some of the wiring is protected by metal conduit. Based on existing conditions, it is assumed that electrical systems upgrades are required to bring the facility up to current building codes.

The main floor mechanical and floor drain system in the apparatus bays is not adequate. Based on existing conditions, it is assumed that mechanical systems upgrades are required to bring the facility up to current building codes.

The main floor interior space is extremely limited and does not provide adequate storage space for Fire Department gear and equipment. Storage is observed lining walls along side of apparatus vehicles, limiting overall function and personnel movement through the Fire Hall. Increased storage space that is properly designated is required.

The main floor apparatus bays are too small to accommodate proper separation of rooms from the trucks. The Fire Hall does not have a workshop or clean room which is required for SCBA purposes. Further layout adjustments are required to provide a proper decontamination washroom/ shower room in the apparatus bays. The existing washroom/ shower room does not serve as an adequate decontamination shower.

There is no space for wildfire gear or additional rescue equipment. Additional space that is organized and readily available during wildfire season is needed.

The EOC/ Radio Room is completely separated from the second floor administration areas of the Fire Hall. In the event of a disaster, this small room will not provide easy and adequate communication with a team of personnel.

Second Floor Level:

Access, egress and security - interior stairwell and exterior exit (not fit for use).

The main interior stairs open to what is currently the training/ EOC or multi-purpose room with single use men's and women's washrooms, a small kitchen, pantry, and storage room.

The existing training room is set up for 18 people. While the set up is functional and generally acceptable, the fire department requires a training room for 24-30 occupants plus open space for demonstrations and in classroom training exercises. The existing training room does not have occupancy space for use as an EOC if required.

The second floor layout is not conducive to the fire department's needs. Administrative areas such as the gym, desk work stations, and radio/ communications rooms are completely separated on the main level with no quick or easy access.

The interior walls are generally clad with outdated materials. Failures in the wall systems are observed. It is assumed that the wall vapour barrier, insulation, and weather barriers are failing.

The interior is clean and appears to be maintained to the best degree possible. However, storage room and organization for the pantry and the kitchen area storage room is needed. The washrooms also require reconfiguration according to today's standards to properly accommodate 24-30 people.

TOP EXISTING BUILDING CODE/ HEALTH & SAFETY ISSUES:

- **Public access** - this facility does not provide required public/ community accessibility to administrative offices or accessible washrooms. The public requires parking and building access for various needs. The existing site provides no public visitor parking stalls and the uneven ground and cracked concrete apron poses trip and fall issues to the public and Fire Hall users.
- **Occupant life safety** - this facility lacks required fire separations and emergency exits. The absence of a fire suppression system and wall/ floor fire-ratings between the apparatus bays/ storage rooms poses a high fire hazard risk to the entire facility.
- **Work Safe BC** - the functional components of this building (apparatus bays, gear room, storage, etc.) contain numerous personnel safety issues including:
 - Inadequate vehicle exhaust ventilation
 - Inadequate hazardous materials storage
 - Small space storage issues
- **Post-disaster requirements** - it is generally noted that this building may not withstand an earthquake event. The operation of the Fire Hall may be severely limited in the event of a partial or complete building failure.



5.0

OVERALL METHODOLOGY

APPROACH

The Municipality of Ucluelet has a current need to explore options for a new or upgraded Fire Hall and Emergency Operations Center.

Three options were reviewed and are being presented in this report. The three options considered are as follows:

1. Demolition of existing Fire Hall located at 1520 Peninsula Rd and construction of a new Fire Hall and Emergency Operations Center located on the same site.
2. Addition and renovation to the existing Fire Hall located at 1520 Peninsula Rd.
3. New construction of a Fire Hall and Emergency Operations Center at the Tugwell site located off Forbes Rd.

The following eight steps were taken in the preparation of this report:

STEP 1 – PRELIMINARY INFORMATION GATHERING

Scott Zukiwsky and Todd Zukiwsky of Liberty held a series of virtual meetings with Fire Chief Rick Geddes of Ucluelet to gain an understanding of project background and determine project objectives.

STEP 2 – SPACE NEEDS ASSESSMENT

In this step a series of meetings were conducted in order to begin the preliminary stages for a needs assessment. An architectural space program was created. The space program outlined the spaces required for the Fire Hall and organized them into sizes, shapes and groupings. This exercise was done to determine a reference point for a potential building area and massing.

This program was used when determining the feasibility of fitting a new Fire Hall onto the existing site or onto the Tugwell site. It was also used to determine whether or not an addition and renovation to the existing Fire Hall would be possible.

See: 7.1 Functional Programming – ADD and RENO
 7.1 Functional Programming – NEW BUILD

STEP 3 – EXISTING CONDITIONS ASSESSMENT

Scott and Todd of Liberty visited Ucluelet to conduct an existing building evaluation, existing site evaluation, and site evaluations of the Tugwell option.



5.0

OVERALL METHODOLOGY

APPROACH

STEP 3A – EXISTING BUILDING REVIEW

A review of the existing building was undertaken to determine if the existing building was in need of replacement in the relatively near future (3-5 years).

The following areas were reviewed:

- Building structure
 1. Interior and exterior wall construction
 2. Floor joist inspection
 3. Structural beams and columns inspections
 4. Shear wall locating
 5. Foundation review
 6. Seismic capabilities were considered
- Building layout for functionality and future growth (reviewed in comparison with known min. requirements, i.e. to fit an aerial apparatus in the truck bays)
 1. Existing building was measured for interior dimensions of all rooms and spaces
 2. Sketches were made showing actual room layouts and sizing in plan view
 3. An existing main floor plan was generated
 4. An existing second floor plan was generated
 5. Existing access and egress were reviewed
 6. Basic code compliance issues were reviewed
 7. Review for safety hazards and/or safety concerns
- Building envelope
 1. Existing roofing was reviewed
 2. Existing building cladding was reviewed
 3. Windows were reviewed
 4. Exterior doors were reviewed
 5. Overhead doors were reviewed



5.0

OVERALL METHODOLOGY

APPROACH

6. Flashings and miscellaneous penetrations were reviewed
7. Fascias were reviewed
8. Gutters and downspouts were reviewed

See: 6.0 Feasibility Review
Appendix A – Existing Conditions Photos Report

STEP 3B – EXISTING SITE REVIEW

A review of the existing site was undertaken to determine if it would be feasible to renovate and add an addition to the existing building or construct a new building on the existing site.

Considerations were reviewed for the following:

- Size and shape of the existing site
- Topography of the existing site
- Roads and intersections at the existing site

See: 7.2 Conceptual Design Options 1 and 2

The following items were not a part of this investigation:

- Traffic studies
- Geotechnical investigations
- Environmental investigations
- Response time calculations
- Tsunami flood zone considerations



5.0

OVERALL METHODOLOGY

APPROACH

STEP 3C – TUGWELL SITE REVIEW

A review of the Tugwell site was undertaken to determine if it would be feasible to construct a new building at Tugwell.

Considerations were reviewed for the following:

- Size and shape of the existing site
- Topography of the existing site
- Roads and intersections at the existing site

See: 7.2 Conceptual Design Options 1 and 2

The following items were not a part of this investigation:

- Traffic studies
- Geotechnical investigations
- Environmental investigations
- Response time calculations
- Tsunami flood zone considerations

STEP 4 – CONCEPTUAL DESIGN

Information from the preliminary space program and the site investigation was then used to prepare conceptual design blocks to show potential layout and massing of the 3 options as per the project objectives.

Potential block layouts were prepared for the – existing site “new construction”, existing site “addition and renovation”, and the Tugwell site “new construction”.

See: 7.2 Conceptual Design



5.0

OVERALL METHODOLOGY

APPROACH

STEP 5 – CONCEPTUAL BUDGETING

The information gathered from the site investigation and the conceptual planning was then used to prepare a series of “Class D” project budgets.

Potential budgets were prepared for the – existing site “new construction”, existing site “addition and renovation”, and the Tugwell site “new construction”.

See: 6.1 Budgetary Opt.1 ADD & RENO EXISTING SITE
 6.2 Budgetary Opt.2 NEW BUILD EXISTING SITE
 Appendix B.1 Budgetary Opt.3 NEW BUILD TUGWELL SITE

STEP 6 – POTENTIAL BASELINE SCHEDULE

A procedure and step review was done in order to illustrate the potential next steps to the process of commencing a project. Potential timelines were considered for each step in this process. The items considered were not meant to be an exhaustive list but to give an idea of the overall activities and how they could potentially fall in order.

See: 8.0 Ucluelet FH Reference Schedule



The above photo (left) showcases an example of temporary fire department emergency operations facilities in place during construction of a new facility.

The above photo (right) showcases an example of locally produced custom turnout gear millwork racking aiding in the support of local economics.

6.0

FEASIBILITY REVIEW

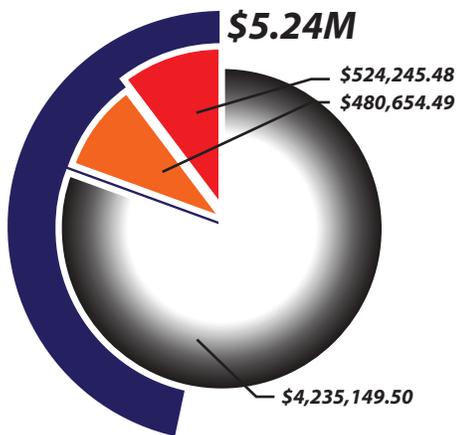


CONSTRUCTION GROUP

POTENTIAL FOR ADDITION & RENOVATION VS. NEW CONSTRUCTION

Ucluelet Fire Hall New Construction or Addition & Renovation							
PROJECT FEASIBILITY REVIEW	BUILD OPTION	MINIMUM DESIGN REQUIREMENTS MET	POST DISASTER DESIGN	LOT ADJUSTMENT REQUIRED	ADEQUATE ON SITE TRAINING	ADEQUATE APPARATUS HOUSING	FUTURE PROOF DESIGN
	OPTION 1	✓	✓			✓	✓
	ADDITION & RENOVATION EXISTING LOT	✓	✓			✓	✓
	OPTION 2	✓	✓	✓	✓	✓	✓
	NEW CONSTRUCTION EXISTING - COMBINED LOT	✓	✓	✓	✓	✓	✓
	OPTION 3	✓	✓	✓	✓	✓	✓
	NEW CONSTRUCTION ALTERNATE SITE	✓	✓	✓	✓	✓	✓

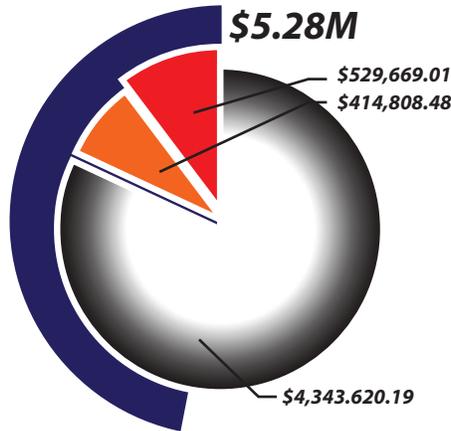
OPTION 1
ADDITION & RENOVATION
EXISTING LOT LOCATION



- PROJECT TOTAL COST
- TOTAL PROJECT SOFT COST
- TOTAL PROJECT OTHER COST
- TOTAL CONSTRUCTION COST

FEASIBLE OPTION

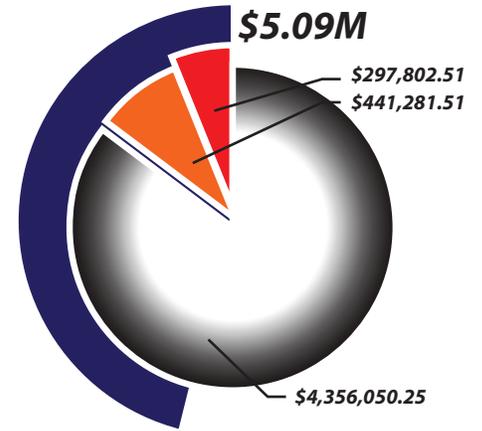
OPTION 2
NEW CONSTRUCTION
EXISTING LOCATION
COMBINED LOTS



- PROJECT TOTAL COST
- TOTAL PROJECT SOFT COST
- TOTAL PROJECT OTHER COST
- TOTAL CONSTRUCTION COST

PREFERRED OPTION

OPTION 3
NEW CONSTRUCTION
ALTERNATE LOCATION
TUGWELL SITE



- PROJECT TOTAL COST
- TOTAL PROJECT SOFT COST
- TOTAL PROJECT OTHER COST
- TOTAL CONSTRUCTION COST

GOOD OPTION



6.0

FEASIBILITY REVIEW

POTENTIAL FOR AN ADDITION & RENOVATION VS. NEW CONSTRUCTION FIRE HALL PROJECT

This report will demonstrate that it could be possible to achieve the following options for a new Fire Hall in Ucluelet.

1. An addition and renovation would likely be achievable at the existing Fire Hall site location.
2. Construction of a new Fire Hall would likely be achievable at the existing site location.
3. Construction of a new Fire Hall would likely be achievable at the alternate site location, Tugwell Site.

All 3 options appear to have similar budgets in the range of approximately five million dollars (\$5.09M - \$5.28M).

See:

- 6.1 Budgetary Opt.1 ADD & RENO EXISTING SITE
- 6.2 Budgetary Opt.2 NEW BUILD EXISTING SITE
- Appendix B.1 Budgetary Opt.3 NEW BUILD TUGWELL SITE

One conceptual schedule was produced as it is believed in the preparation of this report that all projects could be achieved in the same approximate time frame.

ADDITION AND RENOVATION – EXISTING LOCATION

An addition and renovation could potentially be achieved at the existing location. A layout was prepared showing that five back in apparatus bays may be achievable with an addition and renovation.

The observations will show that the existing building would require extensive renovations as there would be several areas of change necessary including:

- Extensive structural upgrades to achieve seismic capabilities
 1. Foundation
 2. Walls
 3. Floor and roof systems
 4. Shear strength upgrades
- Architectural layout and sizing upgrades to bring the existing areas up to code
- Full building envelope replacement
 1. Complete roof replacement
 2. Complete exterior cladding replacement



6.0

FEASIBILITY REVIEW

- The majority of the electrical systems may need to be replaced
- The majority of the plumbing systems may need to be replaced
- The majority of the mechanical systems may need to be replaced

See: 4.0 Observations

If an addition and renovation is considered on the existing site (lot), we recommend that preparation for this work begin as soon as possible. The timeline from start of planning to the completion of construction is approximately 24 months. Since many areas of the existing building do not comply with current building code requirements (i.e. stairs, exiting, etc.), there are major risks associated with delaying facility upgrades. Risks associated with continued use of the existing facility in its current state include but are not necessarily limited to the following:

1. The existing building does not qualify as post disaster. In many areas it appears that the existing building does not have high capabilities of resisting seismic forces.
2. The existing building does not have fire suppression system.
3. The existing building does not have proper fire ratings, fire separations, or smoke separations.

- ADDITION/ RENOVATION PROS:**
- The existing site could be utilized
 - Cost may be slightly less than building new on the existing site
 - The adjacent site would not need to be utilized
 - Good access to community

- ADDITION/ RENOVATION CONS:**
- The cost is not significantly less than building new on the existing site
 - Apparatus bays would likely not be drive through bays
 - Only five apparatus bays could likely be achievable
 - Difficult to make seismic
 - More difficult to construct than the other options
 - Likely no option to add an ambulance component
 - Limited outdoor space for training. Satellite training facilities would be required.
 - Poor access to rear parking area

NEW CONSTRUCTION – EXISTING LOCATION WITH COMBINED LOTS

Construction of a new Fire Hall could potentially be achieved at the existing location. A layout was prepared showing that 6 drive-through apparatus bays may be achievable with the combination of additional lot space.

- NEW CONSTRUCTION ON EXISTING SITE PROS:**
- The existing site could be utilized
 - Six drive through apparatus bays would likely be achievable
 - New construction for longest lasting building
 - Good access to community
 - Seismic capabilities could be simply achieved
 - More options for attractive design available
 - Simpler to construct than an addition and renovation

- NEW CONSTRUCTION ON EXISTING SITE CONS:**
- Potentially highest cost option
 - To achieve six drive through bays the adjacent site would need to be utilized

If construction of a new Fire Hall on the existing site/ UAC site is considered, we also recommend that preparation for this work begin as soon as possible. The timeline from start of planning to completion of construction could take over 24 months including legal planning and demolition. With this option, consideration would have to be given to constructing temporary operations facilities for the fire department. This could be achieved in various ways. One possible option would be to erect a temporary tent structure for the apparatus bays and make use of temporary modular units for admin., turn out gear room, storage, etc.



6.0

FEASIBILITY REVIEW

NEW CONSTRUCTION AT ALTERNATE LOCATION – TUGWELL SITE

Construction of a new Fire Hall could potentially be achieved at the Tugwell location. The conceptual layout prepared for the new build option on combined lots could be applied to the Tugwell site option.

NEW CONSTRUCTION AT TUGWELL SITE PROS:

- Potentially lowest cost option
- Six drive through apparatus bays would likely be achievable
- New construction for longest lasting building
- Seismic capabilities could be simply achieved
- More options for attractive design available
- Simpler to construct than an addition and renovation
- Would not require temporary facilities during construction

NEW CONSTRUCTION AT TUGWELL SITE CONS:

- Access roads are congested
- Community access will be limited until road infrastructure is improved
- Possibly more costly hydro upgrades



If construction of a new Fire Hall at the Tugwell Fields site is considered, we also recommend that preparation for this work begin as soon as possible. Additional time for infrastructure improvements and community planning may be required for construction of a new Fire Hall at this lot location. While the existing Fire Hall may be used for a short period of time during construction as a temporary facility, consideration would have to be given as this process could take over 24 months to complete, including demolition of the existing Fire Hall and lot cleanup.

During this time, risk levels of natural disaster events in the area could increase and further threaten the building integrity. Without immediate maintenance or some sort of minor renovation, the building deterioration rate will accelerate as more time passes (particularly due to the failed building envelope). As the exterior/ interior building elements continue to age, the structural integrity of the building will become more of a risk due to various factors observed and noted herein this document. A complete building failure may lead to a non-operational Fire Department after a disaster event.

In the meantime, if no upgrades are done, the fire department will at least experience a continued increase in building operating and maintenance costs, restricted operations and training abilities, and lowered response efficiency due to constricted movement in the hall.

6.1

BUDGETARY OPT. #1

PRELIMINARY BUDGET SUMMARY**ADDITION AND RENOVATION AT EXISTING SITE**

Project: Ucluelet Fire Hall
Ucluelet , BC

TOTAL SF	10,138	COST/UNIT TOTAL	\$417.75
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(hard construction)

Date: 25-Aug-21

Notes: No escalation. Values to reflect current market conditions.

CLASS "D"

DIVISIONAL BREAKDOWN		\$/SF	TOTAL	%
0100	General Requirements	\$ 59.91	\$ 607,320.44	14.3%
0018	Site Work	\$ 37.60	\$ 381,163.46	9.0%
0300	Concrete Work	\$ 31.33	\$ 317,636.21	7.5%
	New structural, cladding, and roofing	\$ 84.93	\$ 861,005.89	20.3%
0400	Masonry	\$ 5.01	\$ 50,821.79	1.2%
0500	Metals	\$ 2.26	\$ 22,869.81	0.5%
0600	Wood & Plastics	\$ 16.67	\$ 168,982.47	4.0%
0700	Thermal & Moisture Protection	\$ 2.92	\$ 29,646.05	0.7%
0800	Doors & Windows	\$ 22.31	\$ 226,156.98	5.3%
0900	Interior Framing and Finishes	\$ 42.19	\$ 427,750.10	10.1%
1000	Specialties	\$ 2.97	\$ 30,069.56	0.7%
1100	Equipment	\$ 15.67	\$ 158,818.11	3.8%
1200	Furnishings	\$ 1.42	\$ 14,399.51	0.3%
	Mechanical and Electrical	\$ 92.57	\$ 938,509.13	22.2%
TOTALS CONSTRUCTION		\$ 417.75	\$ 4,235,149.50	100%

SOFT COSTS		\$/SF	TOTAL	%
	Architect and other design consultants	\$ 23.69	\$ 240,200.00	50.0%
	Project Management (at 3% of hard costs)	\$ 12.53	\$ 127,054.49	26.4%
	Project Specific Insurance	\$ 6.36	\$ 64,500.00	13.4%
	Other Soft Costs	\$ 4.82	\$ 48,900.00	10.2%
TOTALS SOFT COST		\$ 47.41	\$ 480,654.49	100%

OTHER		\$/SF	TOTAL	%
	Temporary Fire Hall and EOC Facilities	\$ 26.88	\$ 272,488.00	52.0%
	Hydro	\$ 3.95	\$ 40,000.00	8.3%
		\$ -	\$ -	
	PROJECT CONTINGENCIES (AT 5%)	\$ 20.89	\$ 211,757.48	44.1%
TOTALS OTHER		\$ 51.71	\$ 524,245.48	104%

TOTAL		\$/SF	TOTAL
PROJECT TOTAL		\$ 516.87	\$ 5,240,049.46

CASH ALLOWANCE

TBD

6.2

BUDGETARY OPT. #2

PRELIMINARY BUDGET SUMMARY**NEW CONSTRUCTION AT EXISTING SITE**

Project: Ucluelet Fire Hall
Ucluelet , BC

TOTAL SF	9,951	COST/UNIT TOTAL	\$436.50
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(hard construction)

Date: 25-Aug-21

Notes: No escalation. Values to reflect current market conditions.

CLASS "D"

DIVISIONAL BREAKDOWN		\$/SF	TOTAL	%
0100	General Requirements	\$ 57.23	\$ 569,448.04	13.1%
0018	Site Work	\$ 62.20	\$ 618,965.26	14.2%
0300	Concrete Work	\$ 35.88	\$ 357,045.22	8.2%
	New building structure, cladding, and roofing	\$ 97.47	\$ 969,933.76	22.3%
0400	Masonry	\$ 5.24	\$ 52,123.39	1.2%
0500	Metals	\$ 1.31	\$ 13,030.85	0.3%
0600	Wood & Plastics	\$ 8.69	\$ 86,437.96	2.0%
0700	Thermal & Moisture Protection	\$ 6.55	\$ 65,154.24	1.5%
0800	Doors & Windows	\$ 20.30	\$ 201,978.14	4.6%
0900	Interior Finishes	\$ 35.36	\$ 351,832.88	8.1%
1000	Specialties	\$ 3.10	\$ 30,839.67	0.7%
1100	Equipment	\$ 15.45	\$ 153,764.00	3.5%
1200	Furnishings	\$ 1.48	\$ 14,768.29	0.3%
	Mechanical and Electrical	\$ 86.25	\$ 858,298.49	19.8%
TOTALS CONSTRUCTION		\$ 436.50	\$ 4,343,620.19	100%

SOFT COSTS		\$/SF	TOTAL	%
	Architect and other design consultants	\$ 22.48	\$ 223,700.00	53.9%
	Project Management (at 3% of hard costs)	\$ 13.10	\$ 130,308.48	31.4%
	Project Specific Insurance	\$ 2.24	\$ 22,300.00	5.4%
	Other Soft Costs	\$ 3.87	\$ 38,500.00	9.3%
TOTALS SOFT COST		\$ 41.69	\$ 414,808.48	100%

OTHER		\$/SF	TOTAL	%
	Temporary Fire Hall and EOC Facilities	\$ 27.38	\$ 272,488.00	51.4%
	Hydro	\$ 4.02	\$ 40,000.00	9.6%
		\$ -	\$ -	
	PROJECT CONTINGENCIES (AT 5%)	\$ 21.83	\$ 217,181.01	41.0%
TOTALS OTHER		\$ 53.23	\$ 529,669.01	102%

TOTAL		\$/SF	TOTAL
PROJECT TOTAL		\$ 531.41	\$ 5,288,097.67

CASH ALLOWANCE

TBD

7.0

DESIGN GUIDE LINES

UCLUELET FIRE HALL AND EMERGENCY OPERATIONS CENTER

SAMPLE PRELIMINARY OUTLINE SPECIFICATION

The purpose of an outline specification in general is to provide a description of the work that could be necessary for the new Fire Hall and emergency operations centre project located in Ucluelet, BC. This sample specification indicates potential major system and material choices for the project and provides the information necessary to communicate the appearance and function of the building.

This information is to be considered conceptual and to be used as a reference point only when determining what could be involved with this new project.

This document takes into consideration what would be included when considering demolition of the existing fire hall and construction of a new fire hall on the existing site. This is not an all-inclusive outline specification and would require modification should this project proceed.

This outline specification is laid out in the construction division format. It can be used to help explain what is anticipated and expected to be included within the budget. A general description of the items included in the construction division are as follows:

DIVISION 1 General Requirements

In general, this construction division would include temporary materials and activities necessary to complete the construction on site works. This would include items like the following:

- temporary facilities
- temporary hoarding
- quality requirements

DIVISION 2 Site Works

In general, this division includes materials and activities necessary to prepare the site to receive foundations. This would include items like the following:

- excavation and backfill
- demolition
- civil services, off site
- storm, water, and sanitary services. On site
- landscaping, hard and soft

DIVISION 3 Concrete

In general, this division includes materials and activities necessary to supply and install the building foundation. This would include items like the following:

- concrete formwork installation
- supply and install of reinforcing steel
- concrete supply and placing

DIVISION 4 Masonry

In general, this division includes supply and install of any item relating to masonry or stonework. This would include items like the following:

- concrete block
- brickwork
- stone or cultured stone

DIVISION 5 Metals

In general, this division includes supply and install of metals or steel. This would include items like the following:

- structural steel
- miscellaneous metals
- handrails or guardrails

DIVISION 6 Wood and Plastics

In general, this division includes supply and install of framing items. This would include items like the following:

- rough framing and carpentry
- finishing carpentry
- supply of dimensional and engineered wood products
- millwork

DIVISION 7 Thermal and Moisture Protection

In general, this division includes building envelope and insulation requirements. This would include items like the following:

- exterior cladding
- roofing
- insulation and vapor barriers

DIVISION 8 Doors and Windows

This would include items like the following:

- wood doors and frames
- pressed steel doors and frames
- aluminum doors and frames
- aluminum, metal, or vinyl windows
- hardware for the above
- overhead doors

DIVISION 9 Finishes

In general, this division includes interior finishing items. This would include items like the following:

- drywall
- flooring
- painting

DIVISION 10 Specialties

Some firehall specific specialties include:

- turnout gear racking
- hose racking

DIVISION 11 Equipment

Firehall specific equipment includes:

- gear washing and drying equipment
- truck exhaust extraction systems

DIVISION 12 Furnishings

- office furnishings
- kitchen furnishings

DIVISION 13 Special Construction

N/A

DIVISION 14 Conveying Systems

N/A

DIVISION 15 Mechanical

In general, this division includes supply and install of mechanical systems and fixtures. This would include items like the following:

- interior plumbing piping and fixtures
- heating, ventilating, and air conditioning equipment
- fire suppression systems

DIVISION 16 Electrical

In general, this division includes supply and install of electrical systems and fixtures. This would include items like the following:

- electrical high voltage service and wiring
- electrical equipment
- lighting fixtures
- fire alarm systems
- low voltage wiring and equipment

The following is a sample outline specification. These pages include items that would need to be incorporated into the Ucluelet Fire Hall and Emergency Operations Center. This specification is preliminary and not all inclusive but is meant to act as a reference starting point.

The items included below are organized to follow the same sequence as the construction divisions organized above and the budget organization contained in the budget section of this document.

Definitions:

Ucluelet Fire Department	UFD
Ucluelet Municipality	UM
Ucluelet Fire Hall and EOC	UFH

DIVISION 1: GENERAL REQUIREMENTS

1.1 GENERAL BUILDING AND SITE INFORMATION

Location: To be determined
Ucluelet, BC

Building Square Footage: It appears that the total building size could range from eight to ten thousand square feet.

1.2 DESIGN

The building design shall be in accordance with current BC Building Code, BC Fire Code, and other municipal codes and bylaws in effect at the time.

1.3 ENGINEERING FEES & DISBURSEMENTS

Architect and Professional Engineering design and consulting fees shall be included in the scope of work. Design and engineering fees shall include Architecture, Structural, Mechanical, Electrical, Civil, Fire Suppression, and Seismic Engineering as required for a construction project of this nature. The Architects and Engineers' scope of work shall include all conceptual design fees, construction documents, design production through to "Issued for Construction" stage, field inspections, meetings, coordination with government officials and disbursements including drawing reproduction costs.

A minimum of four (4) quality resolution renderings of the building shall be included by the Architect.

Drawings to be submitted will include but not necessarily be limited to the following:

Drawing Discipline:

Issued for Building Permit:

Issued for Construction:

Architectural	YES	YES
Structural	YES	YES
Mechanical	YES	YES
Electrical	YES	YES
Civil	YES	YES
Geotechnical	Geotechnical report prior to building permit design drawings.	

1.4 PERMITS, FEES & DEVELOPMENT COST CHARGES

All Development Permit, Building Permit, and related fees including but not limited to any municipal service connection charges, engineering fees, and municipal review fees for the construction of the building shall be taken into consideration and included in the project budget. Hydro, gas, tel., and data fees and works shall be included in the budget.

1.5 INSPECTIONS & TESTING

All intermediate and final inspections required by the Municipality shall be conducted.

Independent 3rd Party Inspections and Testing will be included in the project budget, for the following areas of work:

- Concrete strength testing
- Soils compaction testing

1.6 AS-BUILT DRAWINGS & WARRANTY INFORMATION

A twelve-month warranty on materials and workmanship shall be included in the project budget. This warranty shall commence on the date of substantial completion of the work. Upon completion of the project, a Maintenance Manual including pertinent building information, contact phone numbers and instruction manuals shall be included in the project plan and budget. This Maintenance Manual will also include copies of all applicable manufacturers' warranties.

1.7 GENERAL CONDITIONS

Budget for all necessary general requirements to facilitate the construction of this building. Such general conditions include, but are not limited to construction management, site supervision, first aid, general labour, temporary toilet rentals, surveys, construction trailers, disposal bins, shipping related costs, temporary utilities, miscellaneous tools and materials, etc.

DIVISION 2: SITE WORK

2.1 SITE PREPARATION & EARTHWORKS

All site preparation costs including bulk excavation and backfill and detailed excavation and backfill shall be included in the project budget. This should be considered in conjunction with the geotechnical report and satisfy all recommendations of the geotechnical engineer of record.

If applicable, remove all topsoil and other organic soils and vegetation from all building footprint and paved areas or graveled as per the Geotechnical Consultant's recommendations.

Inspection and compaction testing of foundation excavations and backfill, paving and slab-on-grade areas shall be included in the project budget.

Budget for protecting open excavations against rain, snow and any other water infiltration which may jeopardize compacted soils to a reasonable extent given typical weather conditions.

Budget for constructing, maintaining, and monitoring erosion and sediment controls.

2.2 ASPHALT PAVING

Provide budget for asphalt paving and base materials to areas as required.

2.3 SIDEWALKS

**Example of what could be anticipated in the budget/project:

All sidewalks shall be broom-finished, 4" concrete over 4" of compacted, granular base material. Provide tooled joints in sidewalks at 1200mm (4 feet) on-center maximum. Sidewalks shall be provided as per drawings and specifications.

2.4 CONCRETE CURBS

**Example of what could be anticipated in the budget/project:

Extruded, 6" x 6" concrete curbs.

2.5 DRIVEWAY CROSSINGS

**Example of what could be anticipated in the budget/project:

Provide one (1) municipal driveway crossing in accordance with municipal design specifications.

Concrete let downs will be provided where site access meets municipal road (driveway entrance/exit, concrete apron).

2.6 SITE SERVICING

**Example of what could be anticipated in the budget/project:

Provide an on-site storm drainage system consisting of catch basins, manholes and piping to provide drainage of the asphalt paving areas, as well as to pick up drainage from the building roof drains.

Provide sanitary and water piping and connections to municipal systems. Ensure adequate pipe sizing to facilitate the plumbing and fire suppression demands of the building.

An oil / water interceptor will be as required.

2.7 FENCING & GATES

Budget and specify as required.

2.8 EXTERIOR LINE PAINTING & H/C PARKING SIGNAGE

**Example of what could be anticipated in the budget/project:

Provide painted, white line markings for parking stalls.

Provide H/C parking signage as required by the municipality.

2.9 SITE LIGHTING

**Example of what could be anticipated in the budget/project:

Provide site lighting as required for the project.

DIVISION 3: CONCRETE

3.1 FOUNDATIONS

**Example of what could be anticipated in the budget/project:

Provide steel reinforced, concrete foundations on compacted material.

3.2 SLAB ON GRADE

**Example of what could be anticipated in the budget/project:

Provide steel reinforced concrete slab on grade. Slabs-on-grade shall be a minimum of 25 MPA. Slab on grade base shall be in accordance with Geotechnical Consultant's recommendations.

Provide saw cut control joints in the concrete slab on grade to form areas no larger than 21 square meters.

SLAB THICKNESSES:

Slab thickness shall be minimum of 6 inches thick in apparatus bay areas.

3.6 SLAB ON GRADE FLOOR SLOPING

**Example of what could be anticipated in the budget/project:

Provide minimal floor sloping in the apparatus bay areas as generally indicated on the reference drawings. This will allow slope to floor drains.

DIVISION 4: MASONRY

Not considered at this time to be included in this project.

DIVISION 5: STRUCTURAL STEEL AND MISCELLANEOUS METALS

5.1 STRUCTURAL STEEL

Budget and specify as required.

DIVISION 6: WOOD AND PLASTICS

6.1 ROUGH CARPENTRY

**Example of what could be anticipated in the budget/project:

Rough framings labour and materials for walls and floor structures / mezzanines.

Provide any necessary blocking or backing as may be required for wall mounted accessories including but not limited to stair handrails, televisions, and washroom grab bars.

DIVISION 7: THERMAL AND MOISTURE PROTECTION

7.1 BUILDING INSULATION

**Example of what could be anticipated in the budget/project:

Wall Insulation: Consider semi-rigid or batt insulation. Minimum requirements TBD.

Roof Insulation: Consider rigid or batt insulation. Minimum requirements TBD.

DIVISION 8: DOORS AND WINDOWS

8.1 OVERHEAD DOORS

**Example of what could be anticipated in the budget/project:

Provide six (6); 14 foot wide x 14 foot high - rolling steel overhead doors, electrically operated.

Provide two (2) shutoff switches with contactors to shut power off to all overhead doors. Switches are to be located at exit doors and approved by Owner. Doors shall also be manually operable.

8.2 EXIT DOORS

**Example of what could be anticipated in the budget/project:

Exterior exit doors shall be 1-3/4", 20ga. Insulated metal doors in metal frames complete with commercial grade exit hardware, weather stripping and tamper proof astragal. Door finish shall be as per Division 9 of this Specification.

8.3 ALUMINUM ENTRANCE DOORS

**Example of what could be anticipated in the budget/project:

Provide clear anodized aluminum entrance doors and frames complete with tempered, insulated glazing, closers and hardware.

8.4 EXTERIOR GLAZING

**Example of what could be anticipated in the budget/project:

Glazing shall be low-e, double glazed and thermally broken.

DIVISION 9: FINISHES

9.1 PAINTING OF DOORS & FRAMES

**Example of what could be anticipated in the budget/project:

Paint the interior and exterior sides of all exterior doors and frames using an appropriate metal primer and two finish coats of paint. Surface preparation and application should be in accordance with manufacturer's specifications. Repaint surfaces if required to achieve hiding of substrate and uniform finish.

9.2 OFFICE AREAS (General Description)

**Example of what could be anticipated in the budget/project:

- Steel stud or wood framing
- Drywall over framing to paint-ready finish
- Paint all walls using a primer and two finish coats of paint
- Flooring shall be:
 - Polished and sealed concrete in the administration areas
 - Polished and sealed concrete in the utility areas within the apparatus bay

- Polished and sealed concrete within the apparatus bay areas
- Plywood exposed floor surface at mezzanine level
- Ceilings shall be a combination of t-bar, gypsum, and exposed to underside of structure.
 - T-bar ceilings in all administration areas including underside of mezzanine.
 - Drywall ceilings in mechanical and electrical rooms and washroom areas
 - Exposed to underside of structure in training area and apparatus bays
- Lighting shall be high-efficiency LED fixtures
- All ground floor office areas shall have heating, ventilation and possibly air conditioning.
- Interior office doors shall be architectural grade wood doors in wood frames or hollow metal doors and hollow metal frames complete with commercial grade hardware.
- Washroom fixtures shall be touchless Moen, American Standard, Toto or approved equal.
- Allow for millwork to the washrooms, kitchen, etc. Cabinets shall have a plastic laminate finish or approved equal. Countertops solid surface, stainless steel, phenolic, or approved alternate.
- Sprinkler system in accordance with NFPA 13: (zoning to be determined).

DIVISION 10: SPECIALTIES

10.1 BUILDING ADDRESS NUMBER SIGNAGE

**Example of what could be anticipated in the budget/project:

Provide building mounted, dimensional signage of the building address numbers as required by UM.

10.2 MISCELLANEOUS SIGNAGE

**Example of what could be anticipated in the budget/project:

Provide all signage required for building occupancy by the UM. MISCELLANEOUS

Flag pole?

DIVISION 11: EQUIPMENT

11.1 GEAR RACKING

**Example of what could be anticipated in the budget/project:

Provide turn out gear racking.

DIVISION 12: FURNISHINGS

12.1 APPLIANCES

**Example of what could be anticipated in the budget/project:

Provide residential grade stainless steel appliances to kitchen area as per the following list:

- Stainless steel finish fridge by Whirlpool, or LG, or approved alternate.
- Stainless steel finish range by Whirlpool, or LG, or approved alternate.
- Stainless steel finish dishwasher by Whirlpool, or LG, or approved alternate.
- Stainless steel finish over the range hood fan.
- Laundry or gear washing equipment by others. Plumbing rough in for gear washer included.

12.2 BLOCKING AND BACKING

**Example of what could be anticipated in the budget/project:

Backing provided for televisions. Supply and install of visual equipment by owner.

DIVISION 13: SPECIAL CONSTRUCTION

13.1 FIRE SUPPRESSION

**Example of what could be anticipated in the budget/project:

Provide an overhead, fire suppression system in accordance with NFPA 13. (zoning to be determined).

DIVISION 14: CONVEYING SYSTEMS

N/A

DIVISION 15: MECHANICAL

15.1 APPARATUS BAY HEATING

**Example of what could be anticipated in the budget/project:

Ceiling mount unit heaters.

15.2 APPARATUS BAY VENTILATION

**Example of what could be anticipated in the budget/project:

Provide a ventilation system to manage truck exhaust.

Provide necessary roof support frames and cut-outs for each of the exhaust and make-up air openings.

15.3 HOSE BIBS

**Example of what could be anticipated in the budget/project:

Hose bibs shall be provided at points along all sides of the building exterior. Allow for four (4) total.

15.4 APPARATUS BAY CEILING CIRCULATION FANS

**Example of what could be anticipated in the budget/project:

Provide a minimum of four (4), ceiling fans. Ceiling fans to be distributed throughout the apparatus bay areas.

DIVISION 16: ELECTRICAL

16.1 MAIN SERVICE

**Example of what could be anticipated in the budget/project:

The main service shall be minimum 600 amps, 3 phase, 3 wire.

Provide a new pad-mount transformer and service through BC Hydro. FIRE ALARM & EXIT LIGHTING

Provide all necessary fire alarm devices, including but not limited to, annunciator panel, pull stations, exit lighting, LED exit signs, audible alarm and strobe lights. Provide verification to meet applicable codes and regulations.

16.2 RECEPTACLES

**Example of what could be anticipated in the budget/project:

Receptacles to be provided.

16.3 APPARATUS AREA LIGHTING

**Example of what could be anticipated in the budget/project:

Provide an even distribution of lighting using high-bay LED light fixtures to achieve a minimum lighting level of 40 foot candles measured at 5 feet above finished floor.

16.4 EXTERIOR LIGHTING

**Example of what could be anticipated in the budget/project:

Provide building-mounted LED wall pack fixtures.

Street lighting as required.

16.5 GENERATOR

**Example of what could be anticipated in the budget/project:

TBD kW Diesel fired generator

120/208V, three phase TBD Hz

3P- TBD AMP main breaker

Sub-base tank, 48hr fuel storage (Diesel)

Exterior generator

Standard weather enclosure

7.1

FUNCTIONAL SPACE PROGRAMMING

TABLE TITLE: UFH - Ucluelet Fire Hall Architectural Program - Addition & Renovation

Table subtitle: Preliminary program and requirements summary - Rev.3 October 4, 2021

Naming		Grouping			Key Considerations			Geometry				Others
Official room name	Informal room name	Tentative Room #	Placement Level	Department	Finishing type	In/Out	Segregation/Security Level	Room MIN. area (s.f.)	Room MIN. area (m2)	Room height (ft)	Room height (mm)	Other notes and requirements
ZONE DEFINITION - ADMINISTRATION Group D - Offices												
	Public Accessible Areas											
N/A	Public Entry	100	L1	Administration	1- Office/Admin	In	1- Very High	40.00	3.72	9.00	2743	Main entry door to open with auto door operator.
N/A	Reception	101	L1	Administration	1- Office/Admin	In	3- Moderate	80.00	7.43	9.00	2743	Include glass delineation at reception desk for health & safety requirements.
N/A	File Storage	N/A	L1	Administration		In	2- High	80.00	7.43	9.00		Floor area calculation included with general reception floor space.
Universal Washroom	Public Washroom	102	L1	Administration	1- Office/Admin	In	3- Moderate	56.00	5.20	9.00	2743	Must be an accessible washroom.
	Fire Department Secure Area											
Chief Office	Fire Chief/ Deputy Chief Office	201	L2	Administration	1- Office/Admin	In	3- Moderate	185.00	17.19	9.00	2743	
EOC/ Radio RM	Flex RM/ Radio Comm. Office	202	L2	Administration	1- Office/Admin	In	3- Moderate	144.00	13.38	9.00	2743	
N/A	Radio Storage	N/A	L2	Administration	1- Office/Admin	In	3- Moderate	0.00	0.00	9.00	2743	Radio and EOC storage combined with Communications (EOC/ Radio RM).
Janitor	Janitor Room	105	L1	Administration	1- Office/Admin	In	2- High	30.00	2.79	9.00	2743	
Universal Washroom	Universal Wash/Shower RM	103	L1	Administration	1- Office/Admin	In	3- Moderate	90.70	8.43	9.00	2743	Single occupant use. Add occupancy indicator hardware.
Universal Washroom	Universal Wash/Shower RM	104	L1	Administration	1- Office/Admin	In	3- Moderate	90.70	8.43	9.00	2743	Single occupant use. Add occupancy indicator hardware.
Training Office	Training Office/ Library	106	L1	Administration	1- Office/Admin	In	3- Moderate	0.00	0.00	9.00	2743	May not require dedicated training office according to current FD facility needs.
N/A	Library	N/A	L1	Administration	1- Office/Admin	In	3- Moderate	0.00	0.00	0.00	0	Library book shelving.
Multi-use Room	Training Room/EOC	107	L1	Administration	1- Office/Admin	N/A	2- High	1397.00	129.83	11.00	3353	Training requirements: 24 occupants plus lesson and circulation space. EOC requirements: Room occupancy capacity for 40. Review through detailed design with Architect to meet post-disaster district requirements. Additional space may be allocated for temporary sleeping quarters.
Storage	Training Room/EOC Storage RM	108	L1	Administration	1- Office/Admin	N/A	3- Moderate	134.00	12.45	9.00	2743	Training supplies, first aid storage, folding table (work station) storage.
Kitchen	Kitchen/Dining & Lounge Area	203	L2	Administration	1- Office/Admin	In	3- Moderate	424.00	39.41	11.00	3353	
Electrical	Electrical Room	204	L2	Utility	3-Utility	In	2- High	84.50	7.85	8.00	2438	
Mechanical	Mechanical/ Water Entry	109	L1	Utility	3-Utility	In	2- High	75.00	6.97	8.00	2438	
ZONE DEFINITION - APPARATUS Group F - Division 3												
N/A	Apparatus (6 Bays)	N/A	L1	App Bay	2- App Bay	N/A	2- High	4456.00	414.13	20.00	6096	Current apparatus: 2 Engines, a Rescue, a Quad, a side-by-side, and command pick-up truck. Add future aerial apparatus (ladder truck). Requirements: 3 drive-through bays (ie: 6 14x14 bay doors). Bay over head doors may be 12x14 for drive through bays.
N/A	Hose Tower/Training Tower	N/A	L2	App Bay	2- App Bay	In	2- High	225.00	20.91	38.00	11582	Vertical hose drying system plus training stairs and access to exterior balcony spaces for training.
N/A	Hose Storage Area	N/A	L1	App Bay	2- App Bay	N/A	2- High					Racking for dry surplus coiled hose storage. Floor area calculation included with general apparatus bay floor space.
N/A	App Bay Washroom/Shower	110	L1	App Bay	2- App Bay	In	2- High	66.00	6.13	9.00	2743	
Washroom	Decon Shower	N/A	L1	App Bay	2- App Bay	N/A	2- High	0.00	0.00	9.00	2743	May not require dedicated decon. Shower. Review through detailed design with Architect to meet FD/ worksafe requirements.
Workshop	Workshop	111	L1	App Bay	2- App Bay	In	3- Moderate	145.00	13.48	9.00	2743	A small work area c/w workbench, tool chest, shelving.
SCBA Room	SCBA/Fill Room	112	L1	App Bay	2- App Bay	In	2- High	142.00	13.20	9.00	2743	Clean RM required c/w a small bench to work on SCBA gear.
N/A	Laundry	N/A	L1	App Bay	2- App Bay	N/A	3- Moderate	88.00	8.18	9.00	2743	Required.
N/A	Turnout Gear Room	N/A	L1	App Bay	2- App Bay	N/A	3- Moderate	311.00	28.90	9.00	2743	Currently 20 members. Requirements for future: 24 stalls.

(CONTINUED) TABLE TITLE: UFH - Ucluelet Fire Hall Architectural Program - Addition & Renovation

Table subtitle: Preliminary program and requirements summary - Rev.3 October 4, 2021

Naming		Grouping			Key Considerations			Geometry				Others
Official room name	Informal room name	Tentative Room #	Placement Level	Department	Finishing type	In/Out	Segregation/Security Level	Room MIN. area (s.f.)	Room MIN. area (m2)	Room height (ft)	Room height (mm)	Other notes and requirements
N/A	Dispatch/ Rip/N Run Radio RM	113	L1	App Bay	2- App Bay	N/A	3- Moderate	56.00	5.20	9.00	2743	A small radio room off the apparatus bay would be ideal.
	Lockers	N/A										No.
ZONE DEFINITION - APPARATUS Group F - Division 3 Mezzanine												
N/A	Mezzanine	N/A	L2	App Bay	2- App Bay	N/A	3- Moderate	934.00	86.80	10.00	3048	Yes - great for a secondary training area, EOC/ forest fire materials and equipment storage. May include basic open fitness area.
N/A	Fitness Area	N/A	L2	App Bay	2- App Bay	N/A				10.00	3048	TBD.
N/A	Sprinkler Room	N/A	L2	App Bay	3-Utility					9.00	2743	TBD based on pump requirements.
Compressor	Compressor Room	205	L2	Utility	3-Utility	In	3- Moderate	54.00	5.02	9.00	2743	
N/A	Storage	N/A	L2	App Bay	2- App Bay	N/A				10.00	3048	Surplus training, first aid, wildfire equipment and supplies.
ZONE DEFINITION - BUILDING EXTERIOR												
	Concrete Apron		L1	App Bay	4-Hard Surface	N/A	3- Moderate					Required. Preference would be that the apron is long enough to park an aerial apparatus. Review apron layout/ capacity with Architect and survey property lines for dimension
	Patio		L1	Administration	4-Hard Surface	N/A	3- Moderate					Not required. Nice to have. A generally included space for most FD facilities.
	Parking		L1									Requirements: min. 22 spaces including 1 accessible stall.
	Emergency Generator		L1									Required.
	Fire Suppression		L1									Required. Sprinklered. Review District capacity.
Subtotals:								9,387.90	868.76			
General Circulation (6% of planned floor) *highly efficient												
General Circulation (8% of planned floor) *moderately efficient								563.27	86.88			
General Circulation (10% of planned floor) *somewhat efficient								751.03	130.31			
Grand Totals (6% circ.):								9,951.17	955.64			
Grand Totals (8% circ.):								10,138.93	999.08			
Grand Totals (10% circ.):								10,326.69	1,042.52			

TABLE TITLE: UFH - Ucluelet Fire Hall Architectural Program - New Build

Table subtitle: Preliminary program and requirements summary - Rev.3 October 4, 2021

Naming		Grouping			Key Considerations			Geometry				Others
Official room name	Informal room name	Tentative Room #	Placement Level	Department	Finishing type	In/Out	Segregation/Security Level	Room MIN. area (s.f.)	Room MIN. area (m2)	Room height (ft)	Room height (mm)	Other notes and requirements
ZONE DEFINITION - ADMINISTRATION Group D - Offices												
	Public Accessible Areas											
N/A	Public Entry	100	L1	Administration	1- Office/Admin	In	1- Very High	40.00	3.72	9.00	2743	Main entry door to open with auto door operator.
N/A	Reception	101	L1	Administration	1- Office/Admin	In	3- Moderate	80.00	7.43	9.00	2743	Include glass delineation at reception desk for health & safety requirements.
N/A	File Storage	N/A	L1	Administration		In	2- High	80.00	7.43	9.00		Floor area calculation included with general reception floor space.
Universal Washroom	Public Washroom	113	L1	Administration	1- Office/Admin	In	3- Moderate	56.00	5.20	9.00	2743	Must be an accessible washroom.
	Fire Department Secure Area											
Chief Office	Fire Chief/ Deputy Chief Office	102	L1	Administration	1- Office/Admin	In	3- Moderate	185.00	17.19	9.00	2743	
EOC/ Radio RM	Flex RM/ Radio Comm. Office	112	L1	Administration	1- Office/Admin	In	3- Moderate	144.00	13.38	9.00	2743	
N/A	Radio Storage		L1	Administration	1- Office/Admin	In	3- Moderate	0.00	0.00	9.00	2743	Radio and EOC storage combined with Communications (EOC/ Radio RM).
Janitor	Janitor Room	105	L1	Administration	1- Office/Admin	In	2- High	30.00	2.79	9.00	2743	
Universal Washroom	Universal Wash/Shower RM	103	L1	Administration	1- Office/Admin	In	3- Moderate	90.70	8.43	9.00	2743	Single occupant use. Add occupancy indicator hardware.
Universal Washroom	Universal Wash/Shower RM	104	L1	Administration	1- Office/Admin	In	3- Moderate	90.70	8.43	9.00	2743	Single occupant use. Add occupancy indicator hardware.
Training Office	Training Office/ Library	107	L1	Administration	1- Office/Admin	In	3- Moderate	0.00	0.00	9.00	2743	May not require dedicated training office according to current FD facility needs.
N/A	Library		L1	Administration	1- Office/Admin	In	3- Moderate	0.00	0.00	0.00	0	Library book shelving.
Multi-use Room	Training Room/EOC	108	L1	Administration	1- Office/Admin	N/A	2- High	1397.00	129.83	11.00	3353	Training requirements: 24 occupants plus lesson and circulation space. EOC requirements: Room occupancy capacity for 40. Review through detailed design with Architect to meet post-disaster district requirements. Additional space may be allocated for temporary sleeping quarters.
Storage	Training Room/EOC Storage RM	109	L1	Administration	1- Office/Admin	N/A	3- Moderate	134.00	12.45	9.00	2743	Training supplies, first aid storage, folding table (work station) storage.
Kitchen	Kitchen/Dining & Lounge Area	111	L1	Administration	1- Office/Admin	In	3- Moderate	424.00	39.41	11.00	3353	
Electrical	Electrical Room	110	L1	Utility	3-Utility	In	2- High	84.50	7.85	8.00	2438	
Mechanical	Mechanical/ Water Entry	106	L1	Utility	3-Utility	In	2- High	75.00	6.97	8.00	2438	
ZONE DEFINITION - APPARATUS Group F - Division 3												
N/A	Apparatus (6 Bays)		L1	App Bay	2- App Bay	N/A	2- High	4456.00	414.13	20.00	6096	Current apparatus: 2 Engines, a Rescue, a Quad, a side-by-side, and command pick-up truck. Add future aerial apparatus (ladder truck). Requirements: 3 drive-through bays (ie: 6 14x14 bay doors). Bay over head doors may be 12x14 for drive through bays.
N/A	Hose Tower/Training Tower	121	L2	App Bay	2- App Bay	In	2- High	225.00	20.91	38.00	11582	Vertical hose drying system plus training stairs and access to exterior balcony spaces for training.
N/A	Hose Storage Area		L1	App Bay	2- App Bay	N/A	2- High					Racking for dry surplus coiled hose storage. Floor area calculation included with general apparatus bay floor space.
N/A	App Bay Washroom/Shower	117	L1	App Bay	2- App Bay	In	2- High	66.00	6.13	9.00	2743	
Washroom	Decon Shower		L1	App Bay	2- App Bay	N/A	2- High	0.00	0.00	9.00	2743	May not require dedicated decon. Shower. Review through detailed design with Architect to meet FD/ worksafe requirements.
Workshop	Workshop	115	L1	App Bay	2- App Bay	In	3- Moderate	145.00	13.48	9.00	2743	A small work area c/w workbench, tool chest, shelving.
SCBA Room	SCBA/Fill Room	116	L1	App Bay	2- App Bay	In	2- High	142.00	13.20	9.00	2743	Clean RM required c/w a small bench to work on SCBA gear.
N/A	Laundry	118	L1	App Bay	2- App Bay	N/A	3- Moderate	88.00	8.18	9.00	2743	Required.
N/A	Turnout Gear Room	119	L1	App Bay	2- App Bay	N/A	3- Moderate	311.00	28.90	9.00	2743	Currently 20 members. Requirements for future: 24 stalls.

(CONTINUED) TABLE TITLE: UFH - Ucluelet Fire Hall Architectural Program - New Build
Table subtitle: Preliminary program and requirements summary - Rev.3 October 4, 2021

Naming		Grouping			Key Considerations			Geometry				Others
Official room name	Informal room name	Tentative Room #	Placement Level	Department	Finishing type	In/Out	Segregation/Security Level	Room MIN. area (s.f.)	Room MIN. area (m2)	Room height (ft)	Room height (mm)	Other notes and requirements
Compressor	Compressor Room	114	L1	Utility	3-Utility	In	3- Moderate	54.00	5.02	9.00	2743	
N/A	Dispatch/ Rip'N'Run Radio RM	120	L1	App Bay	2- App Bay	N/A	3- Moderate	56.00	5.20	9.00	2743	A small radio room off the apparatus bay would be ideal.
	Lockers	N/A										No.
ZONE DEFINITION - APPARATUS Group F - Division 3 Mezzanine												
N/A	Mezzanine	N/A	L2	App Bay	2- App Bay	N/A	3- Moderate	934.00	86.80	10.00	3048	Yes - great for a secondary training area, EOC/ forest fire materials and equipment storage. May include basic open fitness area.
N/A	Fitness Area	N/A	L2	App Bay	2- App Bay	N/A				10.00	3048	TBD.
N/A	Sprinkler Room	N/A	L2	App Bay	3-Utility					9.00	2743	TBD based on pump requirements.
N/A	Storage	N/A	L2	App Bay	2- App Bay	N/A				10.00	3048	Surplus training, first aid, wildfire equipment and supplies.
ZONE DEFINITION - BUILDING EXTERIOR												
	Concrete Apron		L1	App Bay	4-Hard Surface	N/A	3- Moderate					Required. Preference would be that the apron is long enough to park an aerial apparatus. Review apron layout/ capacity with Architect and survey property lines for dimension
	Patio		L1	Administration	4-Hard Surface	N/A	3- Moderate					Not required. Nice to have. A generally included space for most FD facilities.
	Parking		L1			N/A						Requirements: min. 22 spaces including 1 accessible stall.
	Emergency Generator		L1			N/A						Required.
	Fire Suppression		L1			N/A						Required. Sprinklered. Review District capacity.
Subtotals:								9,387.90	868.76			
General Circulation (6% of planned floor) *highly efficient								563.27	86.88			
General Circulation (8% of planned floor) *moderately efficient								751.03	130.31			
General Circulation (10% of planned floor) *somewhat efficient								938.79	173.75			
Grand Totals (6% circ.):								9,951.17	955.64			
Grand Totals (8% circ.):								10,138.93	999.08			
Grand Totals (10% circ.):								10,326.69	1,042.52			

7.2

CONCEPTUAL DESIGN



PROJECT DESIGN HIGHLIGHTS

Client

District of Ucluelet

Date of Work to Commence

To be determined

Project Location

Ucluelet, BC

Construction Type

New construction or addition and renovation

Features

Mixed cladding materials

Designed per post-disaster seismic requirements

Hose Drying/

training Tower Component

108'-2" W x 113' L
27' PEAK HEIGHT

UCLUELET FIRE RESCUE DESIGN

INTRODUCTION

One option for the proposed conceptual design of the Ucluelet Fire Hall and EOC addition & renovation or new construction project is a hybrid wood-frame and structural steel building system with metal cladding.* The Fire Hall will be across the street from the newly upgraded and modernized Ucluelet Secondary School. The new Fire Hall would provide increased emergency response and support services which may be called on year-round for various community needs in the District of Ucluelet.

CONTEXT, FORM AND CONSTRUCTION

Context

The design intent of the facility should be to blend with the surrounding context with respect to the growing community around the existing site or, if chosen as a new location, the Tugwell site (sports fields/ future recreational facilities). Further design apart from the conceptual massing would consider the town as a whole including the emergency services required for businesses and residents. Design balance should land in the middle of function and form (aesthetic) with the goal of fitting in amongst single-family neighbouring homes and other existing properties.

An overall 'modern fishing village' aesthetic would be ideal for this facility.

Form and Construction

This structure will serve as a post-disaster building and emergency operations center for the community in the event of a major natural disaster. The two conceptual designs demonstrate the different formal shapes that can be achieved with wood-frame and steel construction while meeting the structural requirements of a post-disaster building.

Both design options are completely conceptual and have been drawn to aid in site visualization for an addition and renovation or new construction project. The concept designs presented herein leave plenty of room for an Architect's detailed design. It is anticipated that the District of Ucluelet owner group, stakeholders, and the Fire Chief would be included in the detailed design process with the project Architect. A future detailed design may draw inspiration from the west coast aesthetic including local residences, resorts, and commercial buildings around the harbour. This could also apply to the Tugwell Site, however could be tailored to suit a more functional feel that would fit better amongst the recreational context.

Due to the size and proximity to a main intersection in the town, the Fire Hall is highly visible to drivers and pedestrians along Peninsula Rd and Matterson Drive. The concepts propose to capitalize on this visibility by using both form and finishes to make the Fire Hall a visual marker in the community.

*Other building materials or building systems may be considered for alternate design solutions.



FUNCTIONAL PROGRAMMING HIGHLIGHTS

Project Size

Approx. 10,000 SF (929 SM)

Features

Public accessibility

Fire Department administrative areas

EOC administrative areas

6 (3 drive-through) apparatus bays

Storage with related facilities

Multi-use indoor/ outdoor training zones

Kitchen/ dining

Lounge

Fitness Room

SINGLE STOREY
NEW BUILD OR
TWO STOREY A&R

UCLUELET FIRE RESCUE DESIGN

DAYLIGHT AND CLADDING

A combination of metal cladding and large windows would bring natural daylighting and visual interest with varying textures to the Fire Hall. For an addition & renovation or new fire hall facility, colours would be selected to compliment the tones on the adjacent buildings and the natural surroundings. Strategically placed overhangs would provide solar, wind, and rain protection. Window placement would maximize natural lighting while canopies could be used to minimize solar heat gain. A large canopy overhang may accentuate and define the main entrance of the facility.

Consideration for reduced energy consumption should be a main focus of the overall design to reduce facility operating costs. It is recommended that non-combustible, low maintenance cladding materials be chosen.

LAYOUT AND FUTURE PROOFING CONSIDERATIONS

Layout

The overall building layout should be coordinated and approved by the Fire Chief and if appointed, a Fire Department Project Steering Committee. The final detailed design should be adjusted according to the department's specific Emergency Response requirements for the District of Ucluelet and surrounding service area. The Fire Chief/ Volunteer's main entrance may need to be adjusted or otherwise differ from the main public entrance for faster access and movement to key facility rooms.

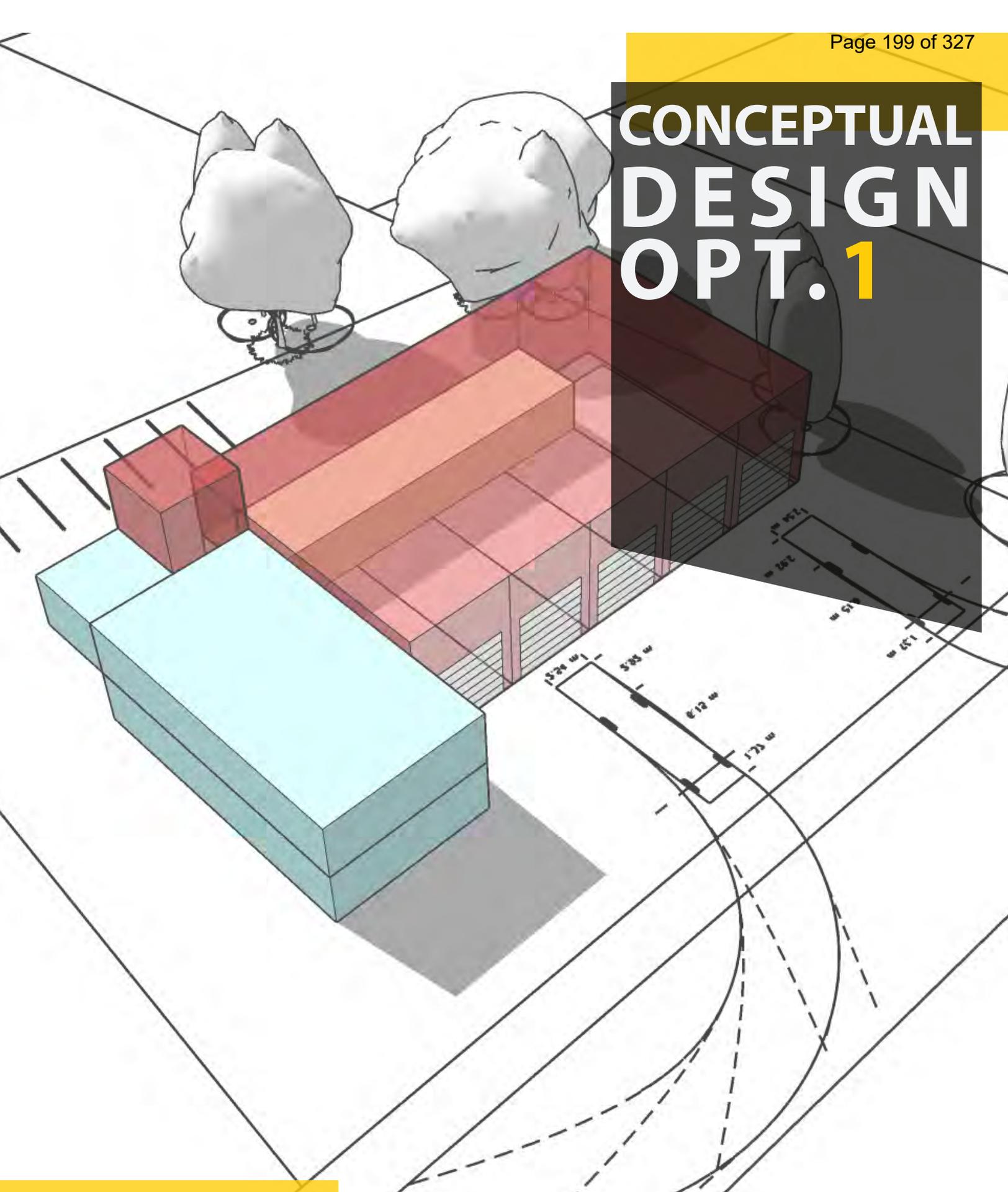
Fire Chief Rick Geddes has reviewed daily Chief vehicular startup procedures and responsibilities. These procedures include testing of vehicular lights and sirens. Due to possible visual and audible distraction by line of sight from the school and main roadway, an adjusted main entrance design may be required to accommodate a carport along the building's North Elevation. This may be reviewed by an Architect during the detailed design phase.

Future Proofing

To increase longevity of the facility, building design and construction methodology should be reviewed. Building materials would need to be chosen carefully with the goal of specifying or choosing cost-effective/ low maintenance materials. Minimum thermal and energy performance standards systems should be considered and outlined in order to achieve a reduction in future operating costs. The project may benefit from the addition of sustainable features such as:

- Electrical rough-in for solar panels that may be added in the future.
- Rainwater collection and filtration tanks for truck filling to reduce burden of the District's fresh water supply system.
- Unfinished flex space that may be converted to dormitories or sleeping quarters after a disaster event.

CONCEPTUAL DESIGN OPT. 1



*Rendering models shown feature an artists conceptual design for visualization of building massing and site location only. The general shapes or form do not represent an actual construction ready design. As a Pre-Construction Coordinator, Liberty Contract Management Inc. reserves the rights to any and all rendering design or other drawing elements. Construction design and drawings require the official stamp of an architect. **This model is based on a 'somewhat efficient' functional program with 10% planned general circulation space.

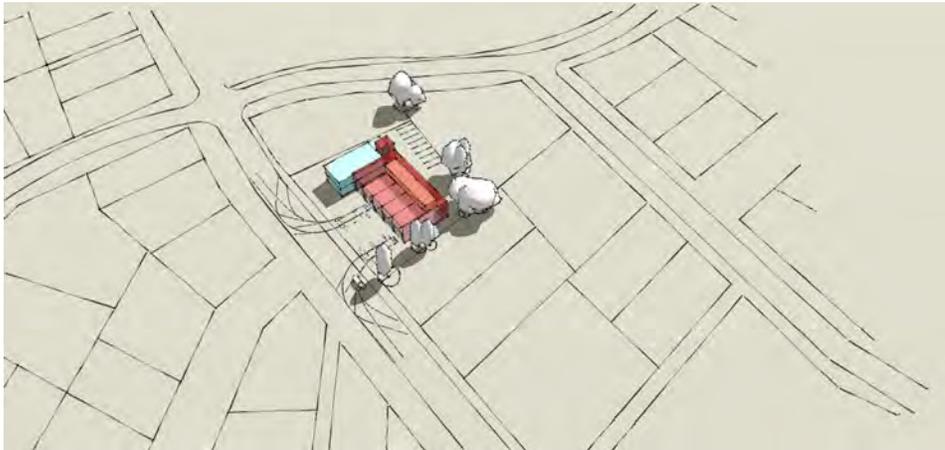


CONSTRUCTION GROUP

7.2

CONCEPTUAL DESIGN

ADDITION & RENOVATION



- Administration building component
- Apparatus (engine bays) building component
- Mezzanine building component

Existing lot addition & renovation conceptual massing model. Aerial view overlooking the intersection at Peninsula Rd and Matterson Dr.



Existing lot addition & renovation conceptual massing model. Front Elevation along Peninsula Rd.



Existing lot addition & renovation conceptual massing model.

- 5 back-in apparatus bays
- 14x14 overhead doors
- Concrete apron
- 2 Storey Administration
- Hose/ training tower
- Limited overall lot space
- Reduced parking/ training area capacity
- Additional lot space recommended

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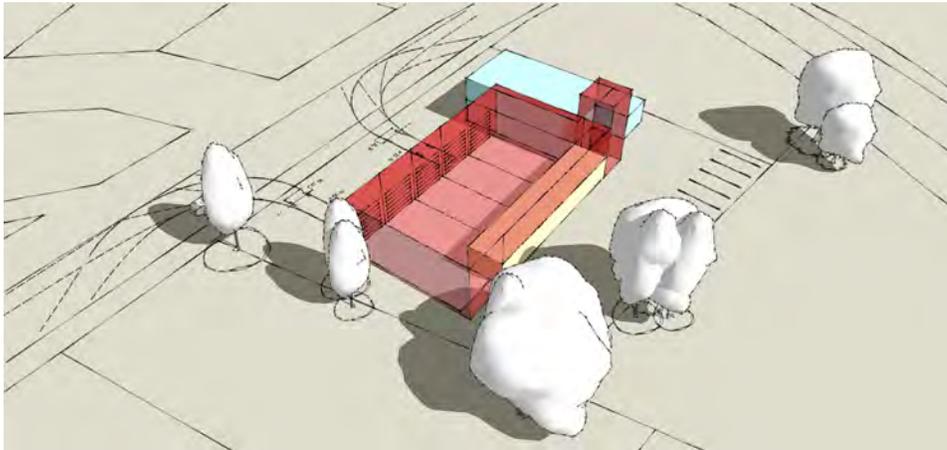


CONSTRUCTION GROUP

7.2

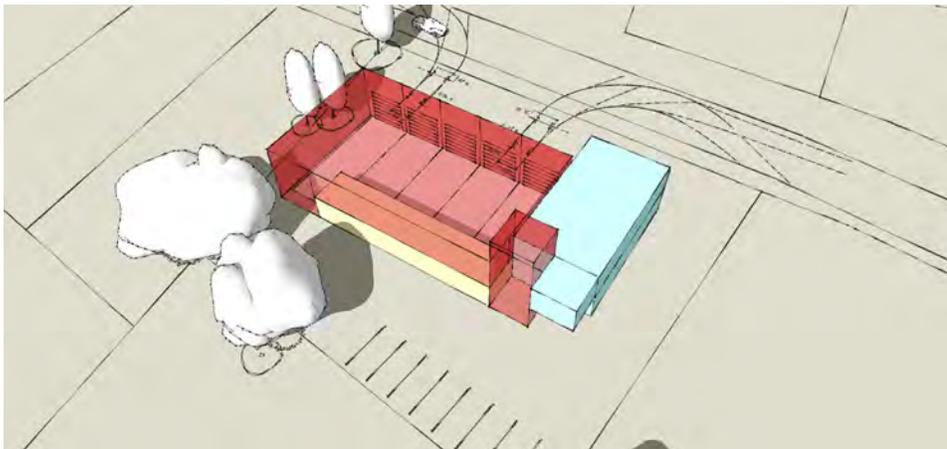
CONCEPTUAL DESIGN

ADDITION & RENOVATION



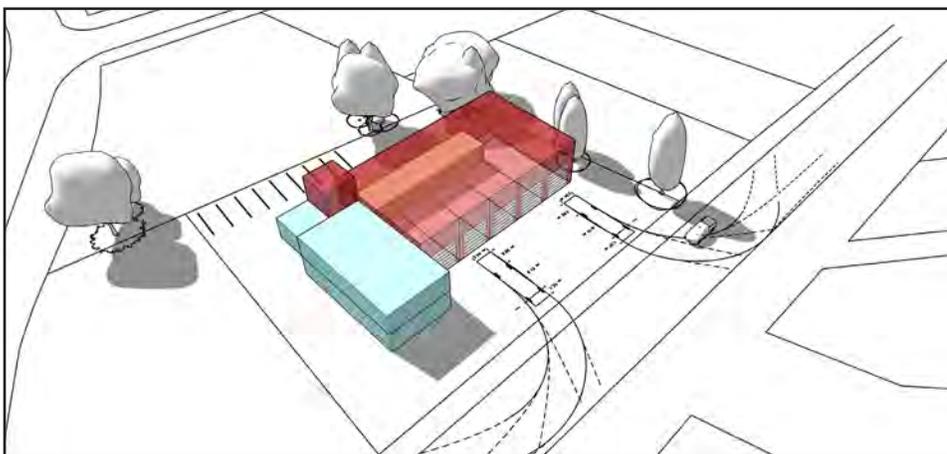
Existing lot addition & renovation conceptual massing model.
Isometric - Aerial 3D View

Project North/ West Elevations



Existing lot addition & renovation conceptual massing model.
Isometric - Aerial 3D View

Project West/ South Elevations

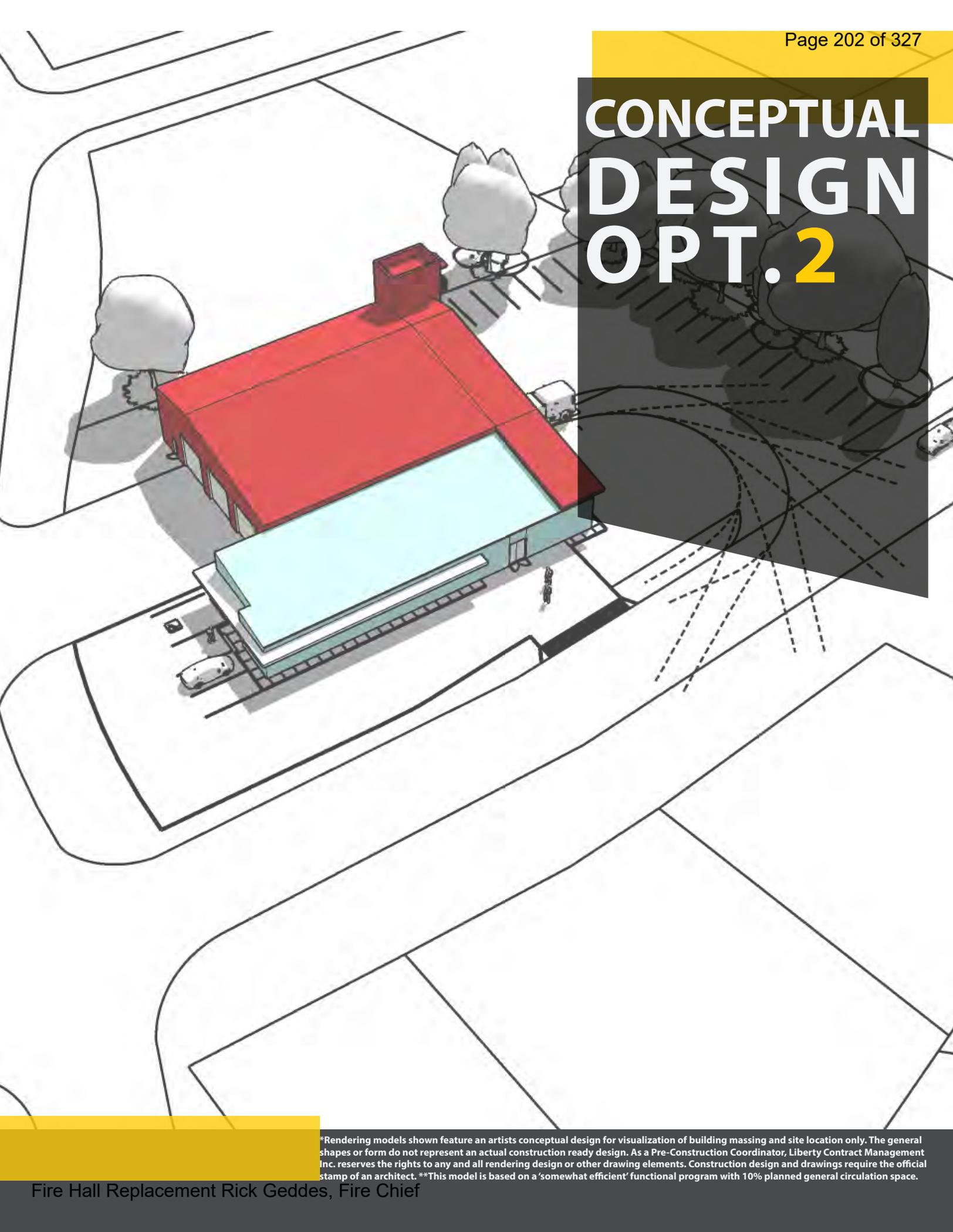


Existing lot addition & renovation conceptual massing model.
Isometric - Aerial 3D View

Project East/ South Elevations

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CONCEPTUAL DESIGN OPT. 2



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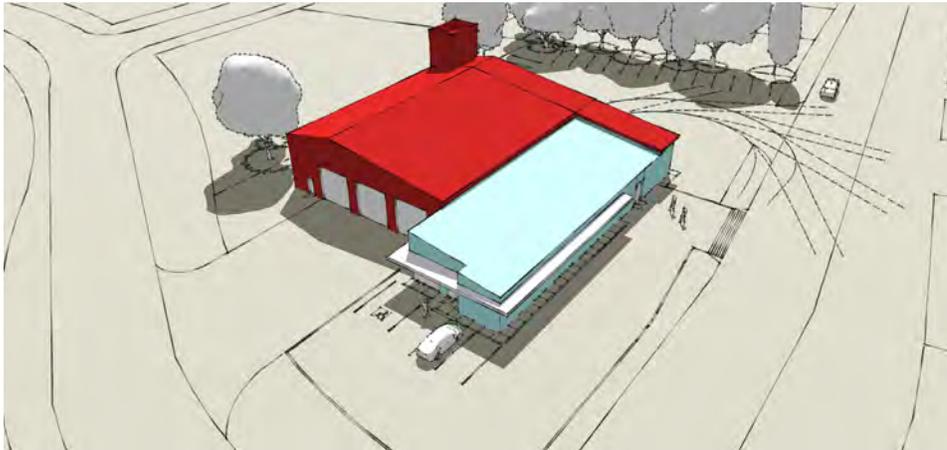


CONSTRUCTION GROUP

7.2

CONCEPTUAL DESIGN

NEW CONSTRUCTION



- Administration building component
- Apparatus (engine bays) building component
- Mezzanine building component (not shown)

Existing + adjacent lot new construction conceptual massing model. Aerial view overlooking the intersection at Peninsula Rd and Matterson Dr.



Existing + adjacent lot new construction conceptual massing model.

East/ South Elevations.

Front Entrance (driveway access/ egress along Peninsula Rd.)



Existing + adjacent lot new construction conceptual massing model.

- 6 apparatus bays (3 double drive-through style bays)
- 14x14 overhead doors
- Concrete apron
- Single Storey Administration
- Hose/ training tower
- Increased overall lot space
- Added gravel parking/ training area capacity

*Rendering models shown feature an artists conceptual design for visualization of building massing and site location only. The general shapes or form do not represent an actual construction ready design. As a Pre-Construction Coordinator, Liberty Contract Management Inc. reserves the rights to any and all rendering design or other drawing elements. Construction design and drawings require the official stamp of an architect. **This model is based on a 'somewhat efficient' functional program with 10% planned general circulation space.

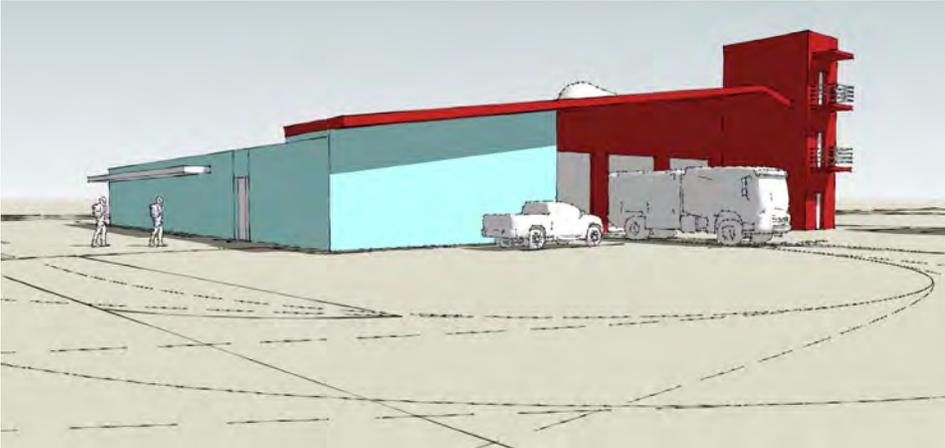


CONSTRUCTION GROUP

7.2

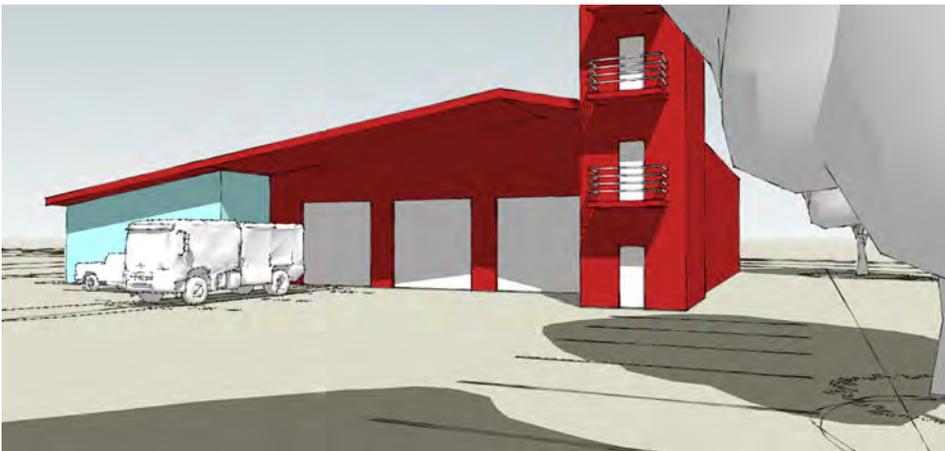
CONCEPTUAL DESIGN

NEW CONSTRUCTION



Existing + Adjacent lot new construction conceptual massing model. Isometric - 3D View

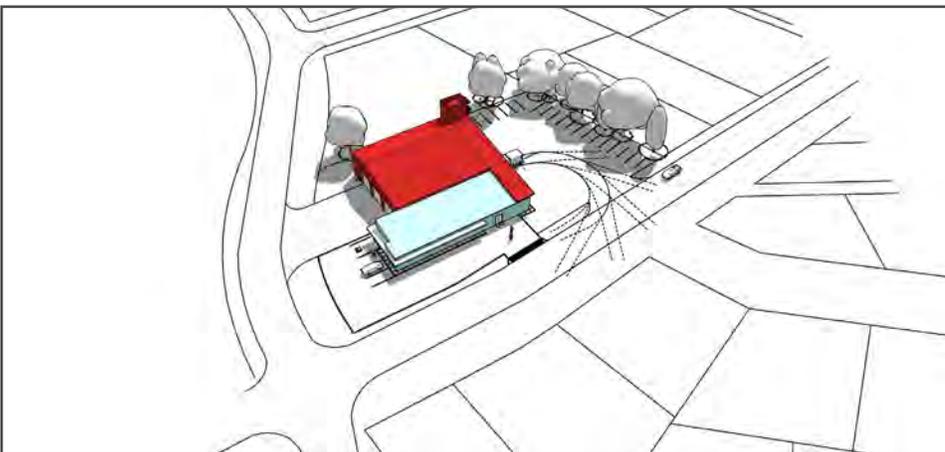
Project North/ East Elevations



Existing + adjacent lot new construction conceptual massing model. Isometric - 3D View

Rear Elevation.

Conceptual hose/ training tower.



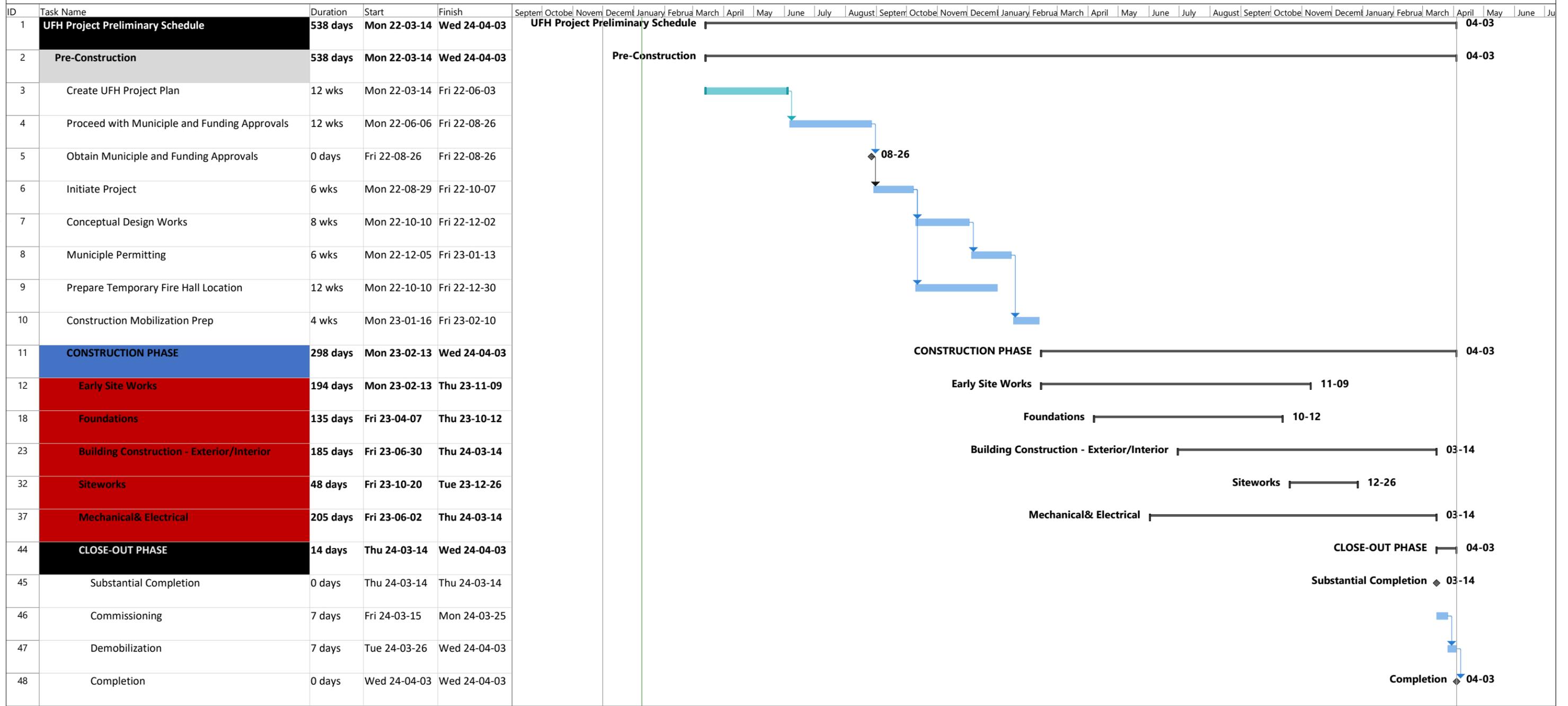
Existing + adjacent lot new construction conceptual massing model. Isometric - Aerial 3D View

*Rendering models shown feature an artists conceptual design for visualization of building massing and site location only. The general shapes or form do not represent an actual construction ready design. As a Pre-Construction Coordinator, Liberty Contract Management Inc. reserves the rights to any and all rendering design or other drawing elements. Construction design and drawings require the official stamp of an architect. **This model is based on a 'somewhat efficient' functional program with 10% planned general circulation space.

8.0

REFERENCE SCHEDULE

UCLUELET FIRE HALL AND EOC - PRELIMINARY SCHEDULE



Project: UFH - Preliminary Sche Date: Sun 22-01-09	Task █ Summary Split ⋯ Project Summary Milestone ◆ Inactive Task	Inactive Milestone ▬ Inactive Summary ▬ Manual Task ▬	Duration-only ▬ Manual Summary Rollup ▬ Manual Summary ▬	Start-only ▬ Finish-only ▬ External Tasks ▬	External Milestone ▬ Deadline ▬ Progress ▬	Manual Progress ▬
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APPENDIX

A

EXISTING CONDITIONS PHOTO REPORT



CONSTRUCTION GROUP

A-A

FIRE HALL EXISTING CONDITIONS PHOTO REPORT

**UCLUELET FIRE HALL
STUDY
1520 PENINSULA RD.
UCLUELET, BC**

This report highlights the existing conditions of the Fire Hall through photo documentation. Professional assessments such as hazardous materials testing or energy reviews have not been completed in this investigation. Reviews by registered professional structural, civil, mechanical, and electrical engineers have not been completed through this investigation. General comments have been made for observation purposes only from a constructibility perspective and do not supersede consultant review and assessment. - Photos and captions highlighted in yellow indicate top problem areas of concern which require immediate attention and remediation.



Ucluelet Fire Hall front elevation view from Peninsula Rd. Main Fire Hall concrete apron marked for emergency use only. Concrete apron shows significant signs of wear and degradation. Ucluelet Fire Brigade branding is being updated. Street frontage shows building past life cycle.



Street view showing main and second floor. Existing apron is very short in length.



Added apparatus bay. Overhead doors are smaller than industry standard. Needs 12'Wx14'H min. size.

Liberty Contract Management Inc.

#316, 19292 - 60th Avenue Surrey, British Columbia, Canada V3S 3M2

tel 604.534.3412 www.libertyconstructiongroup.ca

Fire Hall Replacement Rick Geddes, Fire Chief



CONSTRUCTION GROUP



Photo above shows front soffit area/ canopy overhang with surface mounted linear lighting. General lighting appears to be inadequate for an emergency facility. Downspouts appear to be undersized residential style. OH doors show signs of wear and weathering.



Photo above shows downspouts draining to surface. No splash pads are observed to prevent ground erosion. Ground shows significant organic growth around building in 'non-landscape' areas.



Photo above shows that a perimeter storm water management system is present. The connection appears to be shallow depth. Ground appears unstable due to erosion and organic growth.



Photo above shows vinyl exterior wall cladding. It is obvious that the vinyl cladding has exceeded its product life cycle and needs to be replaced. Immediate maintenance is required. Significant signs of weathering.



CONSTRUCTION GROUP



Photo above shows a close up of the exterior vinyl cladding. This material should not be used on a building of this type. Significant signs of weathering are further shown. Exterior cladding should be replaced with a non-combustible material.



Photo above shows secondary informal gravel apron access to the Fire Hall property from Peninsula Rd. This area of the property is used for parking and training purposes. This area is too small for required uses. Too small for proper truck turning, training, and parking.



Photo above shows site frontage along Peninsula Rd. (South) There are no flashing lights to control traffic when entering or exiting the Fire Hall. Walking and traffic lanes are shown above with no proper apron delineation. Site grading changes are also required.



Photo above shows site frontage along Peninsula Rd. (North). Gravel yard area spills debris onto roadway. Trucks block traffic when entering and exiting site. No apron delineation is present. Tree line shown in photo approximately marks lot line.



CONSTRUCTION GROUP



Photo above shows a patchwork apron that needs replacing. Background of photo shows no dedicated parking areas or access and parking for public. Removal of trees and the addition of a retaining wall may be required at property line for Fire Hall upgrades.



Photo above shows hydro lines along Peninsula Rd. District workers also using Fire Hall lot for temporary purposes.



Photo above shows Peninsula Rd./ Birch St. intersection controlled only by a 'stop' sign. Fire Hall access and egress should be controlled by flashing traffic lights for traffic safety due to lane blockages (quick departures/ slow returns backing in off road)



Photo above shows general view of Fire Hall from neighbouring properties across Peninsula Rd. The building is overall outdated and not aesthetically pleasing on the exterior.



CONSTRUCTION GROUP



Photo above shows the Fire Hall side (North) elevation and training storage area. The general site conditions are degrading and require upgrade and maintenance.



Photo above shows exterior training storage area for vehicles and other equipment or practice materials. Storage space is limited and has low level security. Exterior lighting is limited and not sufficient for night training activities.



Photo above shows rear of second storage. It is obvious that the building envelope has failed. Roof scuppers require replacement. Exterior mounted equipment needs relocation and proper mounting.



Photo above shows rear yard area. Storage and movement space is limited for trailer storage or other goods. The rear concrete apron has failed. It is assumed that the ground requires structural upgrades to support heavier equipment and training.



CONSTRUCTION GROUP



Photo above shows rear overhead door has surpassed its product life cycle. This overhead door may be an acceptable size if used only for access and egress of small equipment.



Photo above shows patchwork to building envelope and inadequate window and door details. It is assumed that the building envelope has completely failed and no longer keeps out water from the wall assembly. Windows are old and past product life cycle.



The photo above shows the overall facade deterioration and inadequate site lighting. Lighting should be upgraded to LED for energy efficiency. Windows and doors should be replaced for improved energy efficiency. No door panic hardware for exiting.



The photo above shows an added exterior shed. The shed is showing similar signs of wear and degradation. An upgraded Fire Hall would cover this footprint area.



CONSTRUCTION GROUP



The photo above shows the adjacent Ucluelet Athletic Club (UAC). The UAC is also beyond its building life cycle and needs complete replacement. It is understood that this lot would serve as an excellent space for Fire Hall expansion.



The photo above shows significant organic growth along the building facades. The buildings show outdated architectural and building envelope details. Fascias and flashings are deteriorating.



The photo above shows the property line location between the Fire Hall and UAC properties. No property line delineation is present. These lots should have security fencing between the two uses.



The photo above shows an exterior view of the lower level administrative building components. No parking is available along this facade. The flat roof drains through scuppers and downspouts as shown in the photo above.



CONSTRUCTION GROUP



The photo above shows the patchwork of cladding materials and the only second level emergency exit staircase. Consistent lot deterioration is shown in this area as well.



The photo above shows poorly sealed wall penetrations and cladding details. These areas are prone to weather intrusion. Building envelope leaks lead to rot, mold growth, health hazards, and energy performance loss.



The photo above shows construction of exterior stairs. The staircase is not built to code and is inadequate for use as an emergency exit.



The photo above shows that the stair is not structurally safe. The stairs are deteriorating and should not be used. A small exterior gutter is observed.



CONSTRUCTION GROUP



The photo above shows exterior mounted electrical conduit along the vinyl clad wall face. This conduit should be protected. The stairs show significant signs of weathering. The steps and railing are not to building code standards and are loose.



The photo above shows further evidence of the description to the right. The stairs are not properly secured to the building structure.



The photo above shows the stairs structural support is inadequately and improperly installed. This detail will cause eventual rot even to pressure treated wood materials. Proper installation and structural fastening is required for life safety areas.



The photo above shows that while SOME perimeter storm drainage is installed, it has not been installed properly and appears to not be installed at the required depth for frost protection. This installation would fail a current building inspection.



CONSTRUCTION GROUP



The photo above continues to showcase the overall deterioration of the Fire Hall. The site lacks property delineation and landscaping. The presentation of the existing Fire Hall does not showcase well in a tourist town. District signage directs main attraction sites.



The photo above shows northbound and southbound traffic lanes along Peninsula Rd. in front of the Fire Hall. Traffic levels appear consistent along this main town thoroughfare. Roadway lines should be upgraded to ensure Fire Hall apron is not blocked by traffic stops.



The photo above shows an overall view of the UAC and Fire Hall sites. Both are on generally flat, level ground which would be ideal for building on. These sites are outside the District Tsunami Hazard zone. It would be desirable to run hydro underground from the pole.



The photo above shows an overall view of the UAC and USS sites at the intersection of Peninsula Rd. and Matterson Dr. It is understood that this intersection is very busy during morning and afternoon pickup times which could slow emergency response.



CONSTRUCTION GROUP



The photo above shows the overhead hydro lines feeding the Fire Hall. There is no post protection to prevent pole damage and possible power outages. Some traffic control signage is noted between the Fire Hall and USS. Neighbouring properties seen in photo.



The photo above shows a number of building code and life safety concerns. This exit stair is unsafe for use. The railing is not secure, the door does not open fully, there is no door panic hardware for exiting, the landing is deteriorating, the overhead power lines to the building are not placed safety or neatly, etc..



The photo above focuses in on the Peninsula Rd./Matterson Dr. intersection. This intersection may need upgraded traffic controls if the UAC site was used for Fire Hall expansion.



The photo above shows a possible new Fire Hall administration main entry location and possible location of an apron entrance for a drive through apparatus bay configuration.



CONSTRUCTION GROUP



The photo above shows the aesthetic of the Ucluelet Secondary School at the intersection of Peninsula Rd. and Matterson Dr. Street frontage landscaping and roadway delineation is observed.



The photo above shows an overall view of USS with the addition and renovation work seen in the background. It is assumed that the entire school facility will be seismically safe at the end of the project whereas the Fire Hall across the street is not.



The photo above shows neighbouring property driveways and gravel parking areas. No formal sidewalk or bike lane is present for pedestrians.



The photo above shows the property line and grade elevation difference between the existing Fire Hall and the Francis Boutique Inn. If an A&R was made to the Fire Hall using the existing property only, tree removal and retaining walls may be required.



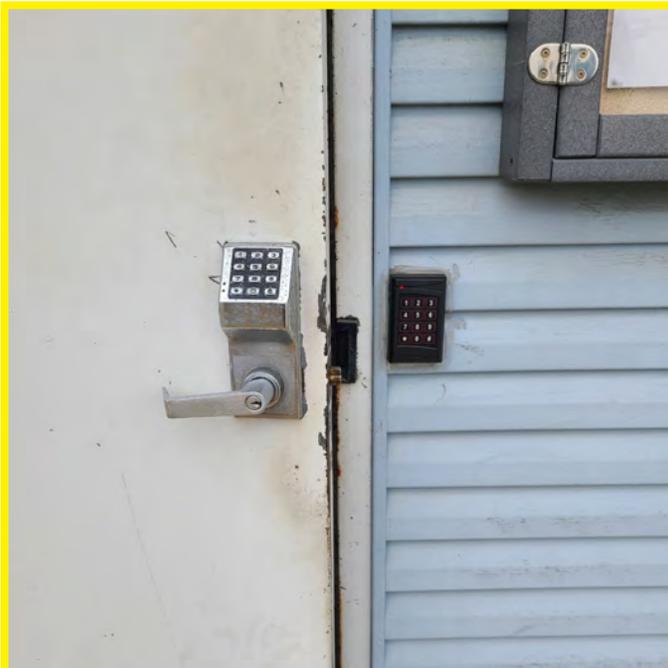
CONSTRUCTION GROUP



The photo above shows the old Fire Hall branding which is in the process of re-branding.
Limited apparatus bay natural lighting or security view toward apron.



The photo above shows the main entry door and apparatus bay overhead doors. The doors and front facade have consistent wear and signs of weathering as the rest of the building. While the style of overhead doors are acceptable, they are too small.



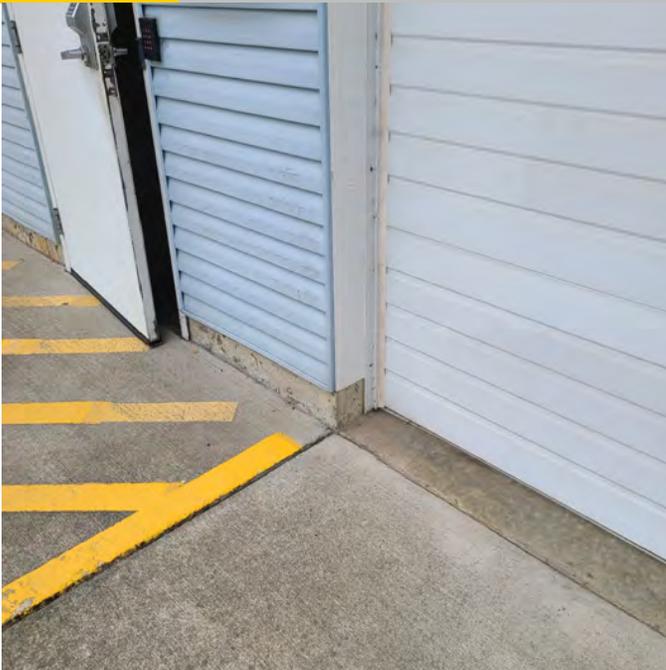
The photo above shows the main Fire Hall entrance. Moderate security is provided with the keyed and coded hardware. Metal door and frame wear is clearly shown.



The photo above shows OH door weather protection detail issues. Water may enter the apparatus bays during major rainfall or significant wind driven rainfall events with inadequate sloping and lack of slab drainage.



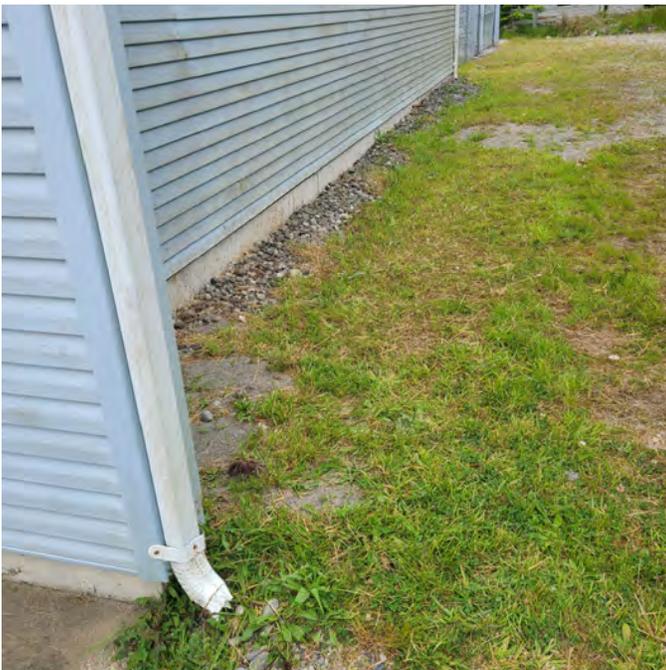
CONSTRUCTION GROUP



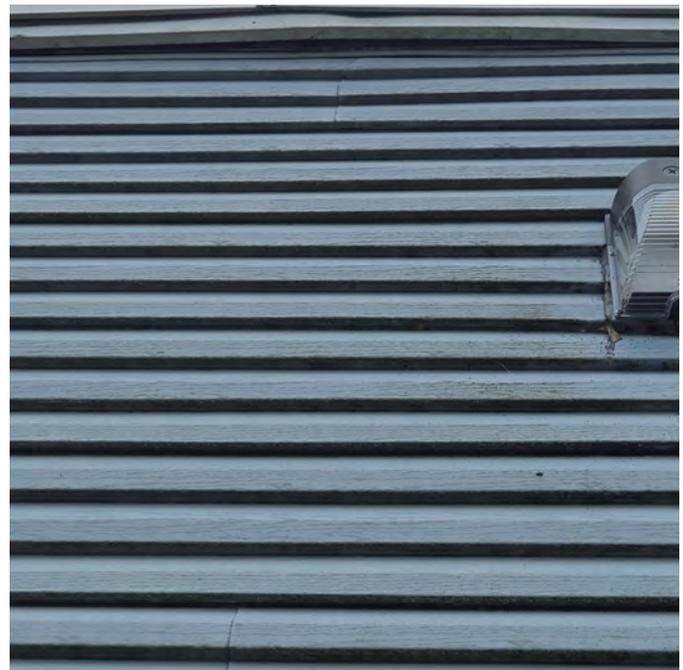
The photo above further shows the issues previously mentioned as well as weather stripping issues and deterioration which leads to an increase in building heating and operating costs.



The photo above shows inadequate main entry lighting. The main entrance is not suitable for public access. Emergency egress (panic) hardware is not present.



The photo above shows the overgrowth of organics are the site and lack of proper storm drainage. The site is not suitable for proper usage and training facilities. The current site conditions pose safety hazards to the public.



The photo above shows another facade view of the failing building envelope.



CONSTRUCTION GROUP



The photo above shows a clear example of building envelope failure at the rear entry door jamb. Rot and deterioration is clearly present and likely is also present within the wall assemblies. The section of rot lessens the security level of this entry point.



The photo above shows a rotting rear door jamb and interior base of wall near the sill. It is clear that proper door installation details were not followed allowing water leakage into the building envelope. A commercial type door should have been used.



Photo 'A' above shows one example of complete building envelope failure. The vinyl cladding has long passed its product life cycle and is brittle and crumbling. This residential style product is combustible and not suitable for this application.



Photo 'B' above shows another location with the same issues as seen in photo 'A' to the left. The plywood wall sheathing is exposed and no building paper or weather barrier is seen which is a major building envelope assembly issue.



CONSTRUCTION GROUP



The photo above shows patched concrete slab sections. Large cracks and overall deterioration in seen in all areas of this photo including rusting metal wall vents, lack of foundation wall curb, and proper separation of organics from the building structure.



The photo above shows firefighter parking. Site parking for Fire Hall volunteers is very limited. The parking surface is overall not acceptable for a Fire Hall facility. The ground surface and lack of lighting poses safety issues for Fire Hall personnel.



The photo above shows surface mounted conduit passing through the roughly cut metal soffit.



The photo above shows clear building envelope penetration weather protection issues. The meter is placed in a poor location and should be relocated for easy access.



CONSTRUCTION GROUP



The photo above shows the general condition of the roof. The roof system is inadequately sloped causing water ponding during the fall and winter months. It is clear that the roof requires replacement.



The photo above shows that although most of the site appears generally stable during warm dry months, poor soils conditions and soft spots become visible during the fall and winter months. Geotechnical investigation should be conducted.



The photo above shows soft spots in the parking and training area of the site that become too soft to drive apparatus trucks over in the fall and winter months. Removal of soft areas and installation of structural fill materials is required in these areas.



The photo above shows potential site hazard areas. While the propane tank is protected, the security level is low. This area shows much site deterioration and blocks much movement and training area. This needs to be relocated and site repairs are needed.



CONSTRUCTION GROUP



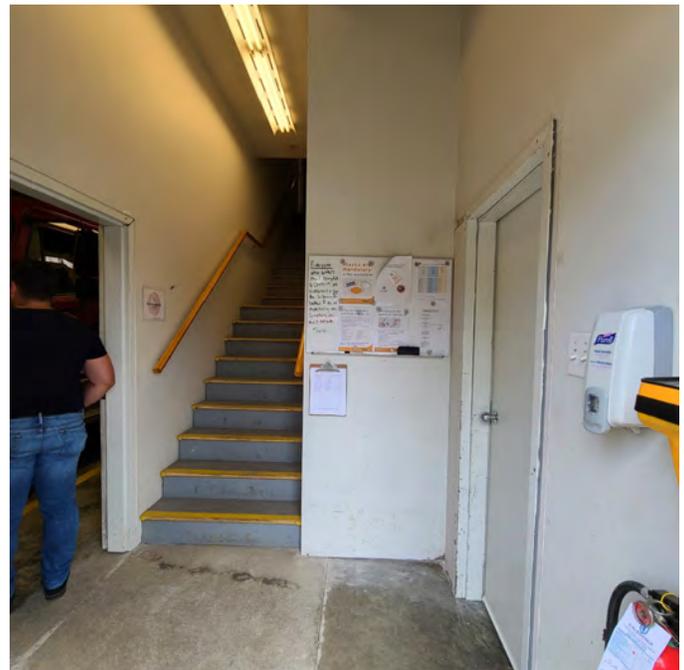
The photo above shows the current trucks owned by the Fire Department. The department needs an aerial apparatus truck. However, there is no room in the current Fire Hall to fit another truck. The existing Fire Hall and apron cannot even fit an aerial truck.



The photo above shows the Fire Chief's rescue truck (daily driver) and regular parking stall location. The Fire Chief should have a labeled parking stall. The Fire Chief's daily testing and activation of the trucks lights and sirens cause distraction to onlookers.



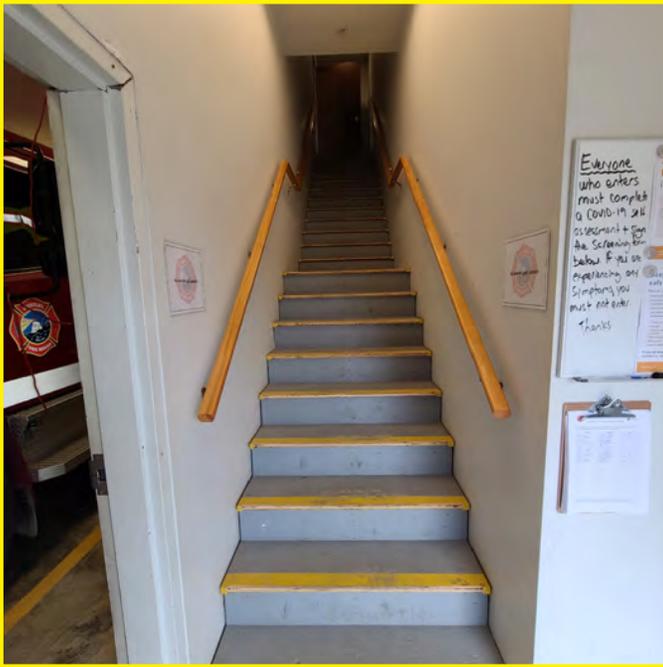
The photo above (referenced previously in this document) marks a transition to the interior photo documentation section of this existing conditions report.



The photo above shows the existing Fire Hall main entry vestibule. The apparatus bays on accessible through single doors to the left and right. The main entry does not meet accessibility requirements. The stairs and handrails are not built to code.



CONSTRUCTION GROUP



The photo above highlights the stair and handrail issues. The stair treads do have proper nosing but have a steep rise and run and inadequate headroom as required by code. The door frame appears to be poorly installed or unfinished.



The photo above shows the existing condition of the bare concrete flooring. No concrete sealer appears present or has worn away. The areas of addition are seen. The **fire rating** of this exit stairwell cannot be confirmed adequate.



The photo above highlights a number of major issues with the existing Fire Hall that further stress the need for an A&R or new Fire Hall to be constructed: OH door/ drainage, electrical issues/ fire hazards, there is NO ROOM for an aerial truck of adequate walking rm.



The photo above shows one of the Fire Hall apparatus bays. Walking room is generally clear but is very tight according to industry standards. The ceiling finish height is low. Lighting is just sufficient. The concrete floor is worn and stained.



CONSTRUCTION GROUP



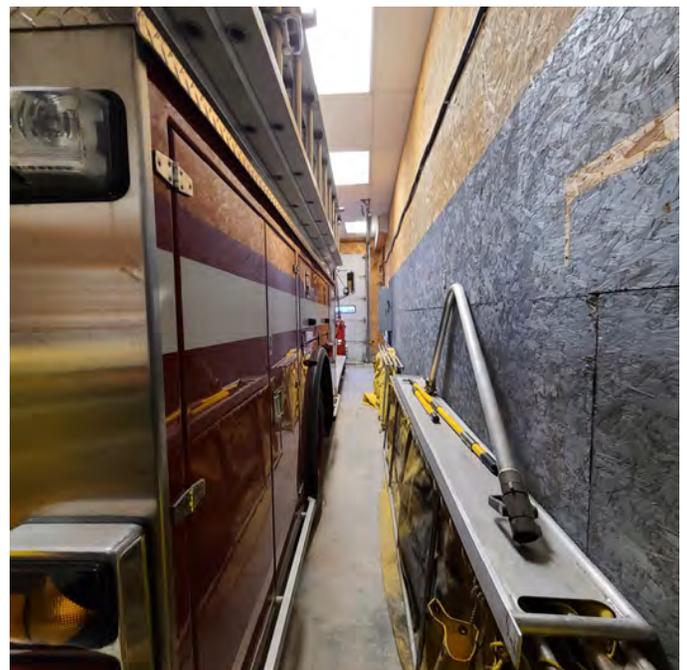
The photo above shows how tight the walking space is around the fire trucks. Movement is limited and will be completely block by an open truck door. The wall finish seen here is just painted OSB plywood which does not serve as a required fire rated material.



The photo above shows the space between the two original apparatus bays. Movement is limited and the lack of storage space for washing equipment creates tripping hazards. It is also assumed that this dividing wall is load bearing but has no fire ratings.



The photo above shows a second apparatus bay. Limited movement around the truck and other issues are consistent with items mentioned in previous photos.



The photo above shows a look at the back of the apparatus bay shown in the photo to the left. There is virtually NO movement space due to storage and narrow bay sizes. The wall finish is half painted, no fire rating is observed with surface mounted electrical.



CONSTRUCTION GROUP



The photo above shows the SCBA and compressor station. The fill station is positioned at the rear of the apparatus bay and has potential for exhaust contamination. Functionality and movement in this area is very limited due to the small space.



The photo above further highlights the issues noted in the photo to the left. SCBA and compressors required a dedicated 'clean room' for proper separation from apparatus bays and intake of fresh air. Clean work area is needed for storage and maintenance of equipment.



The photo above shows a ladder protruding from the back of the fire truck which poses a safety hazard and movement limitations. The SCBA and compressor should be relocated and items should not be stored in this area.



The photo above shows evidence of a previous water leak and subsequent water damage to the ceiling finish. It is assumed this did not cause any structural damage. A small unit heater is hung from the ceiling space and does not appear adequate for the space.



CONSTRUCTION GROUP



The photo above shows miscellaneous SCBA bottle storage along with other maintenance and rescue equipment.



The photo above shows the poor patchwork condition of the interior wall 'finishes' and surface mounted electrical. No fire rated material is observed around bulkhead areas.



The photo above shows equipment that needs to be relocated to a proper clean environment.



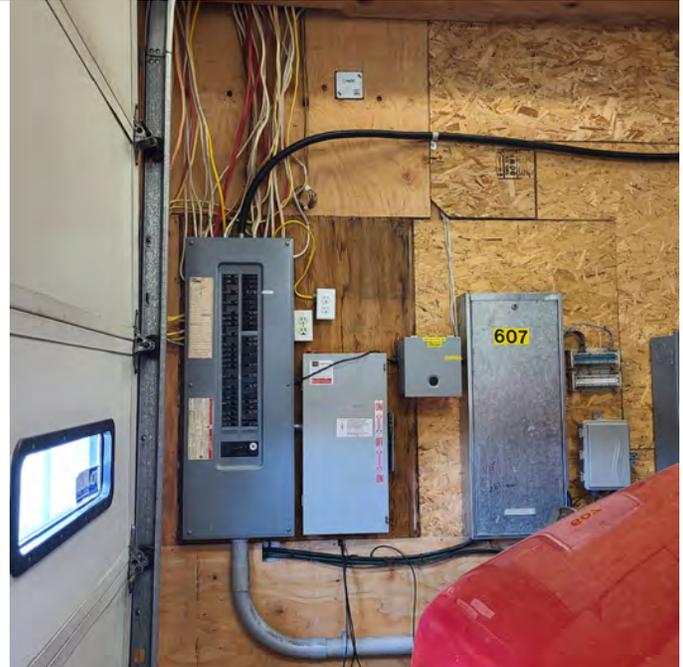
The photo above shows equipment that needs to be relocated to a proper clean environment. There is no access to a sink for washing masks or clean work bench for gear maintenance. There is no available space for either in the existing facility.



CONSTRUCTION GROUP



The photo above shows surface mounted equipment controls and surface mounted wiring again a painted OSB wall finish.



The photo above shows the surface mounted electrical room positioned within the apparatus bay area. This should be within a dedicated fire rated electrical room. The wiring and fuse switches are exposed and are very near to the door.



The photo above further shows that movement is limited around all sides of the trucks in the fire hall. Electrical equipment needs relocation to a proper electrical room.



The photo above shows the electrical installation issues in the existing Fire Hall which likely need to be completely upgraded to meet current codes. If the OH door is open, wind driven rain could cause electrical issues due to the proximity to the door.



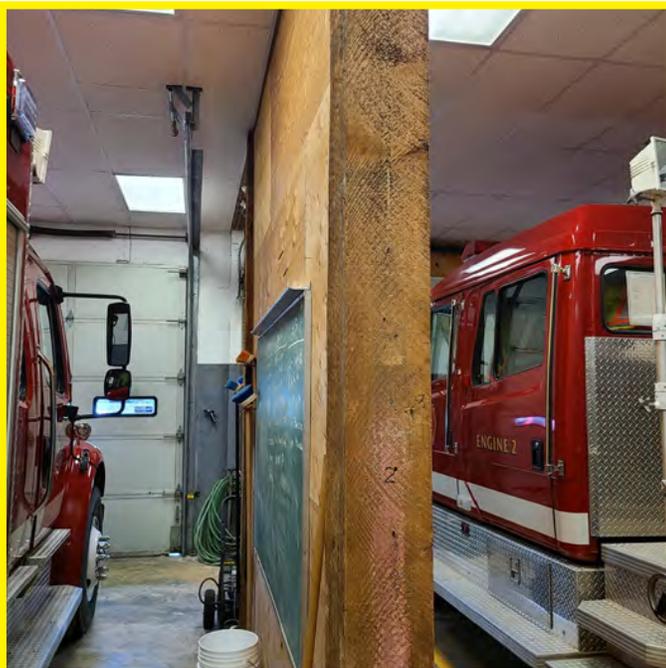
CONSTRUCTION GROUP



See previous photo notes. Additionally, daylight can be seen along the edges of the overhead door resulting in significant energy loss.



The photo above shows a single air scrubber unit centrally hung over the main apparatus bays. Efficacy cannot or proper operation cannot be confirmed to meet WCB standards with respect to controlling carbon monoxide levels from truck exhaust.



The photo above shows a dividing partition wall between the main truck bays. This wall is comprised of rough-sawn timber columns and plywood sheathing. This wall is assumed to be a structural element. No fire rating protects these elements.



The photo above shows the narrow apparatus bays. The trucks can open the doors fully, but movement is severely limited.



CONSTRUCTION GROUP



The photo above shows a close up look at the rough-sawn columns and what is assumed to be a shear wall nailing pattern at the edges of the plywood sheathing. The structural adequacy of the columns and acceptability of the nailing cannot be confirmed.



The photo above shows an exposed 4-ply built-up wood beam supporting the floor above. It is assumed these members are continuous over the column support. Proper structural fastening or metal brackets appear completely absent. Shimming is wedged.



Reference previous photos for further information on photo above. This photo shows another partition wall. Exposed electrical and emergency lighting wiring is observed. The beam above is shimmed and appears to lack appropriate fastening requirement.



The photo above shows the continuation and support of the structural floor beam member terminating at the front wall location. The size of column is unknown. The column is assumed similar rough-sawn wood. Proper bearing? Lack of fastening. NON-SEISMIC.



CONSTRUCTION GROUP



The photo above shows a close up look at one of the interior partition walls. This wall is assumed to be a structural shear wall supporting the floor above. The connections do not appear to be seismically sound.



The photo above shows a look above the apparatus bays acoustic ceiling tile finish. The t-bar does not appear to be seismically fastened to the underside of structure. No fire rating is observed. The structure appears to just be dimensionally wood framed.



The photo above shows a closer look at the 2nd floor framing elements. These do not appear to be seismically sound. The wood is dry but it not in good condition. The wood has the appearance of used forming material. - structural details needed.



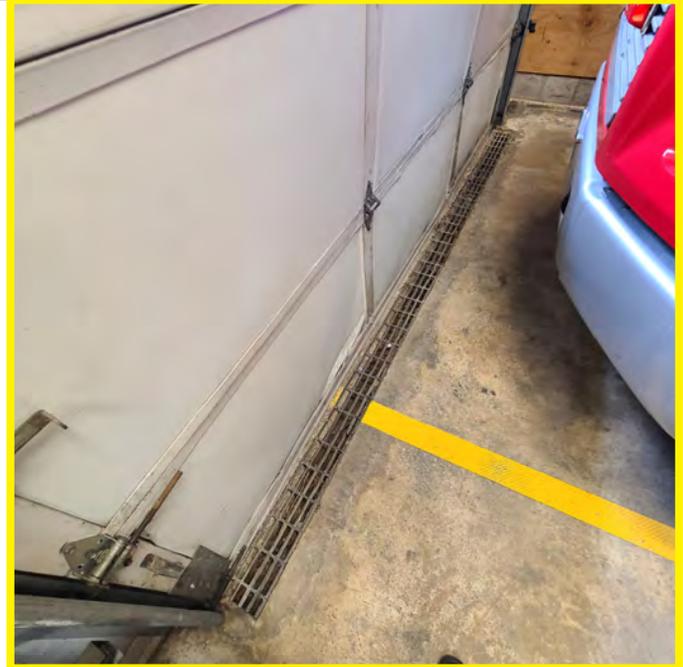
The photo above shows a closer look at the 2nd floor framing elements. Joist bracing or blocking appears to be inadequate. No fire rating is observed. Stuctural framing needs to be inspected by an engineer. Replacement and increased fastening requirements.



CONSTRUCTION GROUP



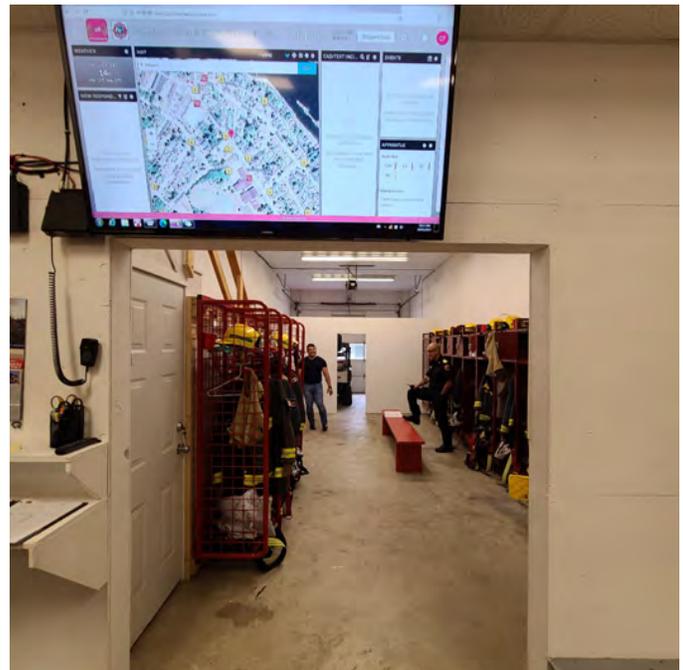
The photo above shows the existing Lift Master overhead door openers. Effective condition cannot be confirmed.



The above photo shows two main areas of concern:
1- improperly positioned undersized trench drain
2- undersized apparatus bays



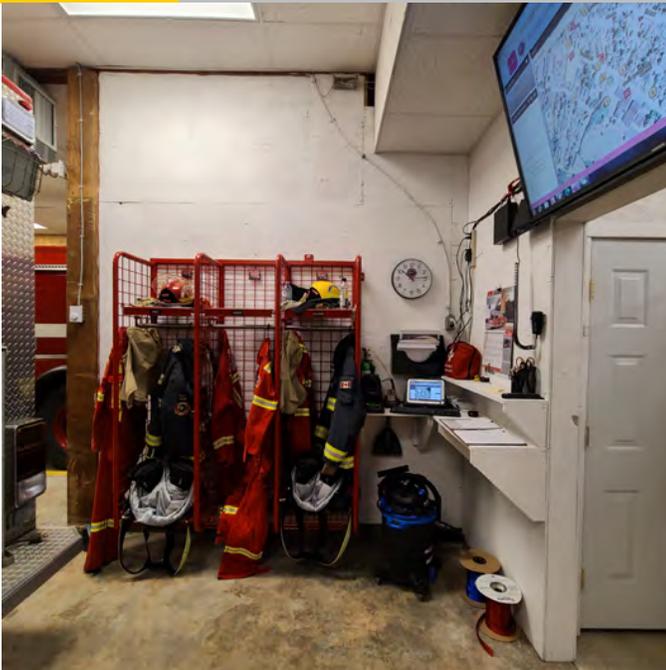
The photo above shows an interior hose bib that is used for vehicle washing. This needs to be relocated and mounted for proper storage.



The photo above shows a look at the emergency response center and rip'n'run radio area (dispatch) to the left. This photo looks towards the gear room and rescue gear storage bays.



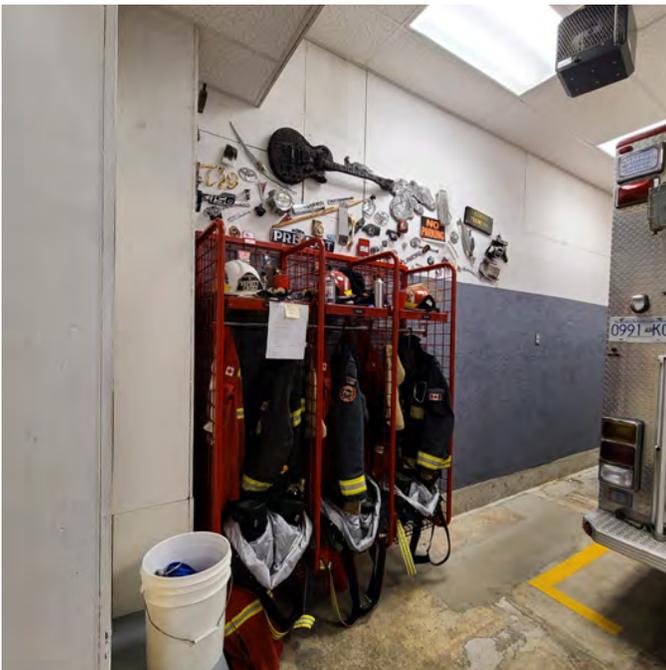
CONSTRUCTION GROUP



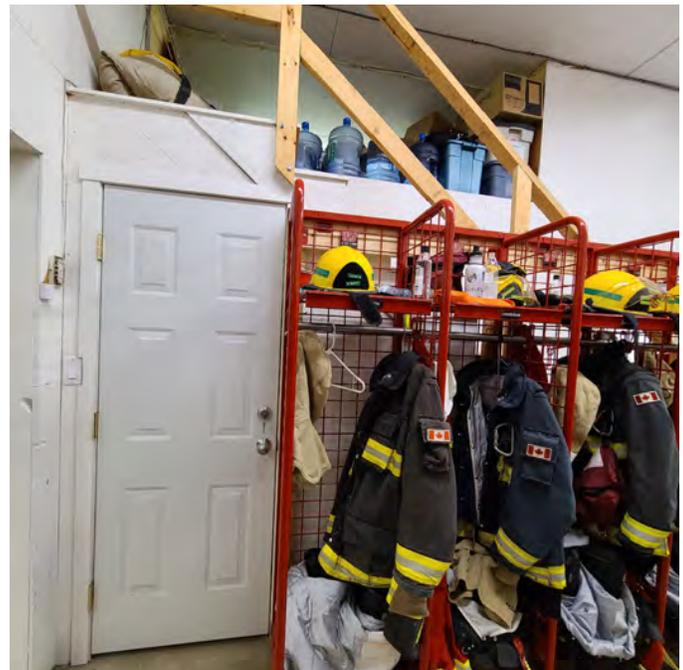
This photo shows a 3-tier ready rack system placed tight against the rip'n'run radio area which creates a very crowded and dis-functional space. A larger work surface and proper shelving for radios and charging is required.



The photo above shows a closer look at this crowded station.



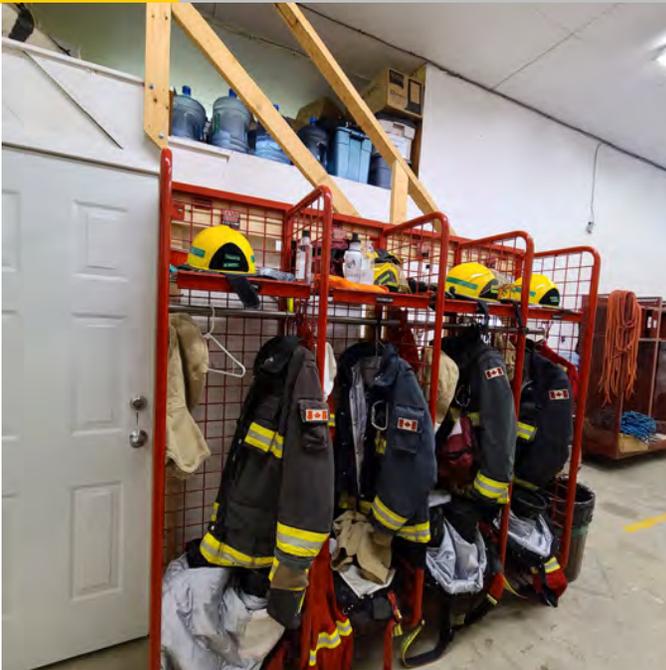
The photo above shows a 3-tier ready rack system hung at the back of the main apparatus bays. There is not enough room for the gear to be hung all in the same room. The gear layout is scattered and inefficient. A proper sized gear room is required.



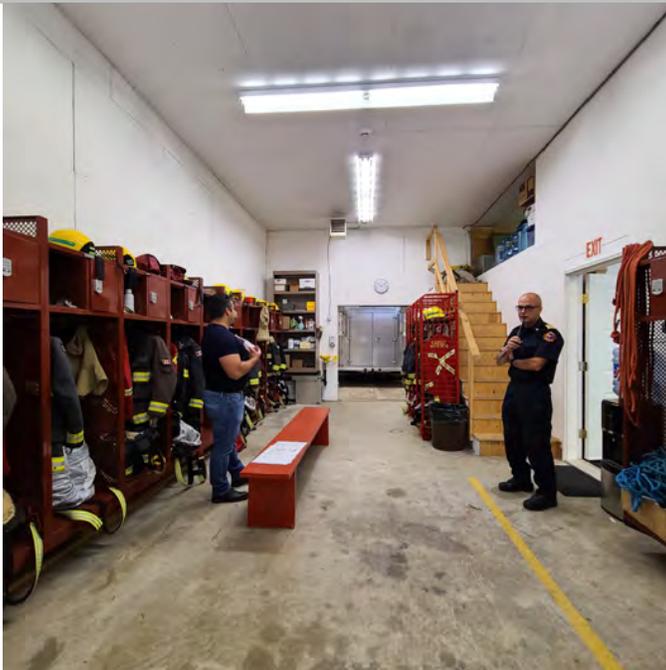
The photo above shows access to a small storage area under the staircase with a small storage mezzanine above and a 4-tier ready racking system to the right.



CONSTRUCTION GROUP



The photo above shows a closer look at the 4-tier ready rack system that has been added to accommodate additional gear storage. This racking is acceptable for re-use (10 stalls total if a new space design configuration allowed).



The photo above shows an overall view of the gear room. The width and space is acceptable but needs complete reconfiguration and renovation.



The photo above shows old style gear racking units and single lockers that need to be replaced as they do not allow for the use of an integrated drying system. The lighting in the gear room is adequate but could be upgraded for better efficiency.



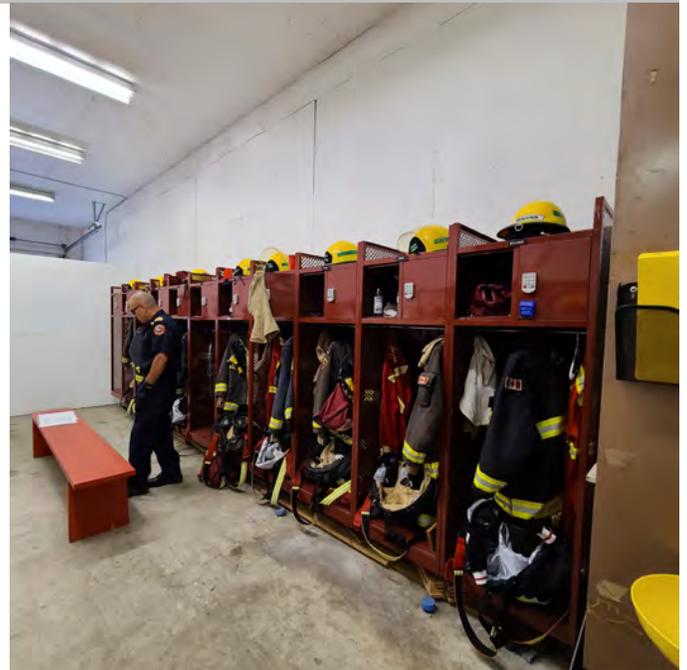
The photo above shows every corner of the Fire Hall being used for some sort of storage. A proper janitorial supply closet is required. The eye wash station is good to have and is acceptable. Hand sanitizing stations should be installed at all high traffic areas.



CONSTRUCTION GROUP



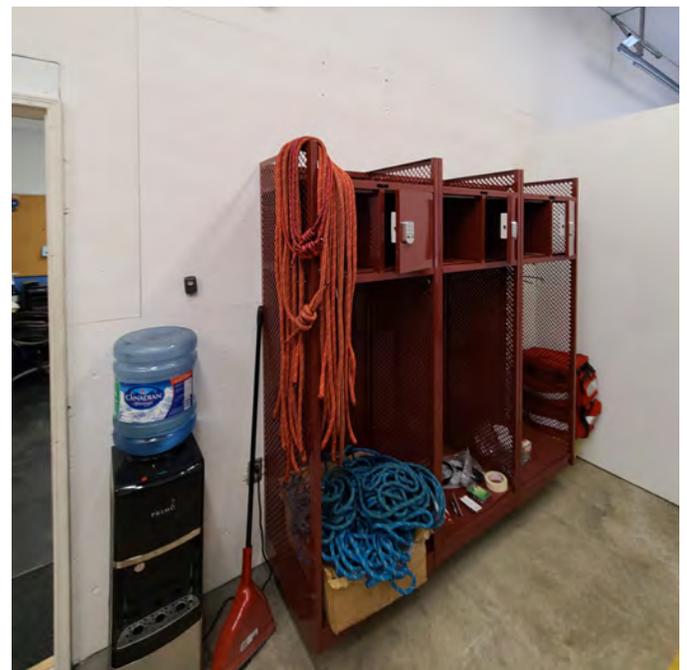
See previous photo for further information. Storage needs to be improved.



See previous photos for further information.



See previous photos for further information. It appears that no gear drying system is available in the gear room which makes gear drying difficult and very inefficient.



See previous photos for further information. The Fire Hall would greatly benefit from a complete redesign to properly organize rooms and Fire Hall functionality components. Training gear and first aid equipment is placed wherever space is available.



CONSTRUCTION GROUP



The photo above shows the access stairs to the storage mezzanine and the door entering the office, gym, and radio rooms to the right. The storage space is not safely accessible.



The photo above shows access stairs to the storage mezzanine. The stairs and railing are not built to code. A small unit heater is observed to be mounted to the underside of the ceiling in the gear room.



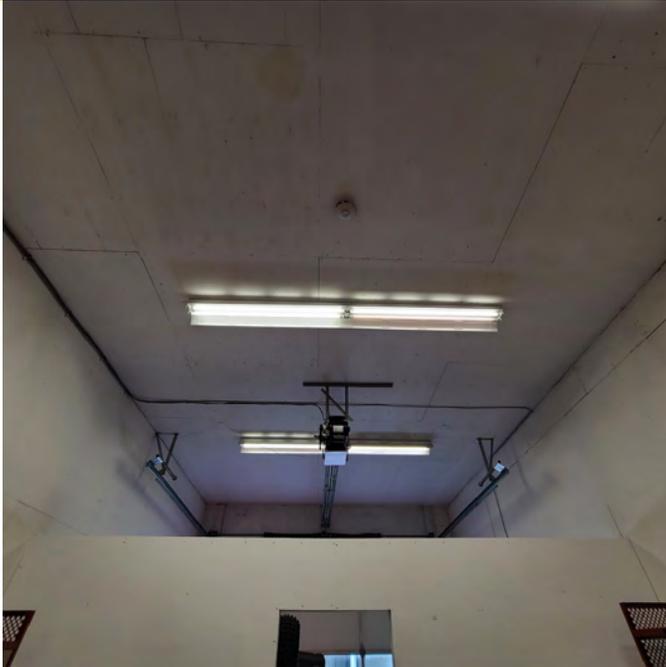
The photo above shows an over packed storage area.



The photo above shows an over packed and inaccessible storage area. There is no room to properly store disaster relief or first aid supplies.



CONSTRUCTION GROUP



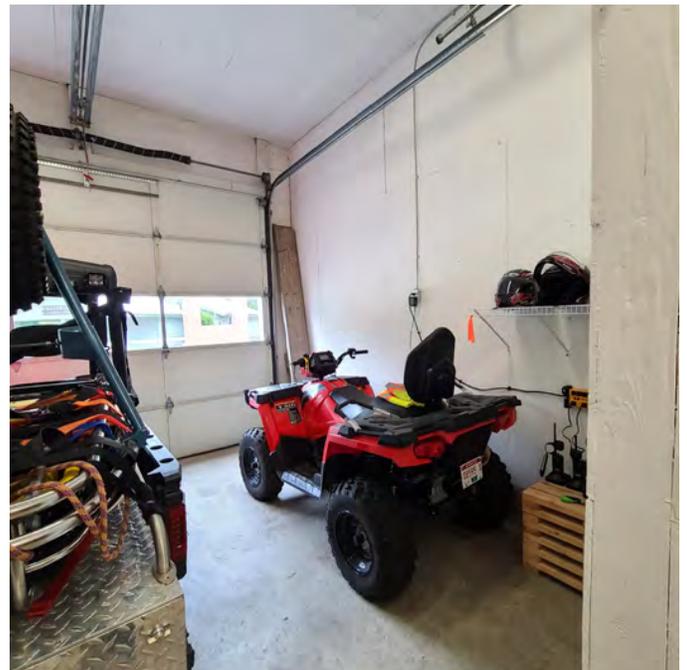
The photo above shows the ceiling and wall finishes above the gear room and rescue storage areas. The finishes are just painted plywood.



The photo above shows rescue equipment and storage area.



The photo above shows rescue equipment and storage area.



The photo above shows rescue equipment and storage area. Storage space and shelving is limited. Good daylight comes from the door glazing. The overhead door needs replacing as previously noted.



CONSTRUCTION GROUP



The photo above shows rescue equipment and storage area. Storage space is limited and the bays are too small to properly fit the required equipment.



The photo above shows rescue equipment and storage area.



The photo above shows rescue equipment and storage area.



The photo above shows rescue equipment and storage area. The rescue storage bays are separated from the gear room with a simple partition wall. No exhaust cleaning system is observed in these areas.



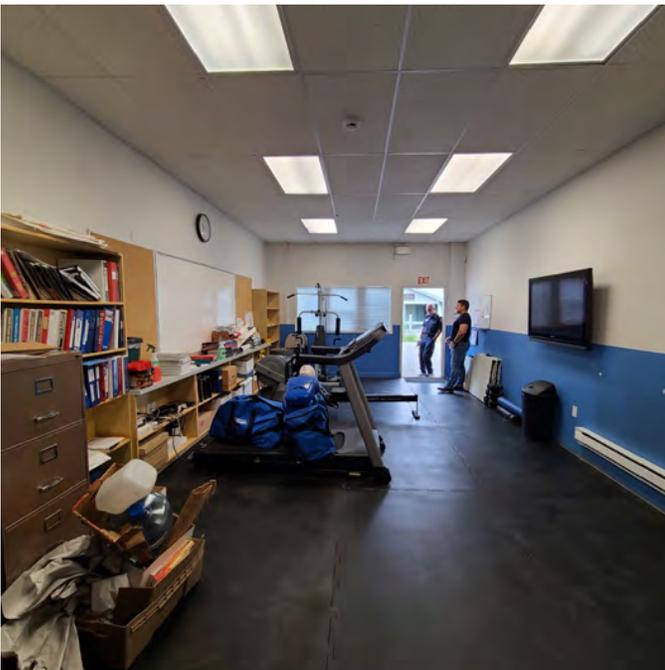
CONSTRUCTION GROUP



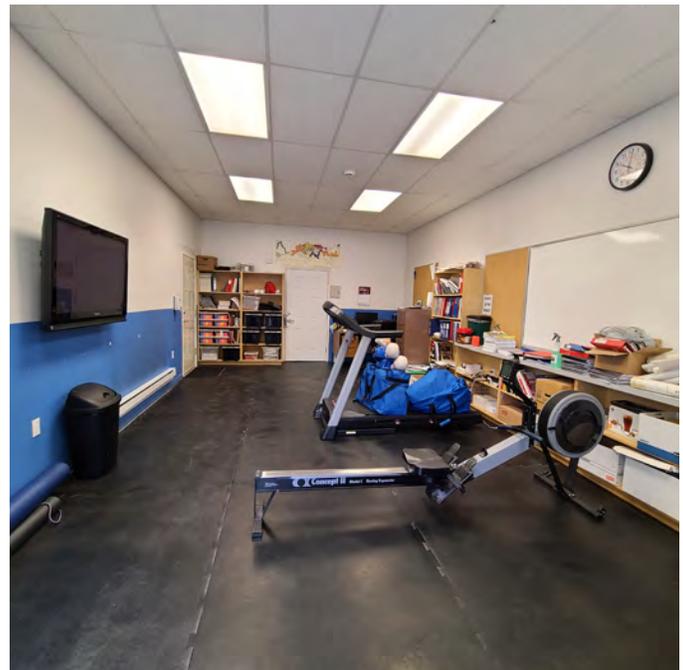
The photo above shows one section of the main floor 'administration area' which has been combined with the fitness room (gym). There is no room for proper separation. There is no room for properly organized shelves and archives.



The photo above shows a desk space that is used for various administrative purposes. The area is cluttered and there isn't room for proper organization.



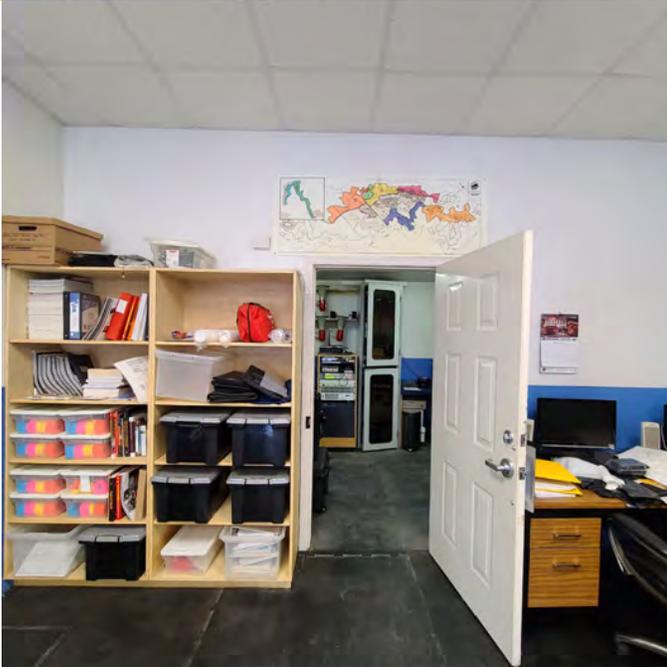
The photo above shows an overall look at the main floor admin. area and gym. Baseboard heating is observed, painted drywall and acoustic ceiling tile finishes.



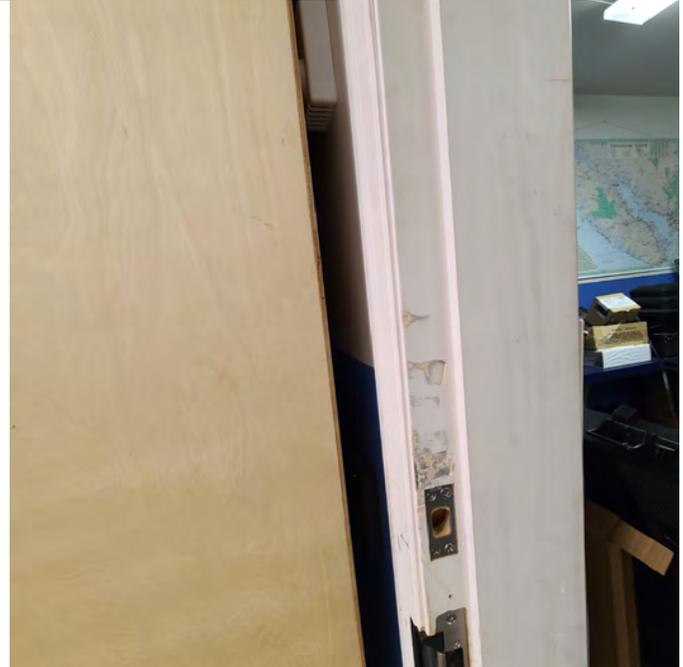
See photo left for further information.



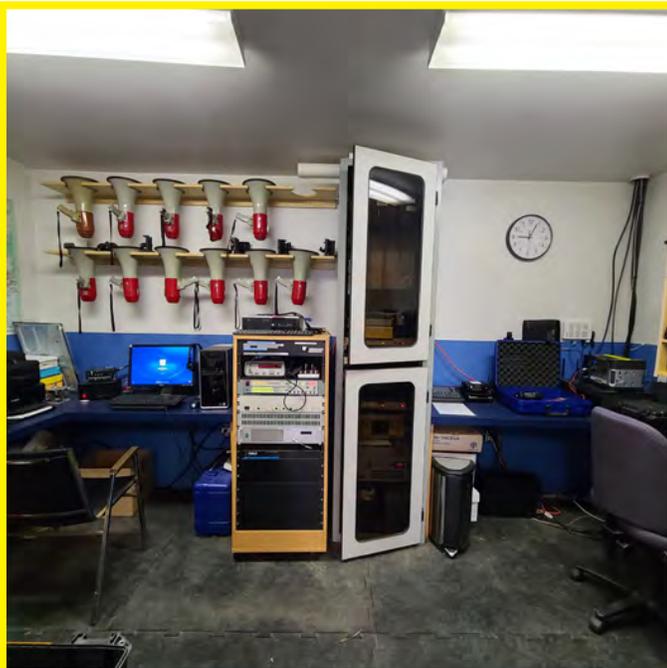
CONSTRUCTION GROUP



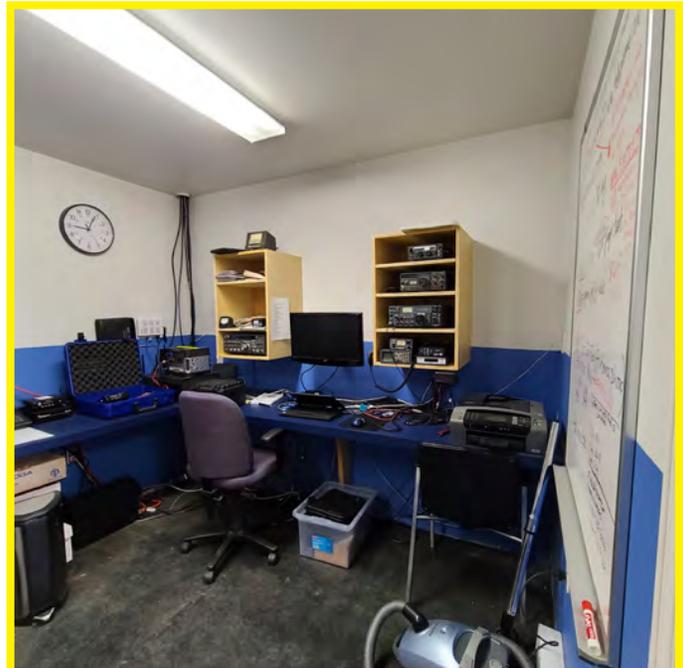
The photo above shows the entry door to the EOC/ radio room.



The photo above shows the thermostat and light switch are blocked by the shelving units.



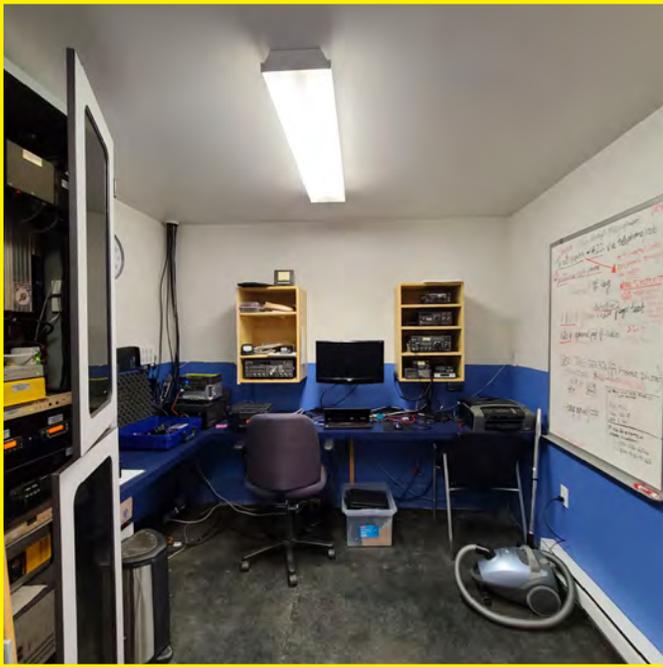
The photo shows an overall view of the EOC/ radio room.



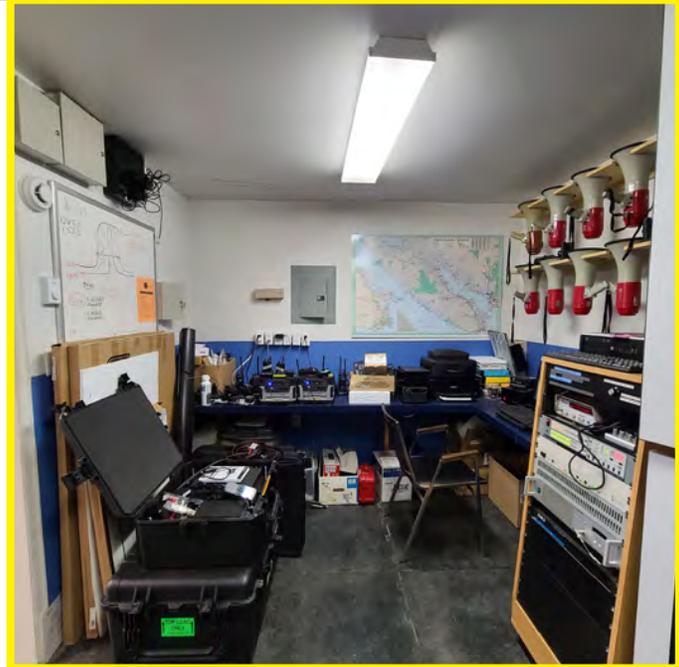
The photo shows an overall view of the EOC/ radio room.



CONSTRUCTION GROUP



The photo shows an overall view of the EOC/ radio room.



The photo shows an overall view of the EOC/ radio room. The room is too small for the required usage and storage. This room would not be sufficient for proper response procedures in a disaster situation.

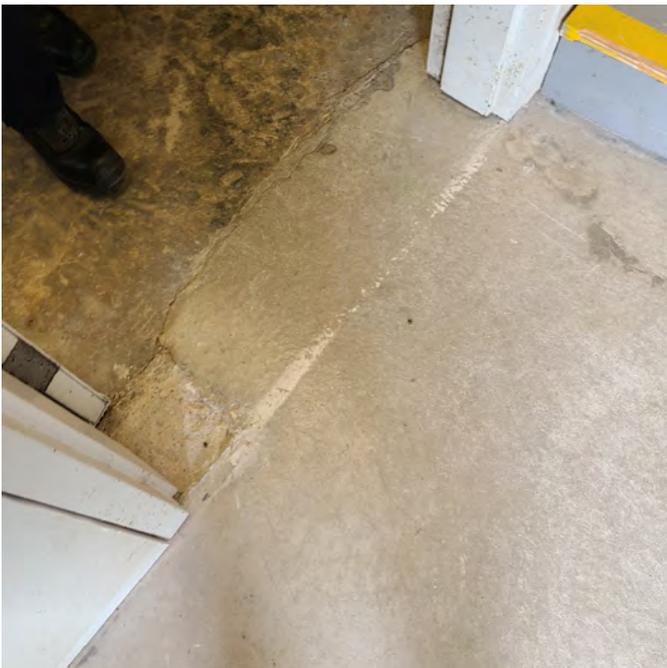
The proceeding photo mark a transition to the 3rd apparatus bay.



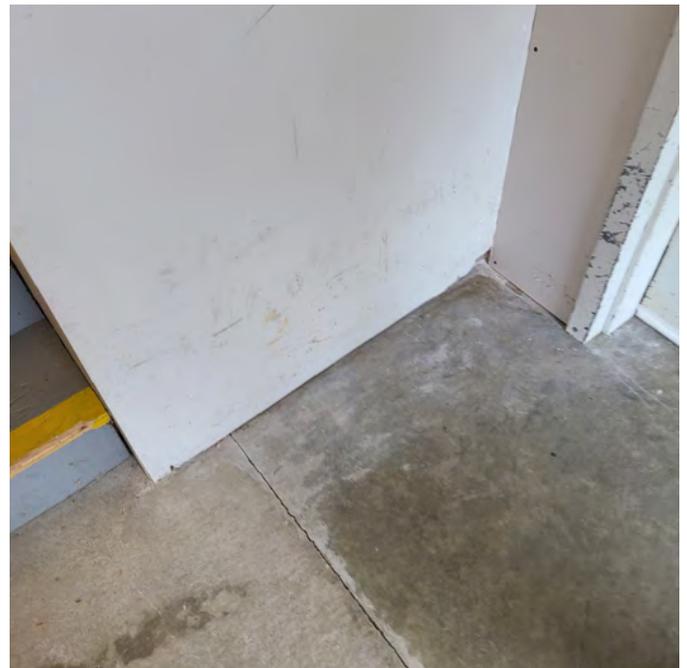
CONSTRUCTION GROUP



The photo above shows a look at the main entry ceiling and stairwell. One surface mounted light is observed and a supporting beam. The fire rating or structural elements cannot be confirmed.



The photo above show the condition of the main entry concrete slab.



The photo above shows the condition of the main entry concrete slab, walls, and door frames. Maintenance is needed. This photo provides a closer look at the plywood stairs and nosing.



CONSTRUCTION GROUP



The photo above shows a look at the 'work shop' area located in the 3rd apparatus bay (left side of bay). There is not enough room for proper tool, equipment, and fuel storage.



The photo above shows a look at the 'hose storage' area located in the 3rd apparatus bay (right side of bay). There is not enough room for proper hose drying and storage on racking.



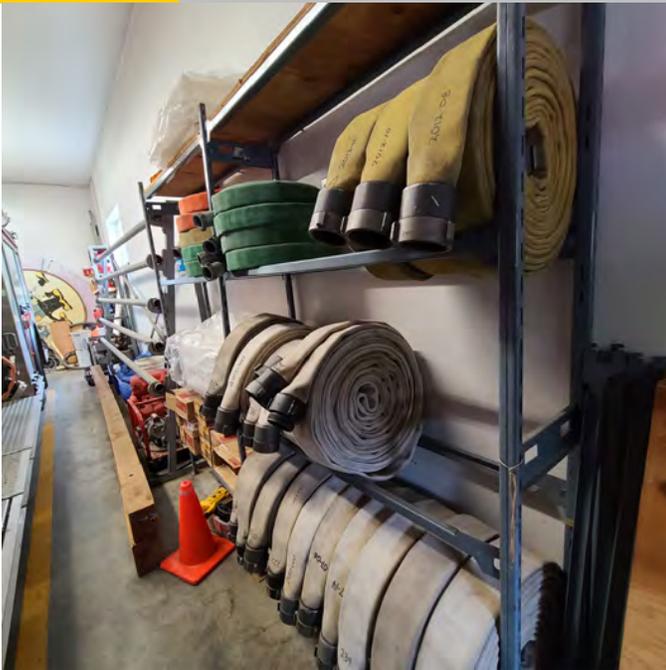
The photo above shows the limited apparatus bay space. There is very limited movement space in this bay.



The photo above for storage in the apparatus bays that needs designated secure space.



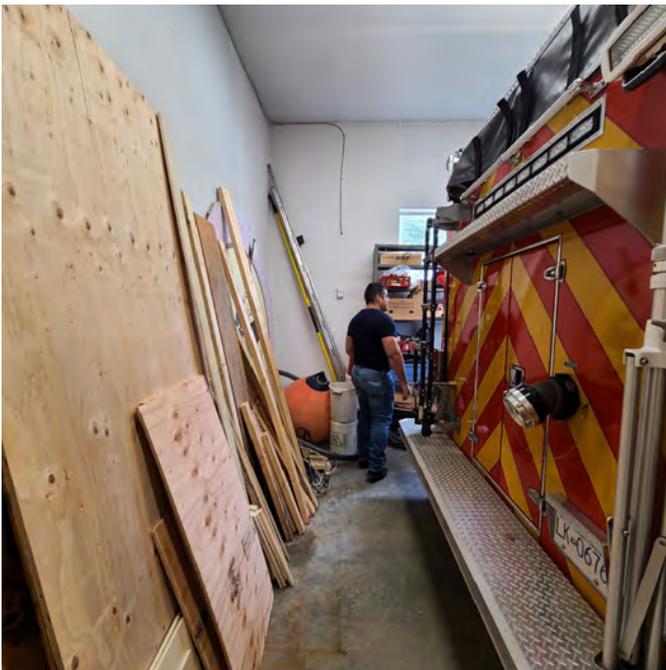
CONSTRUCTION GROUP



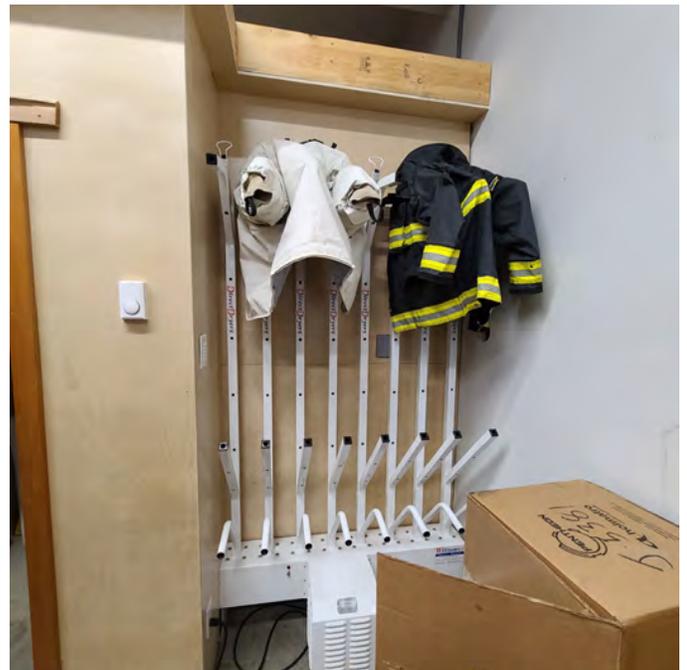
The photo above shows the storage in the apparatus bays that is creating problems due to the limited space available.



The photo above shows the storage in the apparatus bays that is creating problems due to the limited space available.



The photo above shows the storage in the apparatus bays that is creating problems due to the limited space available. There is no room for a workshop or material storage for training prop building or other usages.



The photo above shows the gear drying unit. Capacity is limited.



CONSTRUCTION GROUP



The photo above shows the only available washroom on the main floor. This washroom/ shower room combo is not sufficient for a decontamination room which should be available in the apparatus bays.



The photo above shows the gear washing machine. No organization or cleaning storage room is available in this area. The workshop storage to the left makes for a non-functional space.



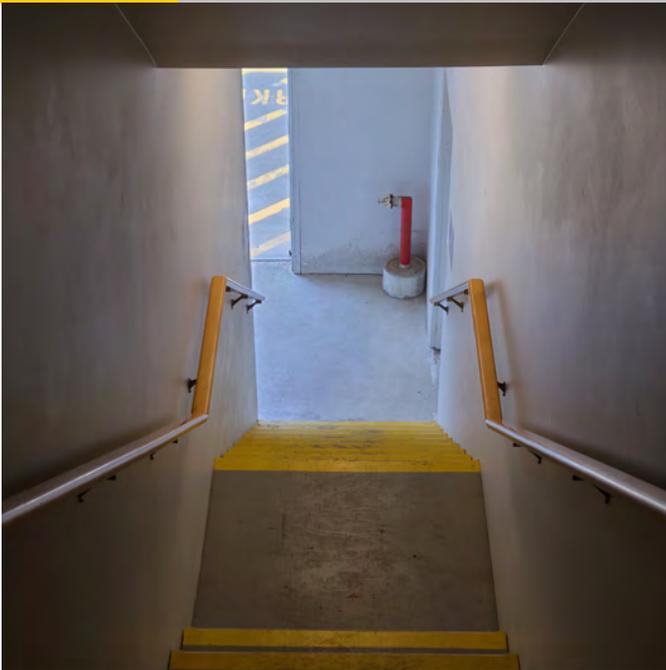
The photo above shows the 'work shop' and bench area with a small storage room.



The photo above shows the bay addition overhead door mounting.



CONSTRUCTION GROUP



The photo above shows the main entry stairs which lead to the second floor administrative and training areas. The plywood stair nosings are painted yellow for safety. Lighting in the stairwell should be upgraded. The railings and stairs in general are not to code.



The photo above shows a view of the washrooms, kitchen, and training/ multi-use areas. The flooring and interior aesthetic is outdated.



The photo above shows the multi-use area where most in-classroom training sessions are completed. Space is limited.



The photo above shows one washroom with electric baseboard heating.



CONSTRUCTION GROUP



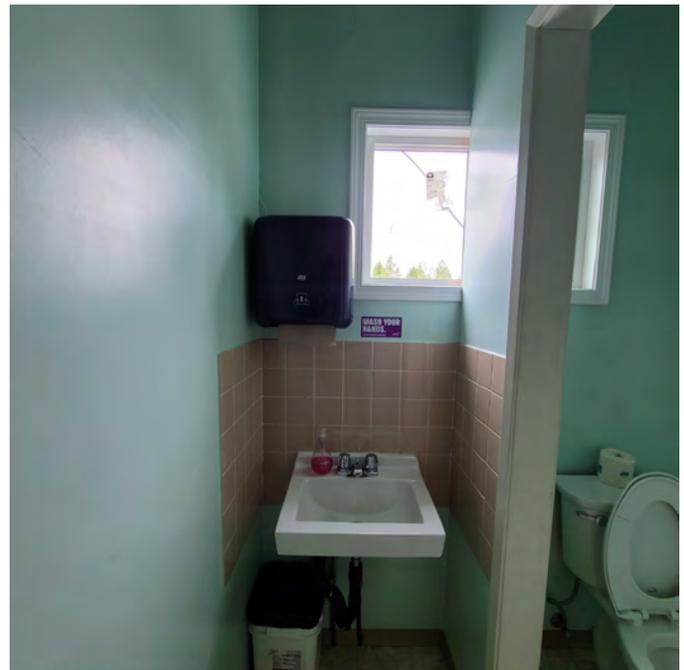
The photo above shows a secondary washroom.



The photo above shows outdated washroom accessories and awkward washroom layouts.



The washrooms are inadequate for the facility uses.



The washrooms need redesign and renovation to create efficiency for the required occupancy during training events or other.



CONSTRUCTION GROUP



The photo above shows a residential style water closet. The toilets should be replaced with commercial grade units including open front seats.



The photo above shows a view into the kitchen and pantry areas.



The photo above shows a view of the general kitchen layout. There is no room for the fridge to be placed within the required space.



The photo above shows an overall outdated kitchen that needs redesign. More counter space and prep. area is required.



CONSTRUCTION GROUP



The photo above shows a pass-through style counter top and prep. area. The layout is disconnected and doesn't make for a functional use of space. The fridge and pantry room are seen in the background of this photo. The layout is not ideal.



The photo above shows the kitchen appliances: stove, two microwaves, sink, no dishwasher.



The photo above shows the fridge and 'pantry' storage/ recycling room. This room could be configured for better storage and use of space.



The photo above shows the storage/ janitorial supply room which is accessible in the kitchen area only.



CONSTRUCTION GROUP



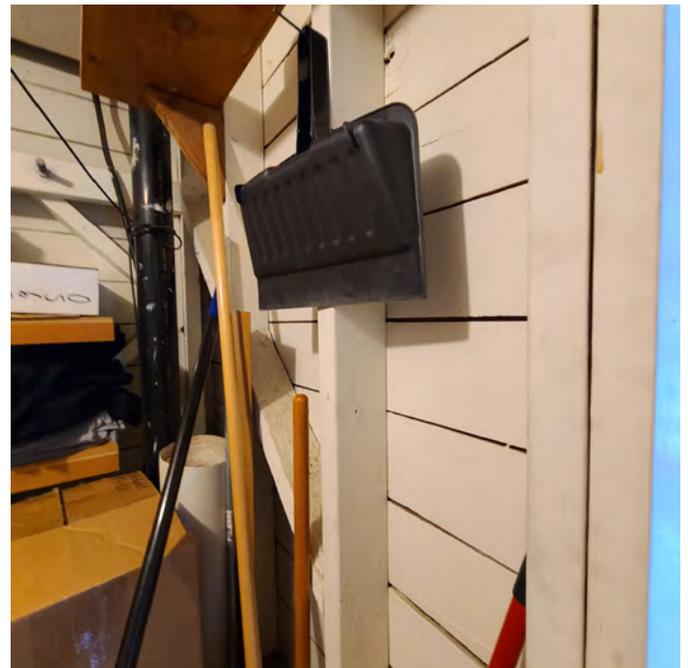
The photo above shows the storage/ janitorial supply room. The room is overstocked and relatively inaccessible due to inadequate shelving and storage space. There is no mop sink for proper cleaning uses.



The photo above shows the storage/ janitorial supply room which is accessible in the kitchen area only. The room is unfinished inside with an inaccessible 'attic' access opening in the ceiling.



The photo above shows the storage/ janitorial supply room which is accessible in the kitchen area only. Exposed electrical and interior wall structure can be observed.



The photo above shows the storage/ janitorial supply room which is accessible in the kitchen area only.



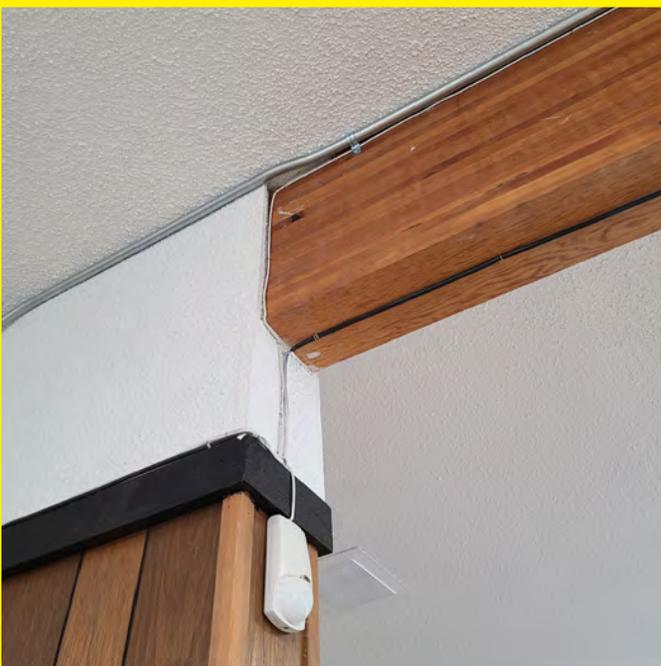
CONSTRUCTION GROUP



The photo above shows an overall view of the second floor administration area where all in-class training sessions are held. The table grouping allows for approximately 18 seats plus an instructor. The FD requires space for 24 training/ 30 occupants EOC.



The photo above shows white boards mounted to the walls for training teaching sessions. Storage and a desk space is seen in the background of this photo (now this is the Fire Chief's office). There is no open space for rope or first aid training or practice.



The following photos show elements of the supporting roof structure. A single exposed glulam beam is observed. The bearing and support column is hidden in the wall and cannot be confirmed adequate.



The photo above shows the glulam beam support at the front exterior wall. The beam is fastened to a metal bracket. The integrity and adequacy of this connection cannot be confirmed. It does not appear seismically sound.



CONSTRUCTION GROUP



The photo above shows drywall cracking below the glulam beam which indicates building movement and/ or settlement.



The photo above shows a through-wall bolt connection (purpose unknown).



The photo above shows a hole through the complete building envelope. Daylight can be seen from the interior. The building wall assembly does not appear to be acceptable.



The photo above shows multiple flooring layers.



CONSTRUCTION GROUP



The photo above shows a further look at the training area. The room has good natural lighting. The windows need to be replaced with new. The lighting should be upgraded.



The photo above shows the view from the second floor. This would be a good location for a second floor office or day lounge.



The photo above shows the building heating components.



The photo above shows electric baseboard heating and wall register. The photo also shows a closer look at the outdated VCT tile and wall finish.



CONSTRUCTION GROUP



The photo above shows the second floor emergency exit stairs. The door does not have any emergency panic hardware and the door can only open approximately 75 degrees. The railing wood railing is weak and shows signs of significant weathering.



The photo above shows a view from the exterior exit stair landing to the ground. The landing surface is deteriorating and narrow. The hand rail is not of an acceptable design. NOT TO CODE/ unsafe for use.



The photo above shows a view of the Tugwell Fields site where a new Fire Hall may be built (alternate site study location). The new Food Bank location is proposed to be built here along with a possible reconfiguration of the fields and public green spaces.



The photo above shows a view of the Tugwell Fields site where a new Fire Hall may be built (alternate site study location).

APPENDIX

B

ALTERNATE

SITE



CONSTRUCTION GROUP

A-B

ALTERNATE SITE CONSIDERATIONS

TUGWELL SITE REVIEW



BACKGROUND

The District owns a sizable portion of land near the terminal of Forbes Road that is currently being used for 'sporting fields' and other recreational purposes. It has been noted that the current land usage is over-allocated to sports and recreational activities and that there may be a better usage of this land allotment. In particular, the question has been raised if redevelopment of this land would serve as a better location for a new Fire Hall or Emergency Services Facility as well as other community buildings.

OBJECTIVES

The purpose of Appendix B of this document, 'Ucluelet Fire Hall Feasibility Study - New Construction or Addition & Renovation', is to investigate one option for a new fire hall location in the District of Ucluelet and to present the information and findings for review.

OBSERVATIONS

Tugwell Fields are located approximately 400 m from Peninsula Rd which serves as one of the District's main driving and emergency response routes. The gravel parking lot accessible off Forbes Rd at the Tugwell Sports Fields is located approximately 1.9 km (4 minutes driving distance) from the existing Fire Hall located at 1520 Peninsula Rd.

Site Access and Egress

The Tugwell site location appears to provide adequate roadway frontage along a relatively level grade creating reasonable on/off property vehicle and pedestrian movement. If properly designed, the site would likely accommodate the access turning radius of an aerial apparatus. Exiting the site apron would likely require crossing the solid yellow dividing line.

A-B

ALTERNATE SITE
CONSIDERATIONS
CONTINUED

TUGWELL SITE REVIEW



Figure 1 - 'Sketch exploring potential future facilities at Tugwell.' (This image has been referenced from Report No: 21-93 Subject: Food Bank on the Edge - Proposed New Location File No: 0890-20-TUGWELL-FBOE2021)

Vehicular access is currently restricted along Forbes Rd. which is a 'dead-end' road with a small turning radius at the termination point. There is no access or connection to Cynamocka Rd. or Marine Dr. (the District's secondary driving and emergency response route).

Roadway Limitations and Hazards

Forbes Rd is a narrow two-lane paved road with square curbing and no provided shoulder or parking lane in either driving direction. While the road is well-maintained, it was observed that two curves in the roadway and a descending grade to Peninsula Rd. may present visual traffic obstructions and a slower Fire Truck response time from the site to the response route. Parking appeared to be permitted along Forbes Rd. in both directions. The allowance of parking appeared to limit the movement of larger vehicles such as trucks without the need to cross over the solid yellow line dividing the directional driving lanes. Initial observations of traffic flow noted that the narrow road width combined with the allowance of parking along the roadway creates high-potential for vehicular accidents or other pedestrian safety hazards in the event where a fast moving fire truck is exiting the Tugwell site toward Peninsula Rd. and potentially impedes the on-coming traffic lane.

The intersection at Forbes Rd and Peninsula is controlled by a single stop sign with no traffic controls in place along Peninsula at this intersection. Vehicles must cross an uncontrolled pedestrian/ bike lane prior to executing a left or right turn.

Tall trees and shrubbery NW of the intersection impedes the line of sight for East-bound traffic and Fire Trucks entering the intersection for a left turn on Peninsula.

Site Services

Electrical - nearby availability.

Water/ fire suppression - fire hydrant at site location. Water pressure investigation required for sprinkler design adequacy.

Sewer - assumed nearby with capacity to service multiple community buildings (according to the Schedule D - Water & Sewer Infrastructure plan).

Storm service - assumed nearby with capacity to service multiple community buildings. Storm service may be designed to manage on-site or limit pressure on municipal system through collection methods.

Noise and Light Pollution

The building demographic in the area along Forbes Rd appears to be low-medium occupancy buildings (generally occupied only during day/ evening hours). However, the building demographic East and South of the subject area is comprised mainly of single-family residential housing. Noise and emergency lighting from fire hall vehicles may cause complaints from nearby residents unless sound buffers are installed around the property (i.e. landscaping, trees, etc.).

THE SITE

The district portion of land known as 'Tugwell Fields' including the 'Off-leash Dog Park' lends itself to some of the most flexible land redevelopment opportunities within District of Ucluelet for community infrastructure buildings.

The Tugwell Fields Site may be sub-divided into multiple properties (one being allocated to a new Fire Hall or Emergency Response Facility) that could easily accommodate up to 10,000 s.f. of building area that would meet the current and future needs of the Ucluelet Fire Rescue Service. A building at the Tugwell Fields Site location may allow for additional training space in various capacities including one or two-storey construction with an integrated hose/



CONSTRUCTION GROUP

A-B

ALTERNATE SITE CONSIDERATIONS CONTINUED

TUGWELL SITE REVIEW

training tower and detached live burning training area.

Future Flood/ Tsunami Hazard Impact Potential

While the fields and adjacent surroundings are generally level terrain, it is understood that the overall elevation of this location is well outside of the 'Tsunami Hazard Zone' (studied and identified by others) and could be recommended as an acceptable post-disaster Fire Hall or Emergency Response Facility location.

Zoning/ OCP

Tugwell Fields are currently zoned as 'green' open space. The surrounding properties are zoned as commercial/service/retail, institutional, light industrial, and some single family residential.

According to the OCP Schedule 'A' Long-Range Use Plan, the Tugwell Fields site will be zoned for a mix of Institutional, industrial, and green/ open-space. A Fire Hall or Emergency Response Facility would fit well within the context area of the Tugwell Fields site location.

RECOMMENDATIONS (FINDINGS FOR REVIEW)

The Tugwell Fields Site presents both pro's and con's with respect to relocation of the existing Fire Hall Facility.

The current needs of the Fire Department do not appear to warrant the need for site relocation unless the following factors are considered:

- The plan for connection of Forbes Rd to Marine Dr. is imminent and will be completed in the same time frame of the completion of a new Fire Hall on the Tugwell site.
- There is expected population densification in the immediate area including multi-storey, high-risk buildings.
- Forbes Rd is widened or parking is disallowed at the curb.
- Flashing lights are installed at the intersection of Forbes Rd and Peninsula that activate during a emergency call-out event.
- There is expected to be an inclusion of the Ambulance Service.
- There is expected need for a live burn training area on the fire hall property.
- There is expected redevelopment of the sports-fields and recreational green space to include community buildings and new recreational facilities.



Google Maps Image - Tugwell site view looking SE from Forbes Rd



Google Maps Image - Tugwell site view looking SE from Forbes Rd



CONSTRUCTION GROUP

A-B

ALTERNATE SITE CONSIDERATIONS CONTINUED

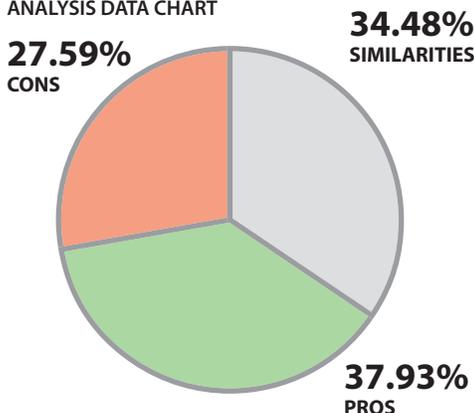
TUGWELL SITE REVIEW HIGHLIGHTS

- SIMILARITIES:**
- PI - institutional zone (Tugwell future)
 - Outside present day and future rare event flood hazard/ tsunami zone
 - Access to required utilities
 - Reasonable emergency response time frame
 - Capable of accommodating a new single-storey or two-storey fire hall with 5-6 apparatus bays.
 - Reasonable site access and egress
 - Generally level land/ terrain limiting the need for major site work (fill or haul out)
 - District owned property - coordination required with Food Bank At Tugwell or UAC at existing site
 - Access and egress from a two-lane roadway
 - Uncontrolled intersections (no flashing warning lights)

- PROS:**
- Capable of accommodating a new single-storey or two-storey 6 bay drive through style fire hall
 - Capable of accommodating an aerial apparatus
 - Capable of accommodating training grounds and/or detached training facilities on-site
 - Capable of accommodating ambulance service inclusion in the same building
 - The existing facility may continue normal operations while a new facility is constructed (no temp. cost)
 - Increased layout and design flexibility which may result in cost-savings
 - Municipal owned empty lot, no designated lot size (Fire Hall could dictate required needs)
 - The District may benefit more from the sale or reallocation of the existing fire hall property which could potentially be combined with the neighbouring lot and designated for a new community hall across from the school
 - Better location for HWY access/ road rescues
 - More central location to accommodate future District growth
 - Possible to design a multi-use facility to include public washroom and change rooms

- CONS:**
- Increased travel distance from high-risk/ high-occupancy buildings (i.e. further to town)
 - Existing Forbes Rd limitations and hazards (refer to 'Roadway Limitations and Hazards' section)
 - Possible need for roadway/ intersection infrastructure work
 - Combined EM facilities and training grounds may require additional security and delineation for public safety near recreational areas
 - Uncontrolled intersection (no flashing warning lights at Forbes Rd and Peninsula)
 - New facility costs at the Tugwell site may be more than addition & renovation of the existing Fire Hall facility
 - The surrounding area may not see enough year-over-year growth to warrant a new, larger facility
 - Neighbouring residents may object due to an introduction of alarm/ siren/horn noise pollution in the area

ANALYSIS DATA CHART



A-B

**BUDGETARY
OPT. #3
TUGWELL**

PRELIMINARY BUDGET SUMMARY**NEW CONSTRUCTION AT TUGWELL**

Project: Ucluelet Fire Hall
Ucluelet , BC

TOTAL SF	9,951	COST/UNIT TOTAL	\$437.75
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(hard construction)

Date: 25-Aug-21

Notes: No escalation. Values to reflect current market conditions.

CLASS "D"

DIVISIONAL BREAKDOWN		\$/SF	TOTAL	%
0100	General Requirements	\$ 57.39	\$ 571,078.19	13.1%
0018	Site Work	\$ 65.66	\$ 653,407.54	15.0%
0300	Concrete Work	\$ 34.14	\$ 339,771.92	7.8%
	New building structure, cladding, and roofing	\$ 96.31	\$ 958,331.06	22.0%
0400	Masonry	\$ 5.25	\$ 52,272.60	1.2%
0500	Metals	\$ 1.31	\$ 13,068.15	0.3%
0600	Wood & Plastics	\$ 8.71	\$ 86,685.40	2.0%
0700	Thermal & Moisture Protection	\$ 6.57	\$ 65,340.75	1.5%
0800	Doors & Windows	\$ 20.36	\$ 202,556.34	4.7%
0900	Interior Finishes	\$ 35.46	\$ 352,840.07	8.1%
1000	Specialties	\$ 3.11	\$ 30,927.96	0.7%
1100	Equipment	\$ 15.50	\$ 154,204.18	3.5%
1200	Furnishings	\$ 1.49	\$ 14,810.57	0.3%
	Mechanical and Electrical	\$ 86.50	\$ 860,755.53	19.8%
TOTALS CONSTRUCTION		\$ 437.75	\$ 4,356,050.25	100%

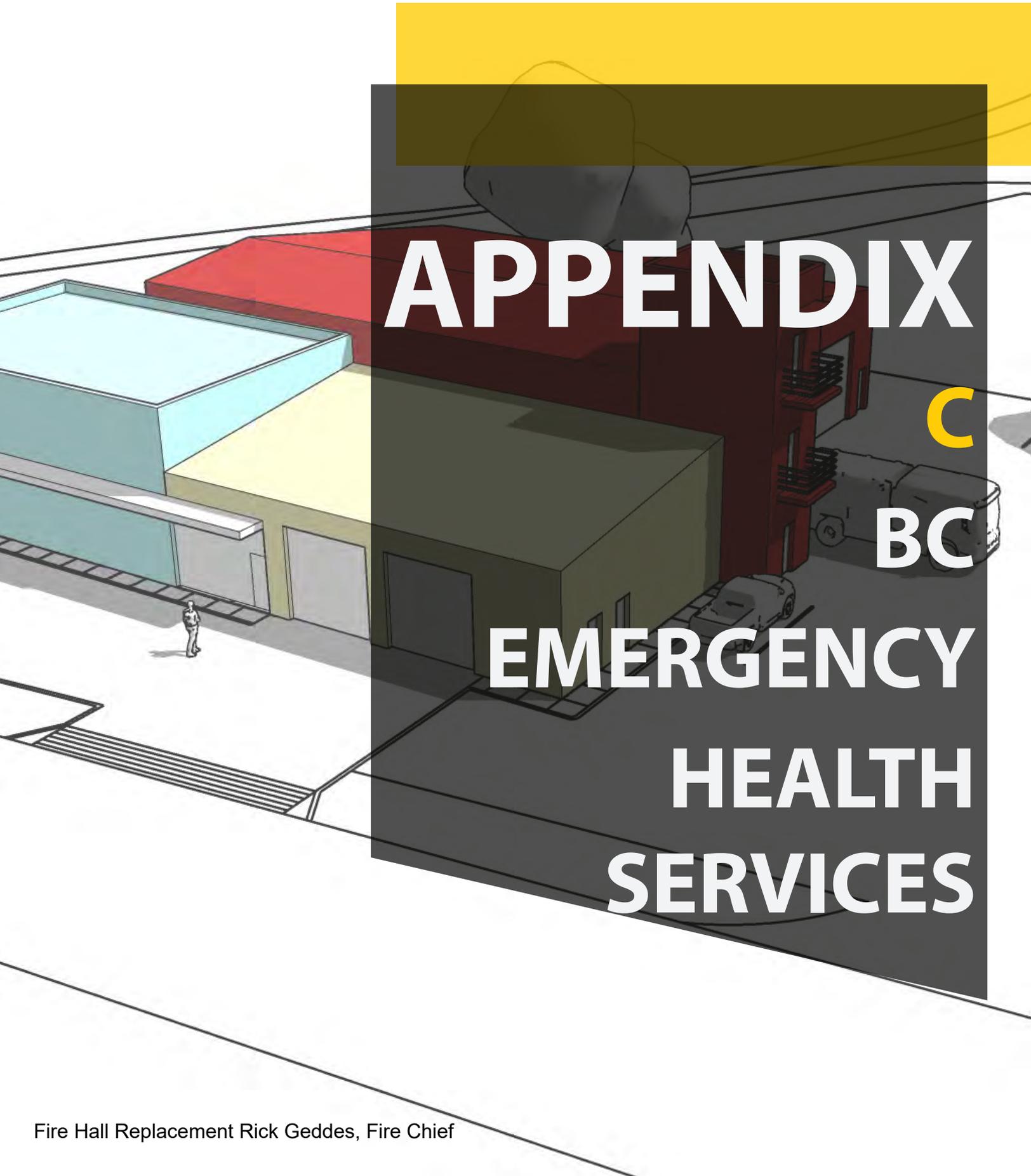
SOFT COSTS		\$/SF	TOTAL	%
	Architect and other design consultants	\$ 24.49	\$ 243,700.00	55.2%
	Project Management (at 3% of hard costs)	\$ 13.13	\$ 130,681.51	29.6%
	Project Specific Insurance	\$ 2.24	\$ 22,300.00	5.1%
	Other Soft Costs	\$ 4.48	\$ 44,600.00	10.1%
TOTALS SOFT COST		\$ 44.35	\$ 441,281.51	100%

OTHER		\$/SF	TOTAL	%
		\$ -	\$ -	
		\$ -	\$ -	
	Hydro	\$ 8.04	\$ 80,000.00	18.1%
	PROJECT CONTINGENCIES (AT 5%)	\$ 21.89	\$ 217,802.51	73.1%
TOTALS OTHER		\$ 29.93	\$ 297,802.51	91%

TOTAL		\$/SF	TOTAL
PROJECT TOTAL		\$ 512.02	\$ 5,095,134.27

CASH ALLOWANCE

TBD



APPENDIX

C

BC

EMERGENCY

HEALTH

SERVICES

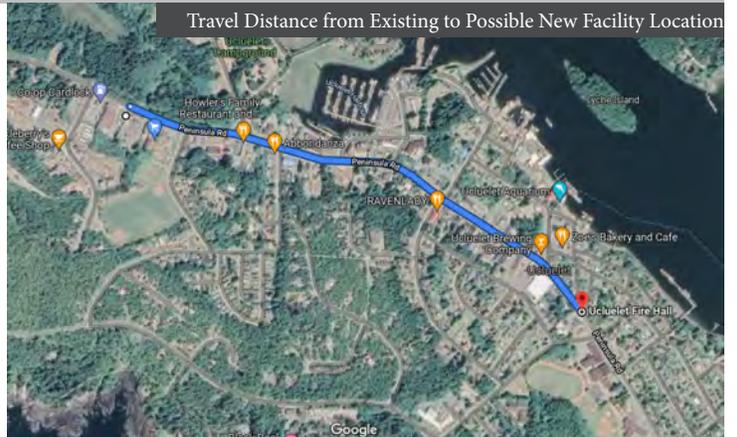


CONSTRUCTION GROUP

A-C

BC EMERGENCY HEALTH SERVICES

FIRE & AMBULANCE PARTNERSHIP



The British Columbia Ambulance Service Station 134 is currently located at 2072 Peninsula Rd, Ucluelet BC. This station currently serves the District of Ucluelet and surrounding community with one ambulance vehicle.

THE EXISTING FACILITY

The existing station is situated just outside the center of Town. This site position allows for good access to the Tofino-Ucluelet Highway and provides reasonable response time to low, medium, and highly populated buildings (i.e. City Hall, Hotels/ Motels, Restaurants, Schools).

The current station is a single bay structure occupying a small lot adjacent the CO-OP gas station. The lot allows for apron ambulance vehicle parking/ washing, and on-site personnel parking. It has been noted that the existing facility and aging building may not meet the future needs of the growing District of Ucluelet.

FIRE & AMBULANCE PARTNERSHIP

While a new Ambulance Service Station could be accommodated at the Tugwell Site (noted previously in this study), there may be capacity and possibility for Fire and Ambulance Service integration into one new Emergency Services Building located at 1520 Peninsula Rd. provided that the existing lot and the adjacent recreational hall lots are amalgamated.

Consideration would be required for a site move to 1520 Peninsula Rd that would position the Ambulance Service approx. 3 minutes (by vehicle) further in town and away from highway access.

The combined partnership may allow for pooling of funds between the two parties to cover the costs of a new post-disaster facility that will accommodate future growth and changing needs of the District and surrounding community. A singular 'Emergency Services' facility would allow for more efficient land usage and lot coverage. However, it would be expected that emergency vehicle traffic from the singular lot onto Peninsula Rd would increase, and therefore review would be required and flashing warning lights at the apron intersection may need to be installed. An increase in noise pollution would also be expected.

A conceptual model has been prepared showing how the Ambulance service may be integrated into a new EM Service Facility.



CONSTRUCTION GROUP

A-C

CONCEPTUAL DESIGN WITH AMBULANCE

NEW CONSTRUCTION

ASSUMED FUTURE NEEDS

- 1 Exterior apron + 2-3 standard parking stalls
- 2 Ambulance vehicle bays (size: TBD)
- 2 Single use universal washroom/ shower rooms (size: TBD)
- 1 Office/ administrative space (size: 10x10)
- 1 Medical/ cleaning supply storage room (size: 12x15) - mezzanine
- 2 Single bed dorm room sleeping quarters (size: 6x9)
- 1 Mechanical room
- 1 Electrical room
- 1 Kitchenette/ lounge space and eating area

DESIGN CONSIDERATIONS

- 2 Storey Fire Hall Administration, single storey ambulance



Ariel View of Possible New Emergency Service Facility (SE corner)



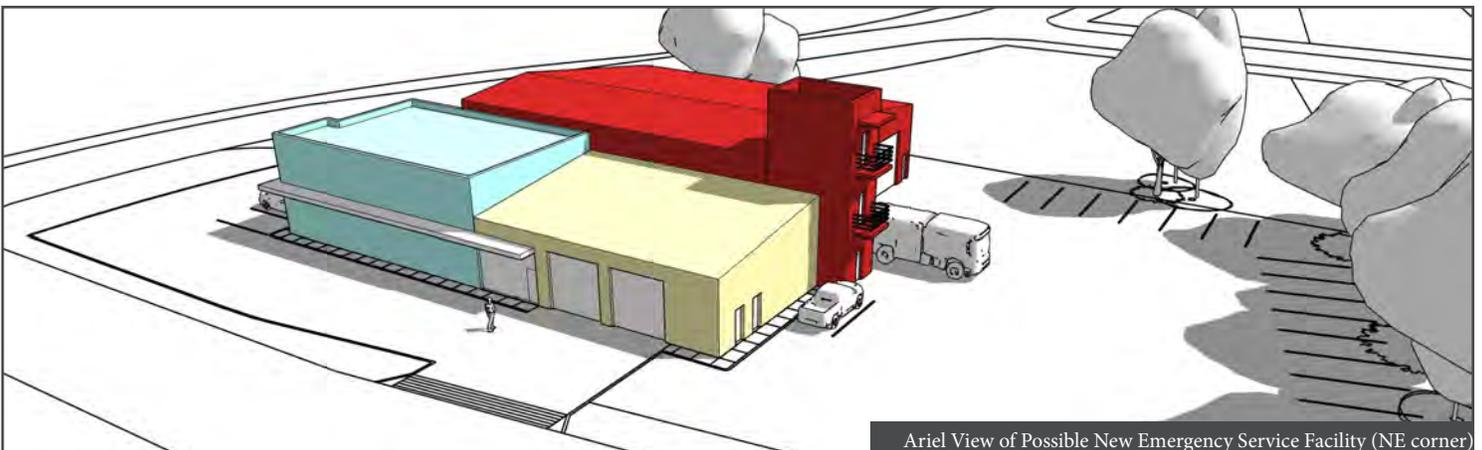
View of Possible Fire Hall Facility Entrance (blue)



View of Possible Ambulance SVC Facility Entrance (yellow)



View of Possible Fire Hall Apparatus Bays and Training Tower (red)



Ariel View of Possible New Emergency Service Facility (NE corner)

*Rendering models shown feature an artists conceptual design for visualization of building massing and site location only. The general shape or form do not represent an actual construction ready design. Liberty Contract Management Inc. reserves the rights to any and all rendering design or other drawing elements. Construction design and drawings require the official stamp of an architect.



UCLUELET FIRE RESCUE FEASIBILITY STUDY

REPORT CONTRIBUTIONS

Ucluelet Fire Rescue

Fire Chief Rick Geddes

Contact Email: rgeddes@ucluelet.ca

Liberty Construction Group

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Todd Zukiwsky - Pre-Construction Manager

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Architectural

Report Consultant: Barrie Chadwick Architect Inc.

Images:

Some images provided in this report have been fully licensed for use through Adobe stock. Maps and aerial screen shots have been provided by Google Maps or Ucluelet's District Mapping system with authorization for use in this report by Ucluelet Fire Rescue.

Study Disclaimer:

This feasibility study was prepared for the District of Ucluelet Fire and Rescue Service (Fire Brigade) by Liberty Contract Management Inc. While Liberty believes the information and findings (recommendations) contained herein to be good and reliable under the conditions and information present during the time the study was conducted, Liberty does not guarantee its accuracy. The study was completed to the best capability of Liberty under the conditions and subject limitations.

Although this report and concept has been completed with the general oversight of an Architect, the accuracy of drawings or sketches cannot be guaranteed for further design use. An Architect should be consulted for build and site design and applicable code analysis.

The use of this study, plans, budgets, construction schedule, or any information contained herein will be at the end user's sole risk, regardless of any errors or fault of Liberty Contract Management Inc.

Liberty cannot estimate or anticipate escalation costs at this time.

Admin Support

From: Edgar Dearden <eddie@gnarinc.com>
Sent: October 13, 2023 2:54 PM
To: Info Ucluelet
Subject: Fossil gas terminology to enhance climate change communication and action
Attachments: Motion to use fossil gas terminology within municipal communications.pdf; Letter to BC government to use fossil gas terminology in BC.pdf

[External]

To the Mayor and Council,

A decade ago, the looming threat of climate change compelled me to transition from a career in fossil chemical engineering to sustainable architecture. My dedication to climate-friendly practices has been unwavering, albeit underpinned by a belief that we had ample time to mitigate the unfolding crisis. The harrowing heat dome of 2021 drastically altered my perspective.

In its terrifying wake, I adopted a staunch position against any of our clients heating their homes with fossil fuel. So I told them what I thought I was supposed to say: "Don't use natural gas."

Despite discouraging use of "natural gas" and explaining its detrimental environmental impact, our clients' responses varied from perceiving it as "green" to valuing its "natural" origin. In late 2021, three of those clients installed fossil gas heating against our advice, and a fourth fired us outright for merely suggesting that her "natural gas" fireplace was detrimental.

In pursuit of more effective communication, I discovered the term "fossil gas," which we used from 2022 onwards. This term is semantically accurate, as "fossil" denotes carbon sequestered underground from previous geological eras. It is the reintroduction of this sequestered fossil carbon to the atmosphere through burning that primarily contributes to the ongoing planetary heating.

Employing fossil gas terminology catalyzed a notable shift. The majority of our clients in 2022 opted against fossil fuel heating in their homes. Buoyed by this success, I embarked on a citizen science experiment to demonstrate public misunderstanding of "natural gas". I asked 10 strangers in public spaces, "Do you know what natural gas is?", and produced transcripts of the 6 respondents who were unable to accurately define "natural gas" nor link it to fossil fuels.

My request is simple: I am urging governments at all levels to adopt fossil gas terminology. Optimally, this initiative would be led by the provincial government, and I have therefore penned a letter to the Honourable George Heyman, Minister of Environment and Climate Change Strategy.

A simple action you could take to assist would be advocating to the provincial government to adopt this initiative.

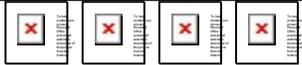
A more ambitious action would be a motion to adopt fossil gas terminology in Municipal communication. Such a move would demonstrate leadership to the provincial government. Should they decide to adopt fossil gas terminology, you would benefit from a head start in updating documents. In the meantime, you would be providing a clear and undistorted message to residents and industries alike.

Even in the absence of municipal action, I encourage you personally to integrate fossil gas terminology into your own vernacular. We are fortunate to live in a free country and there is no obligation to label refined fossil fuel products as "natural." By consciously adopting the accurate term "fossil gas" you will exhibit enlightened leadership and foster an informed, conscious citizenry.

Words can indeed be a potent catalyst for change, especially where governmental authority is currently limited, such as in renovations and the elimination of fossil gas from existing buildings.

I extend these requests with profound respect and gratitude. Thank you for your anticipated efforts in advocating for a future that remains habitable for all of us and subsequent generations.

Kind Regards,



EDDIE DEARDEN

CEO and Founder

o 604.962.1611

Unit 206 - 1420 Alpha Lake Rd

Whistler BC V8E 0E8

www.gnarinc.com

We gratefully acknowledge the land, now known as Whistler and Revelstoke, where we live create and play, in the unceded traditional lands of the Skwxwú7mesh and Lilwat7úl, the Sinixt, Ktunaxa, Secwepemc and Syilx.

MOTION:

WHEREAS the term “fossil gas” is more semantically correct, representing fossil carbon sequestered underground from previous geological eras and its contribution to planetary heating when burned;

WHEREAS the term “natural gas” is potentially misleading and does not accurately represent the fossil origins and environmental impacts of the gas;

BE IT RESOLVED THAT the Council direct staff to conduct research and investigate the implications and benefits of using the term “fossil gas” in place of “natural gas” within municipal communications and documents;

AND BE IT FURTHER RESOLVED THAT staff return to Council with a recommendation on the adoption and use of the term “fossil gas” for municipal purposes, considering the potential for enhanced public understanding and environmental awareness.

October 5, 2023

Honourable George Heyman
Minister of Environment and Climate Change Strategy
Parliament Buildings
Victoria, BC V8V 1X4

Subject: Proposal to use fossil gas terminology in Legislation, Documents and Communications.

Dear Minister Heyman,

Greetings and sincere gratitude for your dedication and steadfast service and leadership. Especially in the pivotal role as the Minister of Environment and Climate Change Strategy. I had the honor of meeting you at the BC Embodied Carbon Awards¹ earlier this year. You presented my company, GNAR Inc - Sustainable Home Design, the award for the Small Buildings BC (max. 300m²) category. [¹ <https://clfbritishcolumbia.com/embodied-carbon-awards>]

I pen this letter to foster a dialogue on a matter harmonizing succinctly with your mandate and British Columbia's CleanBC roadmap to 2030: the adoption of accurate, unequivocal language to catalyse actionable climate consciousness among citizens.

The specific proposal is to formally integrate the term "fossil gas" in lieu of "natural gas" in province wide legislation, documents and communications.

I have identified both through our Home Design clients, as well as an initiative I took to survey the general population, that many in British Columbia cannot identify "natural gas" as a fossil fuel. Even when I asked the esteemed Mayor Jack Crompton of Whistler to explain this term, he was unable to do so.

Attached to this letter are transcripts of my discussions with British Columbians which demonstrate their inability to associate "natural gas" with its fossil origins. These conversations underscore the confusion prevailing amongst residents due to the current terminology.

Remarkably, as you will observe in Conversation 4, when I asked the person a different question, "Do you know what fossil gas is?", he replied, "No". Yet despite never having heard this term before, when prompted further with, "Can you figure it out?", this individual responded, "Gas that's a fossil fuel?"

It is evident that this simple and effective terminology shift to 'fossil gas' can significantly bolster climate action by advocating for the elimination of fossil fuels.



Eddie Dearden
CEO and Founder

eddie@gnarinc.com
+1 604-962-1611

Unit 206 - 1420 Alpha Lake Rd
Whistler BC V8E 0E8

The term “fossil gas” is semantically correct as ‘fossil’ denotes carbon sequestered underground from previous geological eras. It is the reintroduction of this sequestered fossil carbon to the atmosphere through burning that primarily contributes to the ongoing planetary heating.

The tangible impacts of climate change are undeniable, and while we have just suffered the worst wildfire season in our history, British Columbia has been a beacon of progress in implementing strategies and policies aimed at mitigating these impacts and propelling us toward a sustainable future.

Your mandate emphasizes significant points, including executing the CleanBC Roadmap to 2030, aligning policies with B.C.’s 2030 and 2050 legislated reduction targets, and ensuring industrial alignment with net-zero emissions by 2050, all of which are commendable and pivotal.

The use of the term “fossil gas” aligns with several priority areas stipulated in your mandate:

Enhancing Transparency and Education: The term ‘natural gas’ inadvertently masks the fossil origin and the associated environmental ramifications. By adopting “fossil gas”, we illuminate the truth about its origins and impacts, shaping informed perceptions and behaviours among citizens and industries alike.

Supporting Reduction Targets: Informed citizens, aware of the fossil fuel implications, are more likely to adopt and advocate for alternative energy sources, thereby organically driving the demand and swift adoption of cleaner energy solutions.

Aligning New Industries: Ensuring that emerging industries are congruent with the CleanBC plan and legislated targets necessitates a clear, undistorted communication about the energy sources we are phasing out and the alternatives we champion.

Climate Preparedness and Adaptation: A citizenry that accurately perceives the roots and outcomes of climate change is essential in collectively embracing and implementing adaptation strategies.

Fostering Unity and Commitment: Accurate terminology, endorsed by the government, fosters a unified front, bridging citizens, local governments, and industries through a transparent and aligned environmental dialogue and strategy.

This modest yet potent shift in nomenclature not only amplifies clarity and honesty in our communication but also seeds and nurtures a more grounded and accurate understanding of the environmental implications among British Columbians.

Your leadership, Minister Heyman, could ensure that this simple yet profound change cascades through our policies, dialogues, and collective consciousness, further solidifying B.C.’s stance as a vanguard in environmental stewardship and climate action.

I therefore call on you and the Premier of British Columbia, the Honorable David Eby, to adopt fossil gas terminology in Provincial communications and documents, as well as the requisite pieces of legislation. I have drafted a Private Members Bill that would direct this action. It is a mere two pages, but I believe it will initiate the processes necessary to complete this action within 12 months.

I am available for any further discussions or clarifications on this matter and eagerly await your insights and responses to this proposal.

Thank you for considering this proposal and for your unwavering service to our province and environment.

Kind regards,

Eddie Dearden
CEO and Founder



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+1 604-962-1611

PRIVATE MEMBERS BILL:

FOSSIL GAS CLARIFICATION ACT, 2023

WHEREAS clarity and accuracy in the language used in legislation and government communications are of utmost importance;

WHEREAS the term “fossil gas” is more semantically correct, representing fossil carbon sequestered underground from previous geological eras and its contribution to planetary heating when burned;

WHEREAS the term “natural gas” is misleading and does not accurately represent the fossil origins and environmental impacts of the gas;

NOW, THEREFORE, HIS MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of British Columbia, enacts as follows:

1. Short Title:

This Act may be cited as the "Fossil Gas Clarification Act, 2023".

2. Definitions

For the purpose of this Act:

(a) "raw fossil gas" refers to hydrocarbon gas primarily comprising methane derived from fossil sources, which has not undergone processing;

(b) "processed fossil gas" or "fossil gas" refers to hydrocarbon gas primarily comprising methane derived from fossil sources, that has undergone processing, irrespective of the degree of said processing.

3. Legislative Amendments

(a) The Carbon Tax Act, R.S.B.C. 2008, c. 40, and all other BC legislation that define or employ the term "natural gas", shall be amended by replacing the term "natural gas" wherever it appears with "raw fossil gas", "processed fossil gas", or "fossil gas", whichever is contextually appropriate.

(b) Subsequent BC legislation enacted following the commencement of this Act, which seeks to define or reference methane gas from fossil sources, shall use the terms "raw fossil gas", "processed fossil gas", or "fossil gas" as is contextually fitting.

4. Government Communications

All governmental communications, documents, publications, and official correspondences produced after this Act's commencement that reference methane gas from fossil sources must use the terms "raw fossil gas", "processed fossil gas", or "fossil gas" as appropriate. Pre-existing governmental materials that are renewed or republished should be updated to match this terminology.

5. Review of Existing Legislation

The Attorney General shall undertake a review a review to pinpoint specific pieces of BC legislation that define or employ the term "natural gas". Within 12 months from the commencement of this Act, the Attorney General shall produce recommendations for the necessary amendments to ensure alignment with this Act.

6. Commencement

This Act comes into force on the day it receives Royal Assent.

Transcripts of conversations asking: 'Do you know what natural gas is?'

Conversation 1:

Eddie: Do you know what natural gas is?

Person 1: Gas that comes from the earth naturally

Eddie: Could you tell me more about that?

Person 1: No I don't know

Eddie: Do you know where they get it from?

Person 1: No

Eddie: Do you know what it is?

Person 1: No I don't know, it's a long time since I've been in science class

Conversation 2:

Eddie: May I ask you the question I ask everyone who starts here?

Person 2: Yes

Eddie: Do you know what natural gas is?

Person 2: I don't want to say yes but I don't want to say no

Eddie: Say whatever you think

Person 2: No not really

Eddie: I keep telling everyone that people don't know what natural gas is.

Person 2: I don't think I really know, maybe if I looked it up.

Conversation 3 (two people present):

Eddie: Do you know what natural gas is?

Person 3: I think natural gas is like the actual air gas

Person 4: No, not really. Why?

Eddie: I'm just curious, do you know what it is?

Person 3: I don't know if its like liquid or actual air gas

Person 4: I think it's like a fuel and you like, put it in a tank and burn it?

Eddie: Sure that's close enough

Person 4: Yes, nailed it.

Conversation 4:

Eddie: You seem like an informed fellow, I have a question that I have been asking people, do you know what natural gas is?

Person 5: Natural?

Eddie: Natural gas.

Person 5: Where it actually comes from, or what it actually is?

Eddie: Yeah, what is it?

Person 5: I know it's not propane, but I know it is something similar to it. But, I wouldn't actually know to tell you the truth what actual real natural gas is and where it comes from.

Eddie: That's a perfect, great answer. I'm finding most people don't know.

Person 5: I know natural gas is similar to propane, but I know it is not the same. I know that what we have in our houses is natural. Where they get it from and all that I don't know.

Eddie: Do you know what fossil gas is?

Person 5: No.

Eddie: Can you figure it out?

Person 5: Gas that's a fossil fuel?

Conversation 5:

Eddie: I'm going to ask you a question I ask everyone, is that ok?

Person 6: No problem, go for it.

Eddie: Do you know what 'natural gas' is?

Person 6: Gas that's natural

Eddie: Did you just say 'gas that is natural'?

Person 6: I have no idea! But I'm pretty sure it's gas that is better for the environment.

Eddie: Ok, but what is it?

Person 6: I don't know.

Eddie: Search your memory bank, what do you know about it

Person 6: Do you hook it up to your house?

Eddie: Yes, you hook it up to your house.

Person 6: It's gas that's better!

Eddie: Better than what?

Person 6: Than regular.

Eddie: Regular what?

Person 6: Regular gas. Are they the same thing or not?

Eddie: Like gas that you put in your car?

Person 6: Are you talking about gas that you put in your car or gas gas?

Eddie: When people say 'put gas in your car' they mean gasoline

Person 6: Oh right. So you're talking about gas that doesn't go in your car

Eddie: Well it is confusing, there are vehicles that use 'compressed natural gas'

Person 6: So it does go in your car! So it's like fuel.

Eddie: Yes, it is like fuel. But do you know what it is?

Person 6: I don't know, tell me

Eddie: Natural gas is a fossil fuel. I call it fossil gas.

Person 6: How do they get it?

Eddie: Here in Canada they use this process called 'fracking' or hydraulic fracturing. They drill down under the earth, then fill it with chemicals and blow the frack out of it. All the rock gets punctured which releases the gas, but it can also poison aquifers and groundwater.

Person 6: So it's not good?

Eddie: No its really bad for the environment

Person 6: Why do they call it 'natural'

Eddie: Exactly! Why do they call it natural!?

Person 6: So it f**ks everything up?

Eddie: Yes basically, that is why we have global warming.

Person 6: Oh cool... s**t. That sucks.

Conversation 6:

Eddie: Could you please explain linguistically why this substance is called natural gas?

Mayor Crompton: I don't know the reason it is described that way. I think it is the most commonly used term, and that is probably why we use it.

Eddie: So you don't know why it is called natural gas?

Mayor Crompton: I don't have the etymology of the word, no.

Eddie: I sent a letter to you, proposing that Mayor and Council use an alternative term to natural gas, fossil gas. You opposed that motion, but you are saying that you don't know why it is called natural gas?

Mayor Crompton: Exactly yeah. I don't know the etymology. It is the word that is most commonly used in public conversation, so it's the word that we're using at the table as we discuss it. I think most people would know what you mean when you use the word.

Eddie: In my letter I provided transcripts of conversations with 6 residents, who like yourself Mayor Crompton, do not know what natural gas is. Do you accept that? Do you agree it is possible that many people do not know what natural gas is?

Mayor Crompton: Well I think people know what it is. I don't want to comment on conversations you've had with other people because I don't know them and haven't had the opportunity to speak with them myself.

Eddie: Do you think the term 'natural gas' could be misleading?

Mayor Crompton: It is the word that most people in the world use, so it is the word that we use at this table to talk about something that we want to be able to communicate with each other and understand what we are talking about.

Eddie: Given the escalating climate crisis, and the need for public clarity on environmental issues, do you agree that persisting with outdated, and potentially misleading terms, could hinder public understanding?

Mayor Crompton: I think what we came to is that the most important thing we can do is take substantive action on that and that's where we're spending our time. Increasing our transit service, building better buildings. We've got 6 big steps that we're taking very seriously and that's where we want to focus our time and attention.

Eddie: Right. I notice a bit of a dichotomy because, when discussing my letter, Councillor De Jong said "I don't want council spending any time on semantics", but then when discussing the GHG inventory report Councillor De Jong was like "How can we get people to reduce natural gas?". What I'm proposing is that people in British Columbia do not even realize that natural gas is a bad thing. The term natural gas implies benign, it implies beauty, nature. Do you agree with this sentiment?

Mayor Crompton: Mr Dearden your time is up. No, I think most people know that it is a fossil fuel. And I think that is pretty clear to us as we discuss it.

Eddie: To that point, you say you think people realize it is a fossil fuel. I presented conversations with 6 British Columbians, which was 6 out of 10 of the total that I asked, demonstrating that those 6 people do not know that natural gas is a fossil fuel. Do you dispute that 6 out of 10 people I asked don't know that natural gas is a fossil fuel?

Mayor Crompton: We'll have to end here because we're over time but no, I don't dispute the conversations that you've had.

Eddie: So you agree that natural gas is a misleading term?

Mayor Crompton: Mr Dearden we're at the end of our time. I'm grateful you took the time to speak with us tonight.



INFORMATION REPORT

Council Meeting: October 23, 2023

500 Matterson Drive, Ucluelet, BC V0R 3A0

FROM: JAMES MACINTOSH, DIRECTOR OF ENGINEERING SERVICES

FILE No: 5340-31

SUBJECT: DEVELOPMENT LIMITS CAUSED BY SANITARY SEWER CAPACITY

REPORT No: 23- 137

ATTACHMENT(S): APPENDIX A - SANITARY SEWER MASTER PLAN (RELEVANT EXCERPTS)
APPENDIX B - SITE SERVICING ASSESSMENT

PURPOSE:

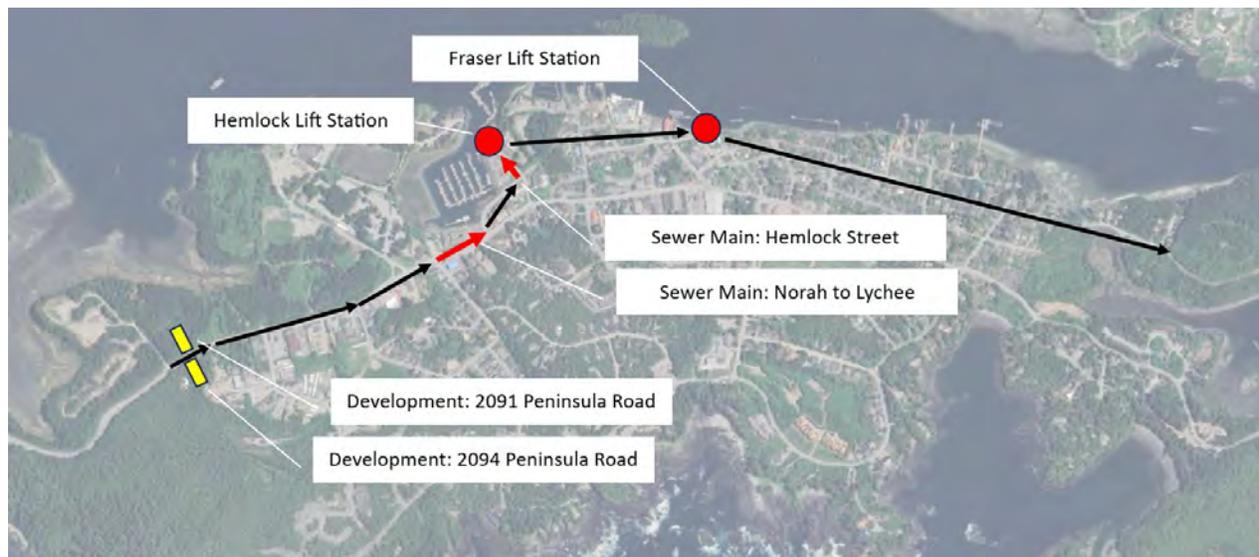
The sanitary sewer system along the eastern peninsula has reached its design capacity and no further developments can be brought online upstream of the bottleneck until more capacity is added. The District has development applications in process which are expected to be brought online within the next 1-2 years which the capacity limitation would hinder. There are options available to increase capacity which vary in scope, immediacy, and cost. Financing the options is currently being investigated and will be presented to Council in the months ahead. This report informs Council of the current situation and possible next steps.

BACKGROUND:

First installed in 1978, the sanitary sewer system along the eastern peninsula was designed to accommodate the density of the time. Since their installation, major components of the system have not been upgraded in terms of capacity or condition. The area has increased in density without the commensurate intake of capital needed to upsize and renew the infrastructure appropriately. The problem has been building for many years and is a symptom of historical approvals of subdivisions and development projects while under investing in infrastructure.

The sanitary sewer system components that are approaching their design capacity and will affect development are Hemlock and Fraser Lift Station as well as two sewer mains running from Norah to Lychee on Peninsula Road and Hemlock Street. Design capacity is the theoretical maximum flow available in lift stations, pumps, and pipes for the conveyance of sewage before the possibility of hydraulic surge arises (system overflow). Based on a comparison of the designed pumping capacity to the theoretical catchment area flow rate at each lift station, the table below illustrates the extent of the concern for the two lift stations.

Lift Station	Current Flow (L/s)	Current Capacity (one pump L/s)	Current Capacity (Both Pumps L/s)
Hemlock	27	20	29
Fraser Lane	40	48	63



The District has received development permit applications for projects that would add volume into the sanitary sewer system's eastern route. The developments currently in the application process include the medical center located at 2094 Peninsula Road and the mixed-use development at 2091 Peninsula Road. As a result of the addition of each development to the sanitary sewer system, the flow to Hemlock lift station would increase by 2-4 L/s, placing further strain on its design capacity (Site Servicing Assessment – Appendix B).

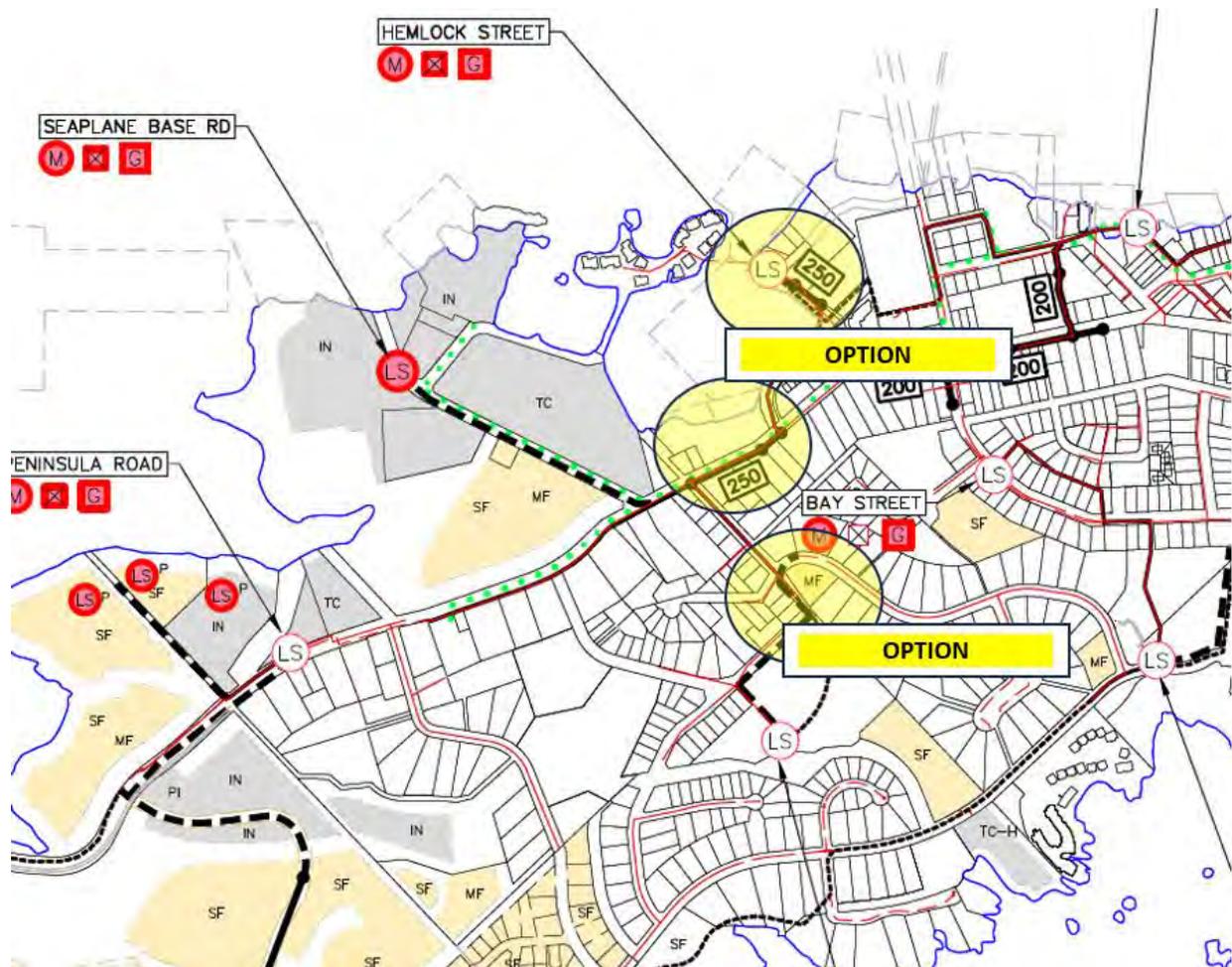
REPORT:

The sanitary sewer master plan calculates current capacity and outlines the infrastructure needed to build out the official community plan over the next 30-years. The strategy is for designs from the master plan to get integrated into the district five-year capital plan as they become justified by need, typically the advancement of development. There are multiple solutions available to increase capacity which have been engineered in concept within the master plan. The solutions vary from relatively small pipe installations which divert flow away from the problem area and

provide short-term relief to significant upgrades of the central components that will improve capacity over the long-term.

The cost estimates to install the solutions range from \$200,000 to \$2.5m. The current short-term solution is to install a new sanitary line that runs from Norah Road to Rainforest Drive that would divert flow away from Peninsula Road is estimated to cost \$200,000. The installation of that line would divert 8 L/s away from the eastern peninsula system and free up capacity to install 3-4 buildings along Peninsula Road.

To improve the capacity shortages for the long term, the upsizing of Hemlock lift station and two associated sewer mains would cost an estimated \$2.5m. The upgrade would add 20 L/s and provide the needed capacity for long-term planned growth. Additional upgrades needed to renew and upsize the sanitary sewer system are beyond the scope of this report; however, the master plan is attached to this report for reference (Sanitary Sewer Master Plan – Appendix A).



The financing strategy needed to consider the options is currently being investigated and incorporated into the 2024 financial plan. The district has not previously budgeted for the sewer

system upsizing needed to increase capacity in this specific area. Financing options could include a tax requisition, or mechanisms to share costs among developers and the municipality.

Since the medical center cannot come online until system capacity is added, the solution could be fast-tracked to align with the development's completion, if Council desires. The timeline is challenging as the project must be planned, financed, approved, designed and constructed in-line with an already live development.

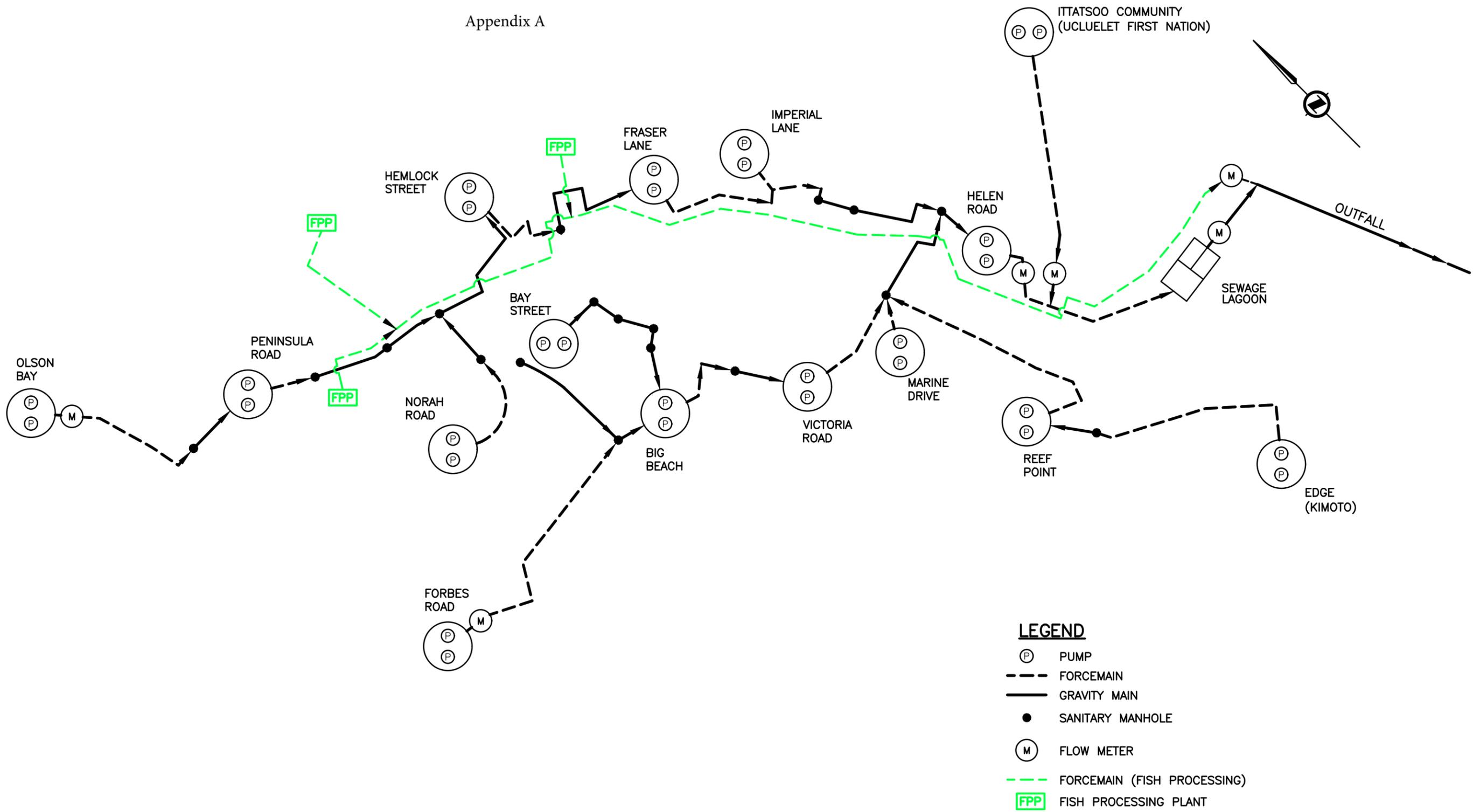
Staff will return to Council with options in December.

Respectfully submitted: James MacIntosh, Director of Engineering Services

Duane Lawrence, CAO

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Appendix A



LEGEND

- PUMP
- FORCEMAIN
- GRAVITY MAIN
- SANITARY MANHOLE
- FLOW METER
- FORCEMAIN (FISH PROCESSING)
- FISH PROCESSING PLANT

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CLIENT DISTRICT OF UCLUELET
 PROJECT **SANITARY MASTER PLAN**

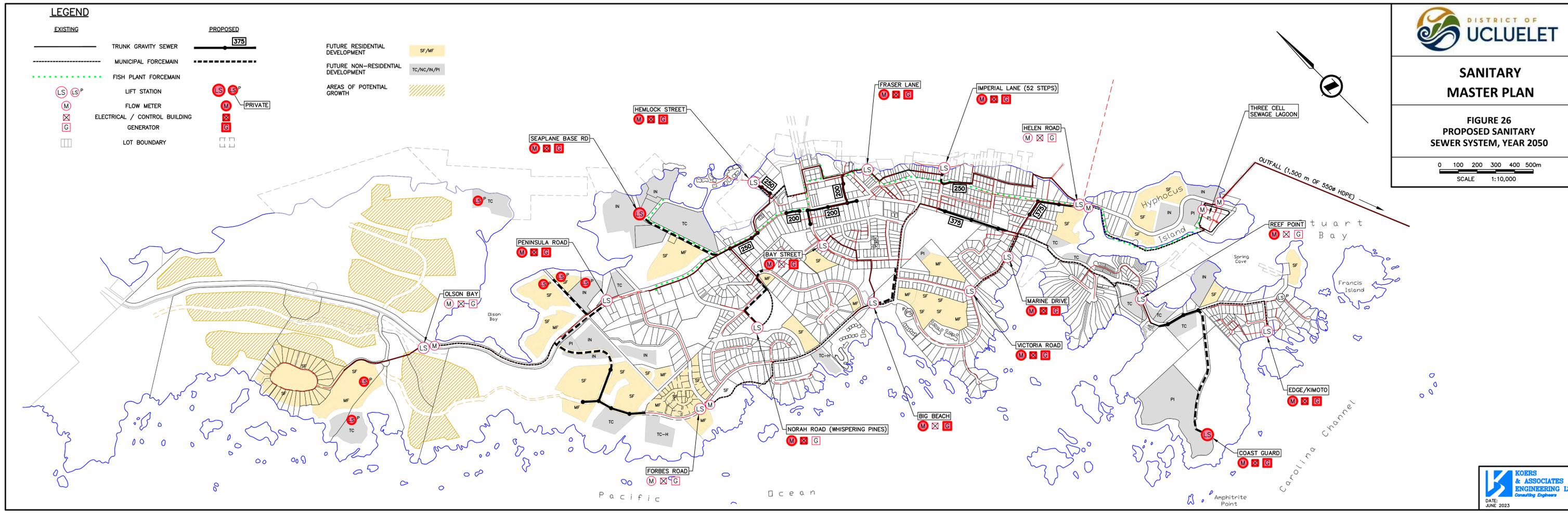
TITLE **SEWAGE LIFT STATION SCHEMATIC EXISTING CONDITIONS**
 APPROVED _____ SCALE Not to Scale
 DATE JUNE 2023 DWG No. **FIGURE 2**
 PROJECT No. 1863

Table 17 – Lift Station Design Flows, Existing Conditions & Year 2050

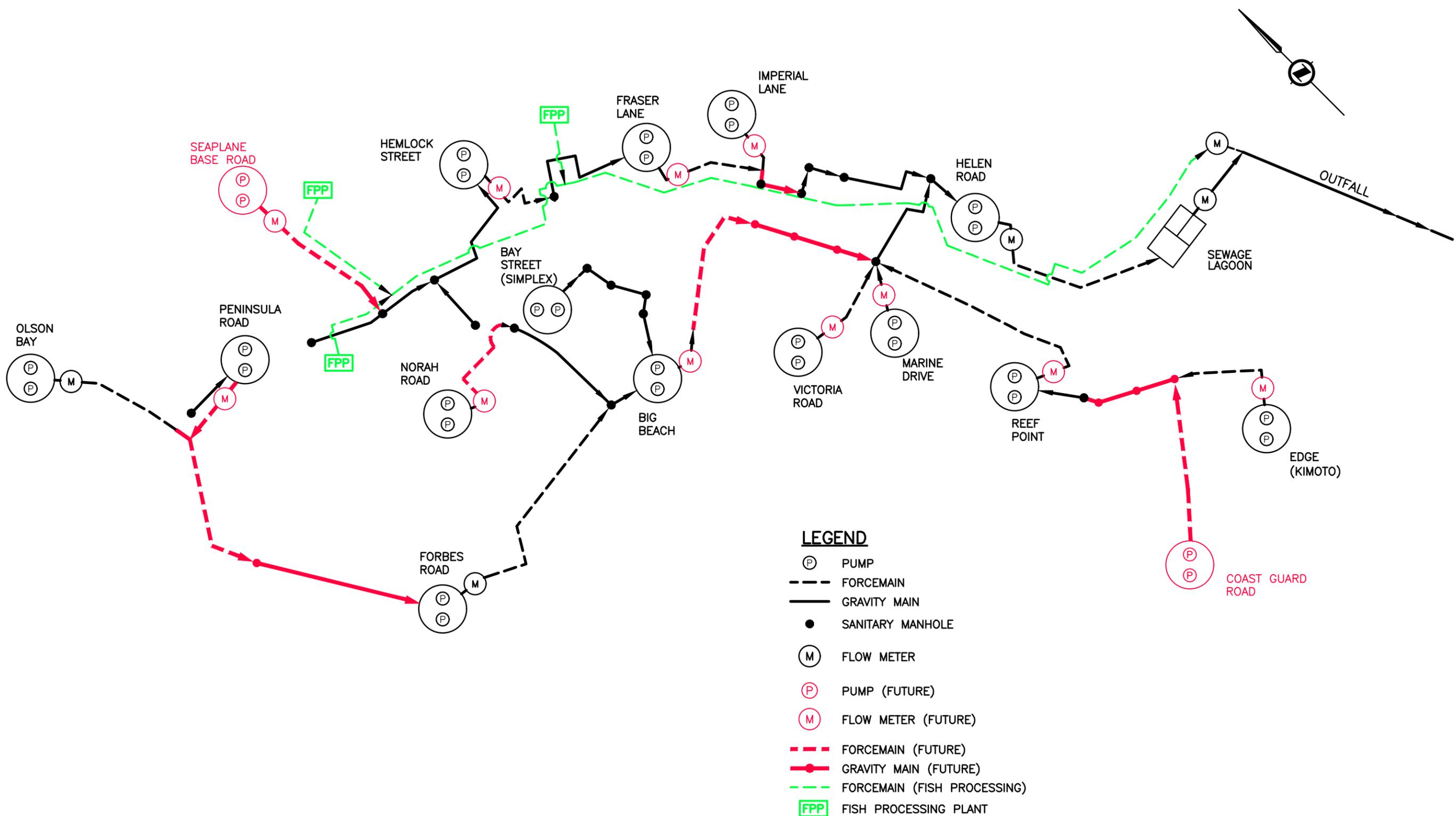
Lift Station / Catchment Area	Routing Option Design Peak Flow ^(1, 2)							Lift Station Current Pumping Capacity		Comment
	Existing Conditions, (L/s)		Year 2050 - OCP Map 9 Low(ish) Growth					One Pump ⁽³⁾ (L/s)	Both Pumps ⁽³⁾ (L/s)	
	No Change	Norah to Big Beach ⁽⁴⁾	A ⁽⁵⁾ (L/s)	B ⁽⁶⁾ (L/s)	C ⁽⁷⁾ (L/s)	D ⁽⁸⁾ (L/s)	E ⁽⁹⁾ (L/s)			
1 Olson Bay	-	-	15	15	15	15	15	13	14	Increased pumping capacity may be warranted in the future
2 Peninsula Rd	5	5	23	11 ⁽⁶⁾	11 ⁽⁷⁾	11 ⁽⁷⁾	11 ⁽⁷⁾	9	12	Increased pumping capacity required if Olson Bay lift station continues to discharge into this lift station (Route A). Increased pumping capacity may be warranted in the future for Route B, C, D and E
15 Seaplane Base Rd			14	14	14	14	14	-	-	future lift station
3 Norah Rd	8	8	8	8	8	8	8	8	8.5	
4 Hemlock St	27	21 ⁽⁴⁾	52	42 ⁽⁶⁾	41 ⁽⁷⁾	41 ⁽⁷⁾	34 ⁽⁴⁾	20	29	Immediate redirection of Norah Rd forcemain or increase in pumping capacity required ^(3,4)
5 Bay (simplex)	1.3	1.3	1.3	1.3	1.3	1.3	1.3	6	7	
6 Fraser Lane	40	34	66	56 ⁽⁶⁾	48 ⁽⁷⁾	48 ⁽⁷⁾	42	48	63	Increased pumping capacity required for Route A and B ⁽³⁾
7 Imperial Lane	2	2	2	2	2	2	2	2.5	>2	
8 Forbes Rd	4	4	22	30 ⁽⁶⁾	41 ⁽⁷⁾	41 ⁽⁷⁾	41 ⁽⁷⁾	31	40	Increased pumping capacity required for Route C, D and E ⁽³⁾
9 Big Beach	26	29	45	49 ⁽⁶⁾	57 ⁽⁷⁾	57 ⁽⁷⁾	62 ⁽⁷⁾	34	44	Increased pumping capacity required for all routing options ⁽³⁾
10 Victoria Rd	31	37 ⁽⁴⁾	51	62	70	17 ⁽⁸⁾	17 ⁽⁸⁾	23	26	Immediate redirection of Big Beach forcemain or increase in pumping capacity required ⁽³⁾
11 Marine Dr	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.4	>2	
12 Edge/Kimoto	7	7	7	7	7	7	7	14	16	
16 Coast Guard Rd										future lift station
13 Reef Pt	17	17	17	17	17	17	17	22	25	
14 Helen Rd ⁽⁴⁾	89	89	146	146	146	146	146	124	144	Increased pumping capacity required in the future ⁽³⁾
- Hyphocus Is.	-	-	4	4	4	4	4	-	-	gravity flow to sewage lagoon
- Hitacu	6	6	-	-	-	-	-	?	?	flows to YFN owned WWTP by Year 2050
Total:	95	95	148	148	148	148	148	-	-	

Notes:

- Design Peak Flows based on the District's Subdivision Services Control Bylaw No. 521, Schedule "B" Engineering Standards and Specifications, Sanitary Sewers, 1.1 Sewage Quantity.
- Peak flow values in red text indicate they exceed the current pump capacity of the lift station.
- The Lift Station Current Pumping Capacity pumping rates are theoretical calculations which are graphically shown in Appendix A for each lift station. The actual pumping rates are not known as there are no flow meters at any of the lift stations except for the Helen Road lift station. Duplex lift stations (equipped with two pumps) are to be capable of conveying the peak flow with one pump operating.
- Redirection of the Norah Rd lift station forcemain to discharge to the Big Beach catchment would have the immediate impact of reducing flows to the Hemlock Rd lift station which in turn would immediately reduce flows to the Fraser Lane lift station but would increase flows to the Big Beach lift station. This scenario would replace the pumping of flows by two lift stations (Hemlock and Fraser) with one (Big Beach).
- Route A – No changes in lift station points of discharge; same as existing conditions.
- Route B – Olson Bay lift station redirected to discharge to the Forbes Rd lift station.
- Route C – Olson Bay lift station and Peninsula Rd lift station redirected to discharge to Forbes Rd lift station.
- Route D – Route C and Big Beach lift station redirected to proposed gravity main to be installed on Peninsula Rd from Matterson Rd to Marine Dr.
- Route E – Route D and Norah Rd lift station redirected to discharge to the Big Beach lift station via the existing gravity main on Rainforest Dr.
- These lift stations are estimated (inferred) to be receiving high I&I flows based on a review of pump run-hours (see Table 7). Upgrading of their pumping capacity may be deferred with the reduction of I&I flows to each station. A reduction in I&I to Hemlock will result in an automatic reduction at the Fraser Lane lift station and the Helen Road lift station.



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- LEGEND**
- (P) PUMP
 - FORCEMAIN
 - GRAVITY MAIN
 - SANITARY MANHOLE
 - (M) FLOW METER
 - (P) PUMP (FUTURE)
 - (M) FLOW METER (FUTURE)
 - FORCEMAIN (FUTURE)
 - GRAVITY MAIN (FUTURE)
 - FORCEMAIN (FISH PROCESSING)
 - [FPP] FISH PROCESSING PLANT


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CLIENT  DISTRICT OF UCLUELET
 PROJECT **SANITARY MASTER PLAN**

TITLE **SEWAGE LIFT STATION SCHEMATIC FUTURE CONDITIONS**
 APPROVED _____ SCALE Not to Scale
 DATE JUNE 2023 DWG No. **FIGURE 27**
 PROJECT No. 1863

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12 CONCLUSIONS

Based on the findings of this study, the following conclusions are made:

Existing Dry Weather Sewage Flows

1. District of Ucluelet - A review of the total monthly pump run-hour readings for the Helen Road lift station indicate an average day dry weather flow of 1,000 m³/day (August 2018). This equates to ±520 litres per capita per day for the permanent residential population estimate of 1,930 for the District of Ucluelet.

Hitacu - An average day dry weather flow of 87 m³/day was recorded by the Hitacu community flow meter. This equates to ±305 litres per capita per day for the permanent residential population estimate of 284.

Existing Wet Weather Sewage Flows (Inflow & Infiltration)

2. Certain amounts of storm water inflow and infiltration (I/I) in a sanitary sewer system are unavoidable, but excessive amounts can:
 - overwhelm the systems (gravity mains, lift stations, forcemains and treatment processes), requiring large capital expenditures to handle the excess flows and volumes,
 - increase operation and maintenance costs (lift stations and sewage treatment facility), and
 - disrupt the performance of the sewage treatment facility.
3. A review of a lift station run-hour and sewage lagoon outfall flow meter readings shows flows increase noticeably with rainfall events and high rainfall events can result in a daily discharge volume from the lagoon that exceeds the District's licenced maximum day limit (4,750 m³/day).
4. Based on wet vs dry weather period run-hours, very high to high I/I is occurring in ten of the District's 14 lift station catchment areas as listed below:

Estimated Very High I/I

- Norah Rd lift station
- Hemlock St lift station
- Bay St lift station (decommissioned)
- Fraser Lane lift station
- Imperial Lake lift station
- Edge/Kimoto lift station
- Helen Rd lift station

Estimated High I/I

- Peninsula Rd lift station
- Bay (simplex) lift station
- Reef Pt lift station

5. Only three (3) of the District's lift stations have a flow meter. Installation of flow meters on all lift stations, beginning with those with Very High I/I (see above and **Table 7**), would quantify the amount of I/I in each catchment area and the reduction in flows achieved through the implementation of an I/I control program.
6. On November 16, 2019, a heavy rainfall event (210 mm), resulting in the discharge volume from the sewage lagoon exceeding the licenced maximum day limit (4,750 m³/day) for three consecutive days (Nov 16 – 18), with the highest recorded discharge being 8,708 m³ on Nov 18. Of this volume:

- 1,000 m³ (less than 12%) was estimated to be attributed to actual sewage flow.

The remaining 7,708 m³ (88%) was estimated to be attributed to rainfall as follow:

- 27% (2,400 m³) attributed to rainfall on the surface of the sewage lagoon, and
- 61% (5,308 m³) attributed to I/I within the sewage collection system.

Inflow & Infiltration Impact on Sewage Lagoon

7. I/I flow has a negative impact on the treatment capacity of the sewage lagoon by reducing the hydraulic retention time. During a dry summer, the hydraulic retention time can reach 23 days. This compares to only 5 days during a very heavy rainfall event (Nov 16 – 18, 2019). A hydraulic retention time of 12 days could be considered appropriate for the District's sewage lagoon system.
8. It is anticipated that the current storage volume of the sewage lagoon system (22,700 m³) can treat an annual average day flow of 1,975 m³/day which corresponds to a permanent population of 2,900. However, the licenced average day discharge limit from the sewage lagoon is 1,855 m³/da. This corresponds to a permanent population of 2,610, which may be reached within the next 13 years (by Year 2036).
9. Expansion of cell 4 from its present 3,000 m³ of storage to 6,400 m³ could service an additional 850 permanent residents.
10. Reductions in I/I would improve the performance of the sewage lagoon during the fall and winter months and accommodate additional population growth without requiring expansion of cell 4 and/or the need for the addition of a sewage treatment plant.

Populations, District of Ucluelet and Hitacu

11. The 2021 Census recorded a permanent population of 2,066 for the District of Ucluelet and 321 for Hitacu.
12. The District's OCP anticipates the permanent population to reach 2,600 by Year 2050 based on an annual averaged growth rate of 1.0% per year over 30 years (Year 2020 to Year 2050).

200 Year Flood Construction Levels

13. As many as six (6) of the District's lift stations are located below the recently developed 200 year flood construction levels. They are:
 - Reef Point
 - Edge (Kimoto)
 - Helen Road
 - Imperial Lane
 - Fraser Lane
 - Hemlock St

Future Municipal Lift Station

14. Two future lift stations are anticipated based on the OCP future growth areas (**Figure 25**):
 - Seaplane Base Rd
 - Coast Guard Rd

Lift Station Pumping Capacity Increases

15. Increased pumping capacity is required now at two stations:
 - Hemlock St

- Victoria Rd

The Hemlock Rd increase can be delayed with the relocation of the Norah Rd lift station forcemain point of discharge to the Big Beach lift station catchment. This relocation would facilitate some of the anticipated development within the Peninsula Road lift station catchment until the Peninsula Road lift station forcemain point of discharge is relocated to the Forbes Road lift station catchment.

The Victoria Rd increase can be prevented with the relocation of the discharge of the Big Beach lift station forcemain.

16. Increased pumping capacity is required at five other lift stations to accommodate future growth:

- Peninsula Rd
- Olson Rd
- Forbes Rd
- Big Beach
- Helen Rd

Gravity Main Upgrades

17. Upgrading of gravity mains have been identified for the immediate-term and longer-term:

Immediate-Term

- Peninsula Rd 390 m Otter St to Marine Dr
- Marine Dr 80 m Rupert Rd to Helen Rd
- Helen Rd 125 m Rupert Rd to 1141 Helen Rd
- Peninsula Rd 170 m Norah St to Lyche Rd
- Peninsula Rd 20 m at Seaplane Base Rd
- Hemlock St 115 m Lyche Rd to Existing Lift station
- Peninsula Rd 70 m 1860 Pen Rd to 1816 Pen Rd
- Peninsula Rd 285 m 1620 Pen Rd to Bay St
- Bay St 40 m Peninsula Rd to 1800 Bay St
- SRW 150 m 1685 Peninsula Rd to Cedar Rd

Longer-Term

- Various Areas 1,640 m upgrading 100 mm and 150 mm dia.
- Peninsula Rd 200 m 1002 Peninsula Rd to Coast Guard Rd
- Helen Rd 155 m Otter St to Garden St

Lift Station Forcemain Point of Discharge Relocation

18. To accommodate the future growth anticipated in the OCP (see **Figure 25**) the relocation of the point of discharge for the following lift stations is required based on Routing Option E:

- Norah Rd lift station forcemain to discharge to Big Beach lift station catchment area.
- Olson Bay lift station forcemain to discharge to the Forbes Road lift station catchment area.
- Peninsula Rd lift station forcemain to discharge to the Forbes Road lift station catchment area.

- Big Beach lift station forcemain to discharge to the Helen Road lift station catchment area.
19. The relocation of the point of discharge of the forcemain servicing the Fraser Lane and Imperial Lane lift station to the gravity manhole on Helen Rd at Otter St will facilitate the abandonment of the section of forcemain in the foreshore.

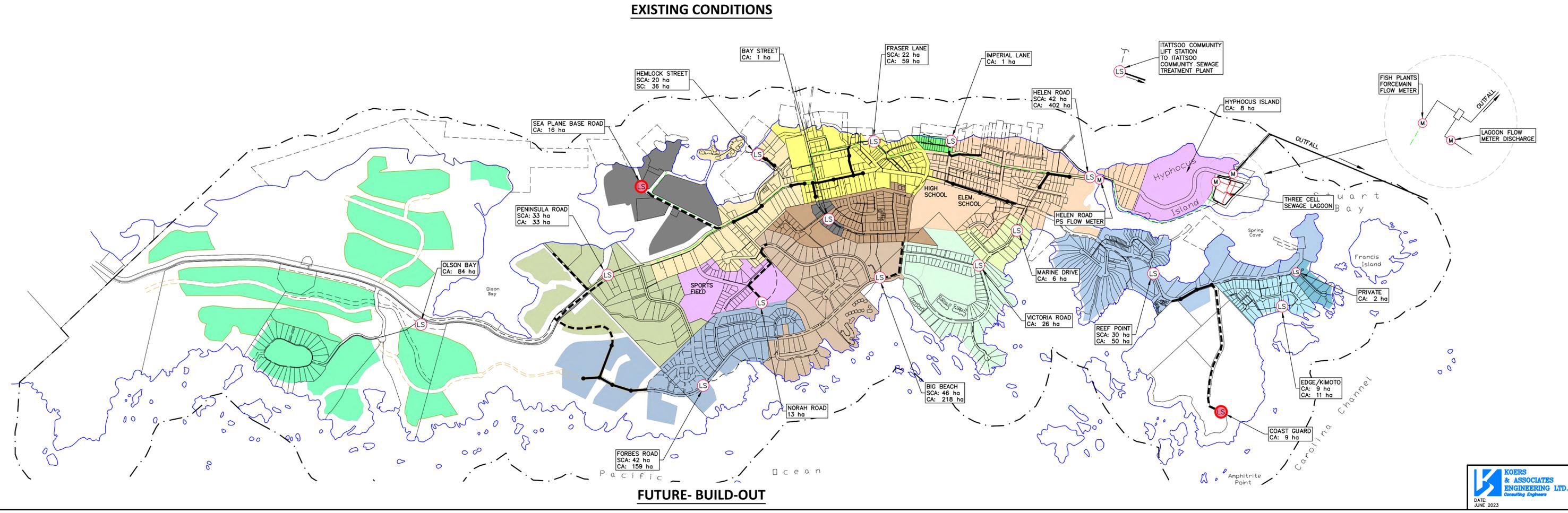
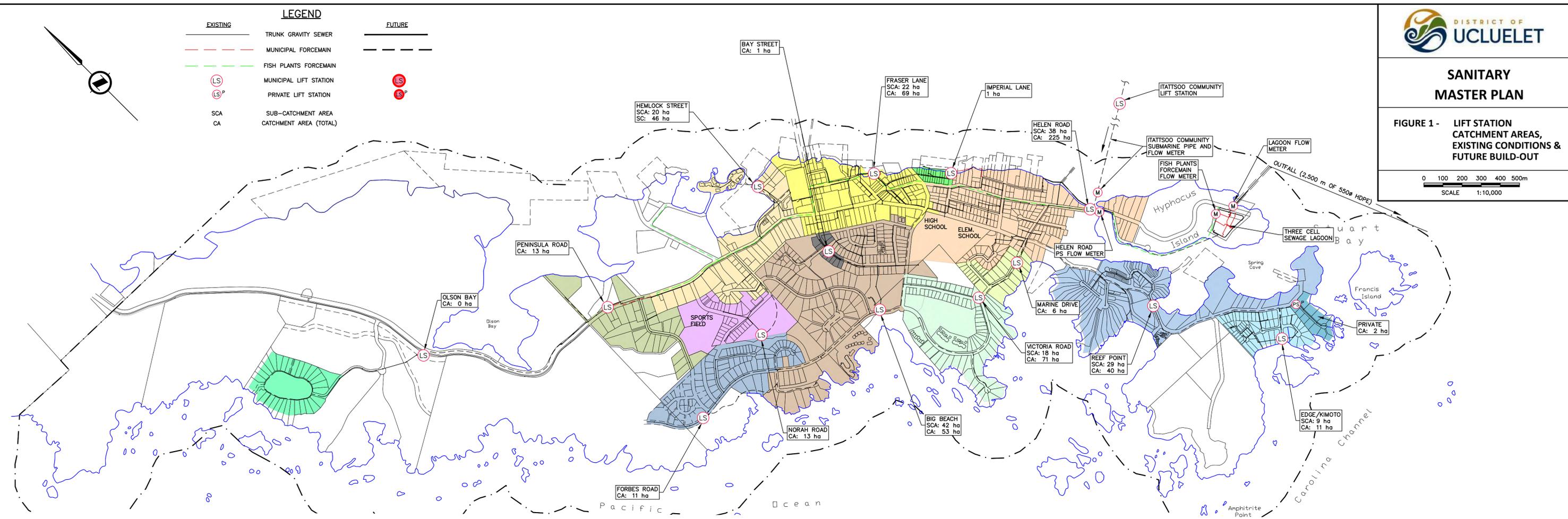
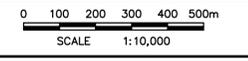
13 RECOMMENDATIONS

Based on the conclusions listed in this report, it is recommended that the District carry out the following in the order they are listed:

1. Carry out a major amendment to the District's Development Cost Charge Bylaw.
2. Develop an annual Infiltration & Inflow Identification and Reduction Program to aggressively pursue the identification and reduction in I/I in the sewage collection system.
3. Carry out the immediate term gravity main and lift station upgrade projects (**Table 19**) to meet existing needs and to accommodate future growth.
4. Carry out the longer-term proposed works (**Table 20**) to accommodate future growth and strengthen system operation.

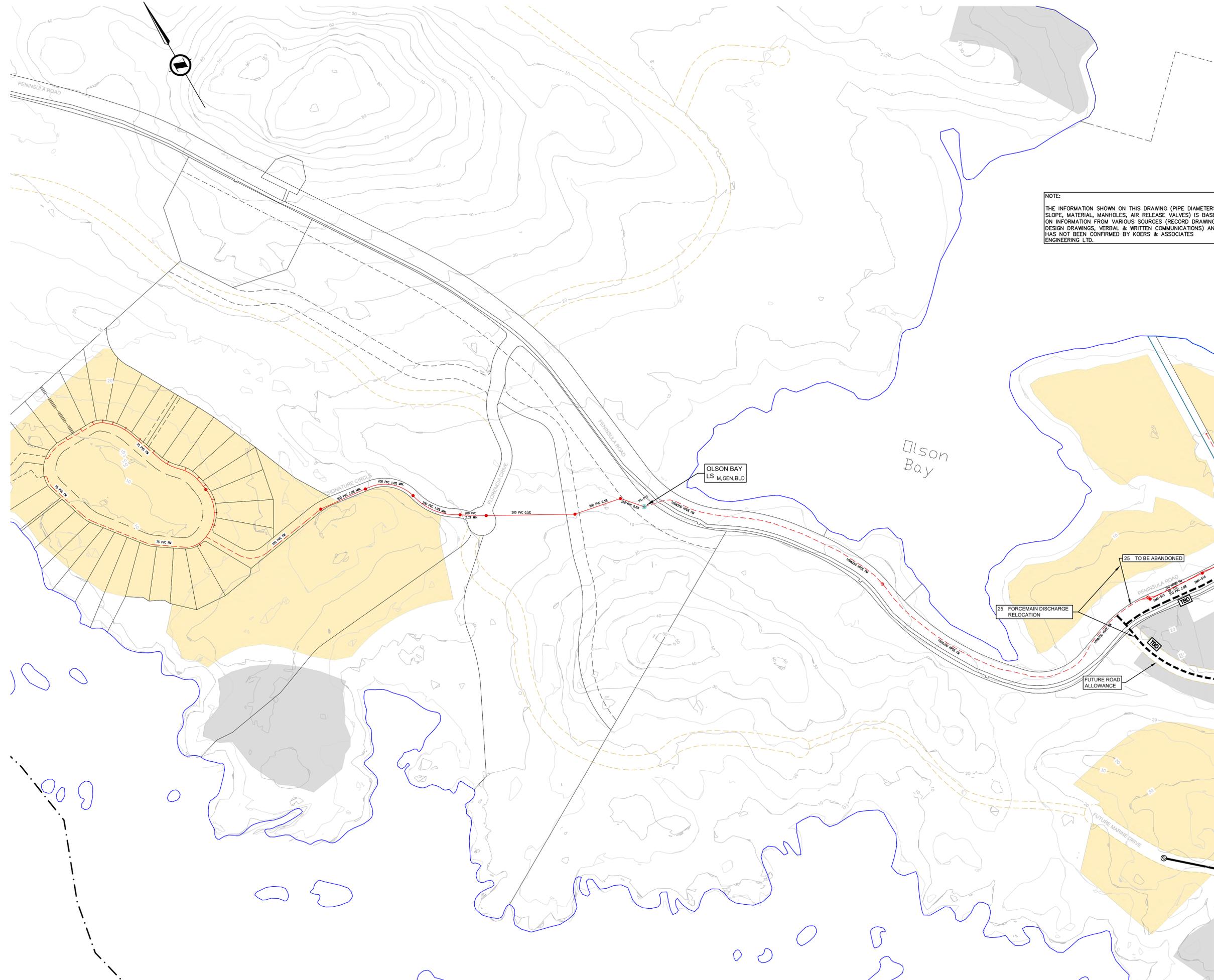
SANITARY MASTER PLAN

FIGURE 1 - LIFT STATION CATCHMENT AREAS, EXISTING CONDITIONS & FUTURE BUILD-OUT



Development Limits Caused by Sanitary Sewer Capacity James Macintosh, D.L.

Page 206 of 227



NOTE:
 THE INFORMATION SHOWN ON THIS DRAWING (PIPE DIAMETERS, SLOPE, MATERIAL, MANHOLES, AIR RELEASE VALVES) IS BASED ON INFORMATION FROM VARIOUS SOURCES (RECORD DRAWINGS, DESIGN DRAWINGS, VERBAL & WRITTEN COMMUNICATIONS) AND HAS NOT BEEN CONFIRMED BY KOERS & ASSOCIATES ENGINEERING LTD.

PROJECT No. & DESCRIPTION
 (SEE TABLES 19 & 20 IN REPORT)

23 FORCEMAIN DISCHARGE RELOCATION

LEGEND

EXISTING		FUTURE
SP-408 200 P.C. 0.5%	SANITARY (GRAVITY)	375 @ 0.5%
SP-411 100 AC 8.4%	TABLE 20 (PROJECT 18)	150/200
SP-425 200 P.C.	SANITARY (FORCEMAIN)	---
SMH-475	MANHOLE	⊙
FS-42	LIFT STATION	⊙
---	FORCEMAIN (FISH PLANT)	---
---	PIPE DIAMETER AND SLOPE TO BE DETERMINED	TBD
LS M	LIFT STATION FLOW METER	---
GEN	LIFT STATION GENERATOR	---
BLD	LIFT STATION ELECTRICAL / CONTROL BUILDING	---
---	SUB-CATCHMENT BOUNDARY	---
---	FUTURE RESIDENTIAL DEVELOPMENT	Yellow
---	FUTURE NON-RESIDENTIAL DEVELOPMENT	Grey

1:2,500 0 50 150m

SEAL
 PERMIT TO PRACTICE No. 1001658

PROJECT NO.	1863
DRAWN	RC
DESIGNED	
CHECKED	CH
APPROVED	CD
DATE	JUNE 2023
SCALE	1:2500

CLIENT
DISTRICT OF UCLUELET

PROJECT
SANITARY MASTER PLAN

TITLE
SANITARY SEWER NETWORK EXISTING & PROPOSED

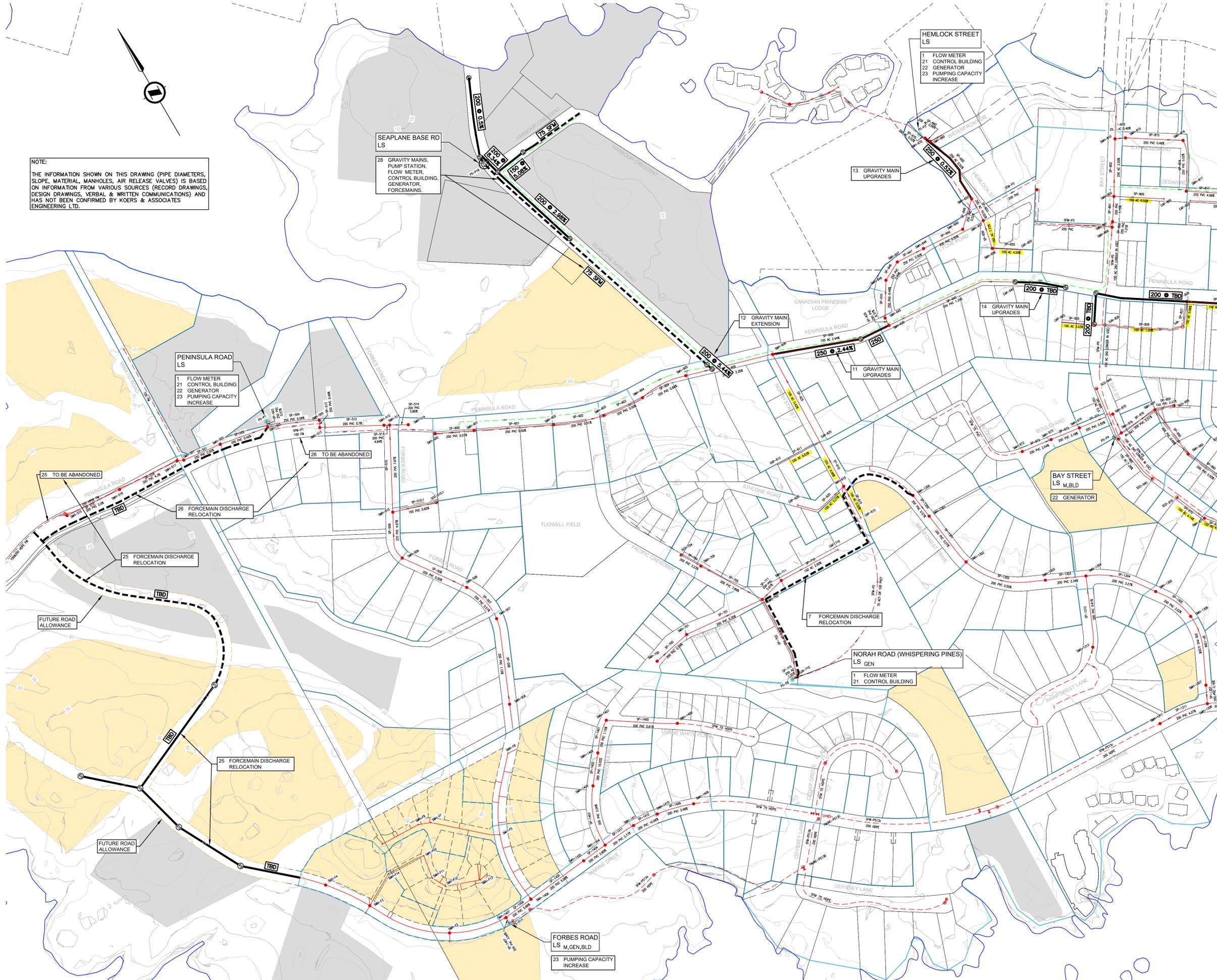
DRAWING No.	REV.	SHEET
1863-SAN-1		1/4

Development Limits Caused by Sanitary Sewer Capacity James Macintosh Di...

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NOTE:
 THE INFORMATION SHOWN ON THIS DRAWING (PIPE DIAMETERS, SLOPE, MATERIAL, MANHOLES, AIR RELEASE VALVES) IS BASED ON INFORMATION FROM VARIOUS SOURCES (RECORD DRAWINGS, DESIGN DRAWINGS, VERBAL & WRITTEN COMMUNICATIONS) AND HAS NOT BEEN CONFIRMED BY KOERS & ASSOCIATES ENGINEERING LTD.



PROJECT No. & DESCRIPTION
 (SEE TABLES 19 & 20 IN REPORT)

23 FORCEMAIN DISCHARGE RELOCATION

LEGEND	
EXISTING	FUTURE
SP-408 200 PC 0.50%	SP-408 375 Ø 0.5%
SP-611 100 AC 8.4%	TABLE 20 (PROJECT 18) 150/200
SP-PS SANITARY (FORCEMAIN)	----- SANITARY (FORCEMAIN)
SM-975 MANHOLE	⊙ MANHOLE
LS-PS LIFT STATION	⊙ LIFT STATION
----- FORCEMAIN (FISH PLANT)	----- FORCEMAIN (FISH PLANT)
TBD PIPE DIAMETER AND SLOPE TO BE DETERMINED	TBD PIPE DIAMETER AND SLOPE TO BE DETERMINED
LS M LIFT STATION FLOW METER	⊙ LIFT STATION FLOW METER
GEN LIFT STATION GENERATOR	⊙ LIFT STATION GENERATOR
BLD LIFT STATION ELECTRICAL / CONTROL BUILDING	⊙ LIFT STATION ELECTRICAL / CONTROL BUILDING
----- SUB-CATCHMENT BOUNDARY	----- SUB-CATCHMENT BOUNDARY
----- FUTURE RESIDENTIAL DEVELOPMENT	----- FUTURE RESIDENTIAL DEVELOPMENT
----- FUTURE NON-RESIDENTIAL DEVELOPMENT	----- FUTURE NON-RESIDENTIAL DEVELOPMENT



SEAL
PERMIT TO PRACTICE No. 1001658
PROJECT NO. 1863
DRAWN RC
DESIGNED
CHECKED CH
APPROVED CD
DATE JUNE 2023
SCALE 1:2500

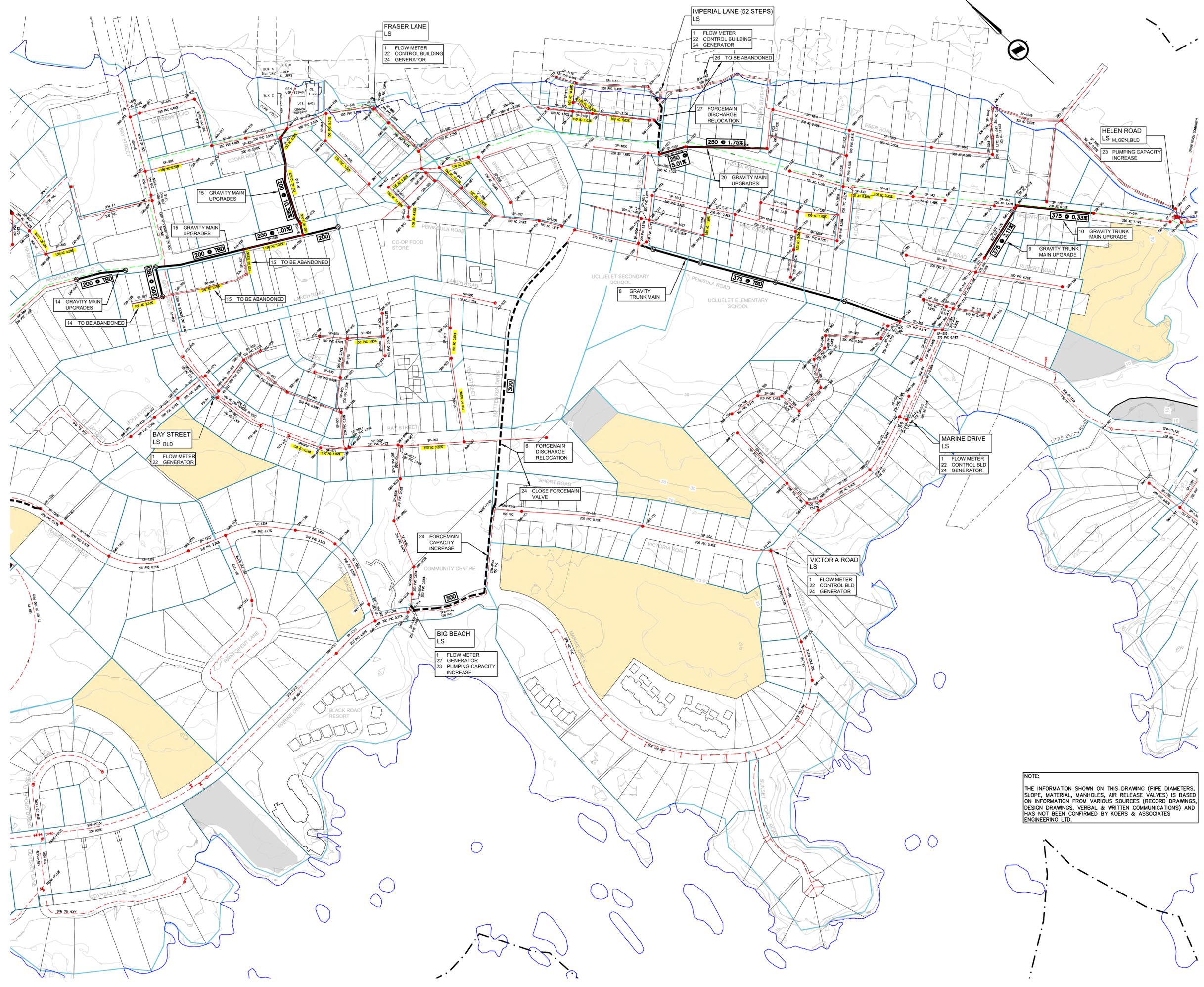
CLIENT
DISTRICT OF UCLUELET

PROJECT
SANITARY MASTER PLAN

TITLE
SANITARY SEWER NETWORK EXISTING & PROPOSED

DRAWING No.	REV.	SHEET
1863-SAN-2		2/4

File: Report_Figures.dwg Plot Time: Jun 29, 2023 - 11:37am User: rcove
 Development Limits Caused by Sanitary Sewer Capacity James Macintosh, Di...



PROJECT No. & DESCRIPTION
 (SEE TABLES 19 & 20 IN REPORT)

23 FORCEMAIN DISCHARGE RELOCATION

LEGEND

EXISTING	FUTURE
SP-408 200 PC 0.50%	375 @ 0.5%
SP-411 100 AC 0.4%	150/200
SP-25	SANITARY (FORCEMAIN)
SP-975	MANHOLE
SP-75	LIFT STATION
	FORCEMAIN (FISH PLANT)
	PIPE DIAMETER AND SLOPE TO BE DETERMINED
LS M	LIFT STATION FLOW METER
GEN	LIFT STATION GENERATOR
BLD	LIFT STATION ELECTRICAL / CONTROL BUILDING
	SUB-CATCHMENT BOUNDARY
	FUTURE RESIDENTIAL DEVELOPMENT
	FUTURE NON-RESIDENTIAL DEVELOPMENT

1:2,500 0 50 150m

SEAL
 PERMIT TO PRACTICE No. 1001658

PROJECT NO. 1863
 DRAWN RC
 DESIGNED
 CHECKED CH
 APPROVED CD
 DATE JUNE 2023
 SCALE 1:2500

CLIENT
DISTRICT OF UCLUELET

PROJECT
SANITARY MASTER PLAN

TITLE
SANITARY SEWER NETWORK EXISTING & PROPOSED

DRAWING No. 1863-SAN-3
 REV. SHEET 3/4

NOTE:
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File: Report_Figures.dwg Plot Time: Jun 29, 2023 - 11:37am User: rcave
 Development Limits Caused by Sanitary Sewer Capacity James Macintosh, Di...



**KOERS
& ASSOCIATES
ENGINEERING LTD.**
Consulting Engineers

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194 MEMORIAL AVENUE
PARKSVILLE, BC V9P 2G8
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Fax: (250) 248-5362
www.koers-eng.com

July 10, 2023
2335-01

VIDKA Holdings Ltd.
c/o Tectonica Management Inc.
#201 – 890 Crace Street
Nanaimo, BC V9R 2T3

Attention: Mr. Darren Moss

Re: 2094 Peninsula Road, Ucluelet
Proposed Health Center, Off-Site Water & Sanitary Sewer Impact Review

As requested, we have conducted a review of the potential impact of the proposed development on the District of Ucluelet's sanitary sewer collection system.

1 PROPOSED DEVELOPMENT

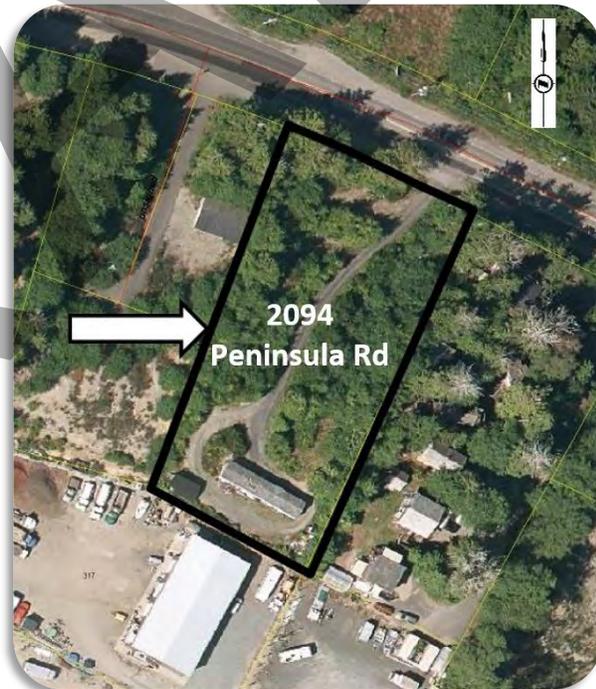
.1 Property Location & Proposed Use

It is understood that a health care building is proposed to be constructed on the property (2094 Peninsula Rd) and that the building will act as a hub for Island Health.

The building will consist of office space and treatment space (wound care, dressing changes, etc.).

.2 Water & Sanitary Design Loads

The building layout and floor space information was not provided as part of this servicing review. Water demands and sanitary sewer flows were provided by Tectonica Management Inc. in their email dated May 26, 2023 to Koers & Associates Engineering Ltd., and is presented in [Table 1](#).



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July 11, 2023
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VIDKA Holdings Ltd.
c/o Tectonica Management Inc.
Mr. Darren Moss

Table 1 – Water & Sanitary Design Loads ⁽¹⁾

Description	Number of Items #	Fixture Unit Count #	Probable Peak Demand L/s
Water System (potable) ⁽²⁾			
- toilets	10	-	-
- sinks	26	-	-
- hose bids	4	-	-
Total:	40	-	-
Sanitary Sewer System			
Total:	-	164	2.1

Notes:

- (1) All information provided by Tectonica Management Inc. in their email dated May 26, 2023 to Koers & Associates Engineering Ltd.
- (2) Tectonica indicated that the building size does not require it to be sprinklered and this no sprinkler water demand was provided.

2 IMPACT ON WATER DISTRIBUTION SYSTEM

.1 Pressure Zone

The property is serviced from the District's Highway Reservoir which has a top water level of 65 m geodetic.

The District's on-line map (UkeeMap) indicates the ground elevation on the property ranges from 11.1 m at Peninsula Road to 24.6 m at the site of the mobile home on the property at the south end. This results in a static pressure ranging from 527 kPa (76 psi) at the Peninsula Rd property line to 395 kPa (576 psi) at location of the mobile home at the south end.

.2 Design Water Demands

The following water demands were used to assess the impact of the proposed development on the District's water distribution system. The modelled design demands are presented in [Table 2](#).

Table 2 – Design Water Demands

Description	Demand L/s
Peak Hour Demand	2.1 ⁽¹⁾
Maximum Day Demand	1.4 ⁽²⁾
Fire Flow Demand	n/a ⁽³⁾

Notes:

- (1) Provided by Tectonica Management Inc. in their email dated May 26, 2023 to Koers & Associates Engineering Ltd.

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KOERS & ASSOCIATES ENGINEERING LTD.



July 11, 2023
2335-01

3

VIDKA Holdings Ltd.
c/o Tectonica Management Inc.
Mr. Darren Moss

- (2) Calculated at $2/3^{\text{rds}}$ of Peak Hour Demand.
- (3) Fire flow demand for the proposed building are not known as the building design is still in progress.

.3 Computer Water Modelling Results

The modelled scenarios were:

- Peak Hour Demand, Existing Conditions with proposed development added
- Maximum Day Demand, Existing Conditions with proposed development added.

We assumed a building floor elevation of 18 m geodetic. Analysis of the current District of Ucluelet WaterCAD model shows the expected peak hour pressures at the proposed development and the available fire flow at the existing hydrant, in conjunction with maximum day demands are as follows.

Table 3 – Peak Hour Pressure, Existing Conditions
Water System Peak Hour Demand = 2.1 L/s

Location	Elevation m	HGL m	Pressure	
			kPa	(psi)
Proposed Connection	18	62.9	440	(64)

Table 4 – Available Fire Flow, Existing Conditions
Water System Max Day Demand = 1.4 L/s

Fire Hydrant Location	Ground Elevation m	Available Fire Flow L/s	Residual Pressure kPa (psi)
Peninsula Rd, northwest corner of 2094 Peninsula Rd	10	100	418 (61)
Peninsula Rd, at 2081 Peninsula Rd (near Forbes Road intersection)	9.5	100	466 (68)

Notes:

- The available fire flows in **Table 4** have been evaluated as concurrent flows.
- The location of the fire hydrant is shown in the attached **Dwg No. 2335-01**.

The maximum available fire flow listed in **Table 4** is based on a maximum velocity of 3.5 m/s in the distribution system under maximum day plus fire flow demands, as recommended by the MMCD design guidelines. If a design fire flow greater than 200 lps is required, additional offsite improvements will be required.

.../4

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July 11, 2023
2335-01

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VIDKA Holdings Ltd.
c/o Tectonica Management Inc.
Mr. Darren Moss

3 IMPACT ON SANITARY SEWER COLLECTION SYSTEM

.1 Sanitary Sewer System Service Area

The property is located within the service area of the Peninsula Road lift station and is connected to the 250 mm dia. gravity main on Peninsula Rd that flows to the lift station.

The Peninsula Rd lift station discharges to:

- the catchment area of the Hemlock Road lift station, which discharges to
- the catchment area of the Fraser Lane lift station, which discharges to
- the catchment area of the Helen Road lift station, which discharges to
- the District's sewage lagoon.

The locations of the lift stations are shown in **Dwg No. 2335-02**.

.2 Gravity Collection System, to Peninsula Rd Lift Station

The existing 250 mm dia. gravity main on Peninsula Road which services the property has a reported minimum slope of 0.49% that results in a conveyance capacity of 37 L/s when flowing at 80% full (d/D=0.8).

The existing 250 mm dia. main on Peninsula Road is adequate to service the proposed development.

.3 Peninsula Rd Lift Station

A review of the lift station indicates that it is capable of handling the calculated peak design flow from the proposed development as shown in **Table 5**.

Table 5 – Peninsula Rd Lift Station Design Inflow and Pumping Capacity Outflow

Sewage Lift Station	Design Peak Inflow			Outflow ^(2,4) (Pumping Capacity)	
	Existing ^(1,2) L/s	Proposed Development ⁽³⁾ L/s	Combined Total L/s	One Pump L/s	Both Pumps L/s
Peninsula Rd	5	2.1	7.1	9	12

Notes:

- (1) Existing Design Peak Flow are based on current zoning of the properties presently connected to the District's sanitary sewer system that contribute flow to these gravity mains.
- (2) Actual flows are not available as flows are not metered at the lift station; only pump run-hours are recorded.

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July 11, 2023
2335-01

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VIDKA Holdings Ltd.
c/o Tectonica Management Inc.
Mr. Darren Moss

- (3) Provided by Tectonica Management Inc. in their email dated May 26, 2023 to Koers & Associates Engineering Ltd.
- (4) The pumping rates are theoretical and are based on the intersection of the pump curve with the calculated total dynamic head curve of the lift station's discharge forcemain (290 m of 100 mm dia.). The lift station is reported to contain two Flygt model 3127.180 HT pumps equipped with 7.4 hp motors. The pump design duty point is 9.1 L/s at 16.5 m total dynamic head.

.4 Conveyance System

The increased duration of pumping in the Peninsula Road lift station will result in higher peak flows in the District's downstream sanitary sewer gravity mains and the pump stations that they drain to, which are:

- Hemlock St lift station, which discharges to
- Fraser Lane lift station, which discharges to
- Helen Road lift station.

As shown in **Table 6**, the analyses indicates that upgrading of the pumping capacity of the Hemlock Street lift station is required to service the proposed development.

Table 6 –Downstream Lift Station Design Inflow and Pumping Capacity Outflow

Sewage Lift Station	Design Peak Inflow			Outflow (Pumping Capacity)	
	Existing L/s	Proposed Development L/s	Combined Total L/s	One Pump L/s	Both Pumps L/s
Hemlock St	27	2.1	29.1	20	29
Fraser Lane	40	2.1	42.1	48	63
Helen Road	89	2.1	91.1	124	144

In addition to the lift station the following gravity mains in the Hemlock Street catchment area exceed their capacity.

- Peninsula Road, Norah Street to Lyche Street
- Hemlock Street, Lyche Road to Hemlock Street lift Station

Given the condition of the Hemlock Street lift station an alternative option is to reduce the flows in the Hemlock Street lift station catchment area by redirecting flows from the Norah lift station to the Big Beach lift station. This would require the rerouting of the discharge of the existing forcemain from the intersection of Norah Street and Rainforest Drive to the start of the gravity system on Rainforest Drive as shown on **Dwg No. 2335-02**.

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July 11, 2023
2335-01

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VIDKA Holdings Ltd.
c/o Tectonica Management Inc.
Mr. Darren Moss

As shown in **Table 7**, the analyses indicates that Norah St lift station can be rerouted to the Big Beach lift station allowing additional pumping capacity in the Hemlock Street lift station for the proposed development.

Table 7 –Downstream Lift Station Design Inflow and Pumping Capacity Outflow with Norah St Rerouted to Big Beach

Sewage Lift Station	Design Peak Inflow			Outflow (Pumping Capacity)	
	Existing L/s	Proposed Development L/s	Combined Total L/s	One Pump L/s	Both Pumps L/s
Hemlock St ⁽¹⁾	19	2.1	21.1	20	29
Fraser Lane ⁽¹⁾	32	2.1	34.1	48	63
Norah St ⁽²⁾	8		8	20	29
Big Beach ⁽²⁾	26	8 ⁽²⁾	34	34	44
Helen Road	89	2.1	91.1	124	144

Notes:

- (1) Hemlock St lift station receives flow from Peninsula Road lift station and discharges to the Fraser Lane lift station, which discharges to Helen Road lift station.
- (2) Norah Street lift station discharges to Big Beach lift station under this option. The additional flow to the Big Beach lift station under this option is due to the proposed development and it represents the Norah Street lift station discharge. The Big Beach lift station discharges to Helen Road lift station.

Off-Site Works Required for Proposed Development (see Dwg No. 2335-02)

- **Option 1** - Reroute the discharge of the Norah Street lift station forcemain to the Big Beach lift station catchment on Rainforest Drive.

OR

- **Option 2** - Upgrade gravity mains that receive flow from the Peninsula Rd lift station forcemain:
 - i) Peninsula Road, Norah St to Lyche Rd,
 - ii) Hemlock Street, Lyche Rd to Hemlock Street lift station

and upgrade the pumping capacity of the Hemlock Street lift station.

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July 11, 2023
2335-01

7

VIDKA Holdings Ltd.
c/o Tectonica Management Inc.
Mr. Darren Moss

We note that this review has not been received by the District of Ucluelet and is subject to their approval. We trust this is the information you require at this time. Please do not hesitate to contact us should you have any questions.

Yours truly,

KOERS & ASSOCIATES ENGINEERING LTD.

Chris Holmes, P.Eng.
Project Engineer

Chris Downey, P.Eng.
Project Manager

Permit to Practice No. 1001658

Attachments

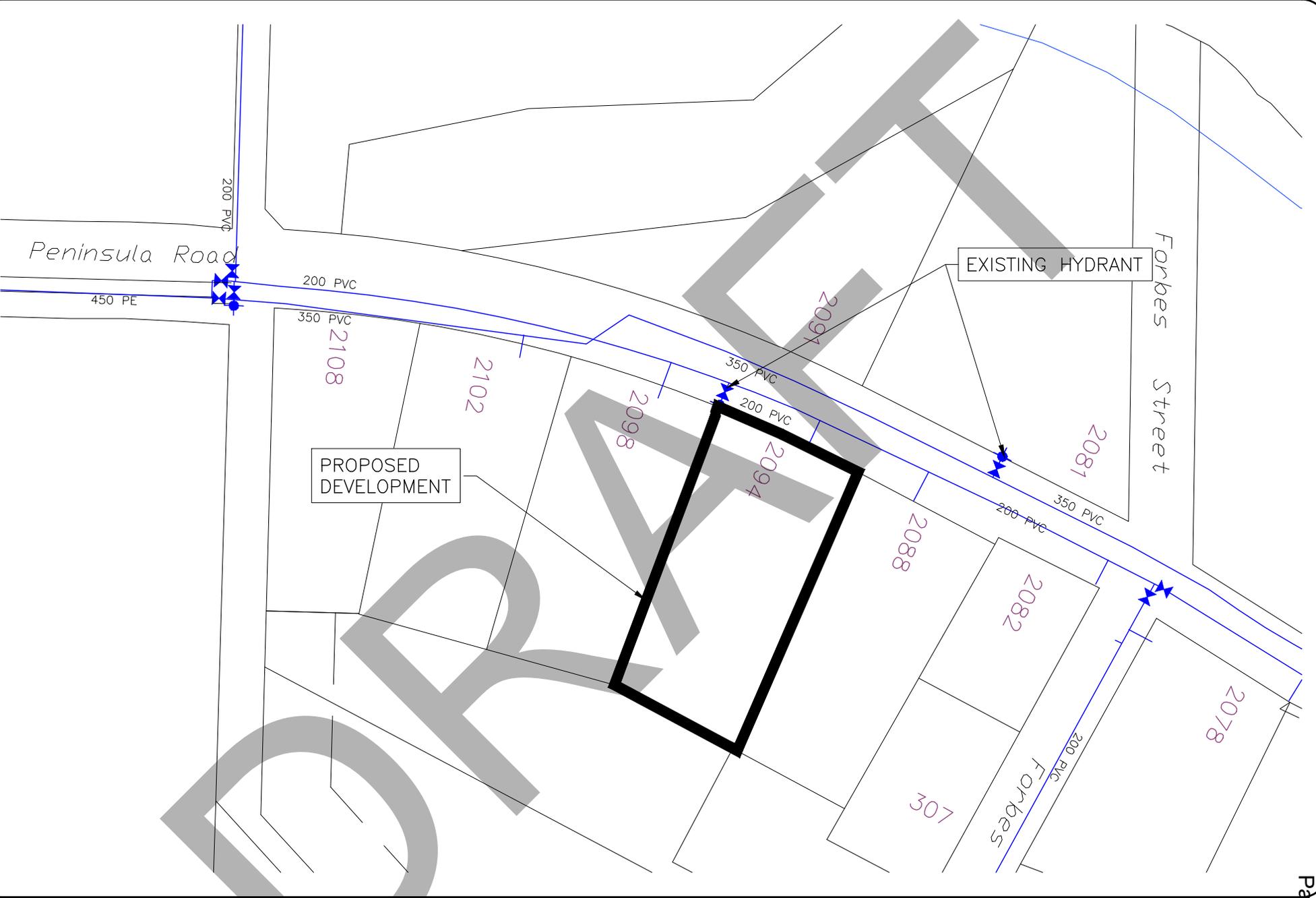
Dwg No. 2335-01 Existing Water Distribution System

Dwg No. 2335-02 Existing Sanitary Sewer Collection System

KOERS & ASSOCIATES ENGINEERING LTD.



Development Limits Caused by Sanitary Sewer Capacity James MacIntosh, Di

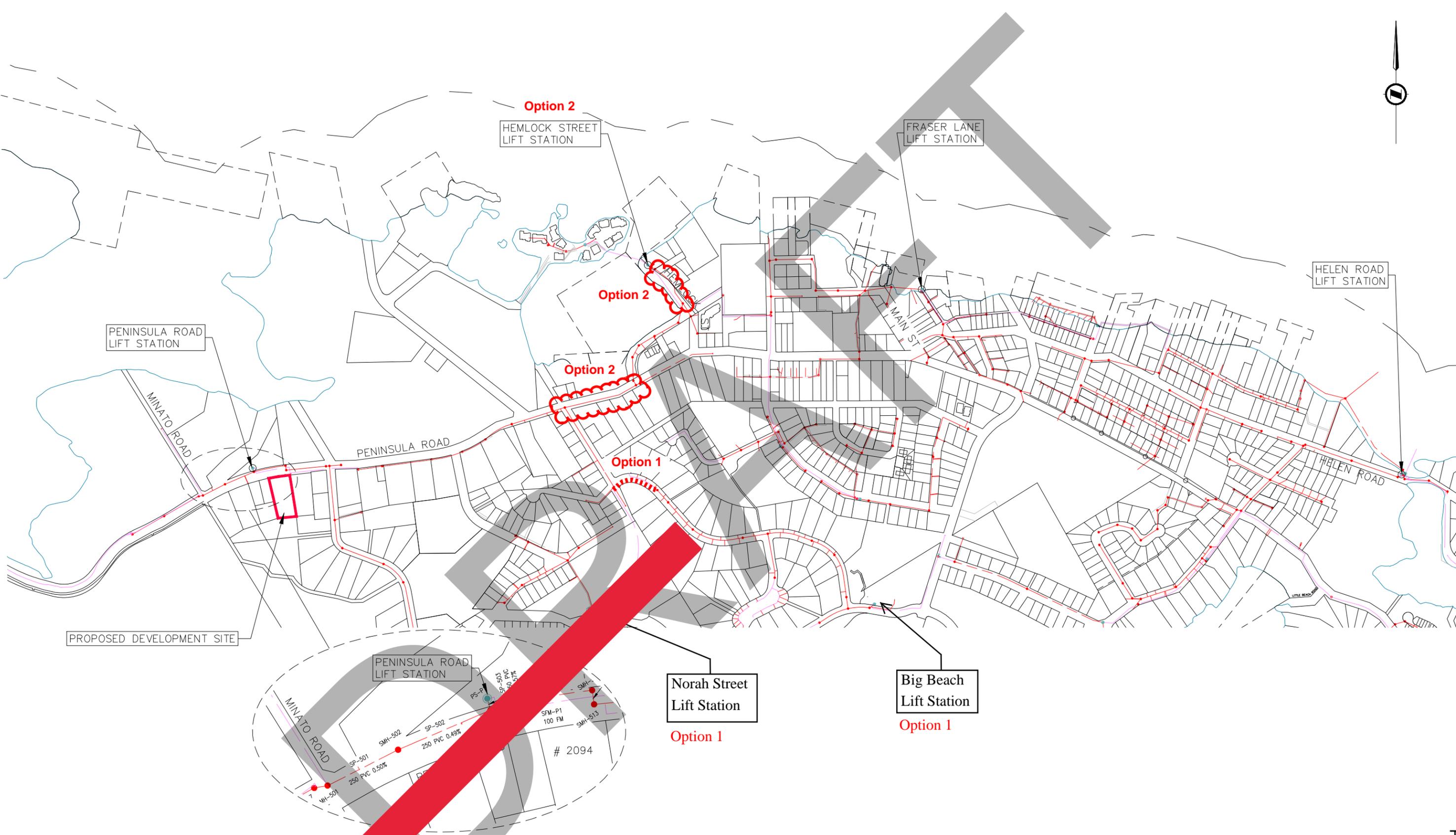


KOERS & ASSOCIATES ENGINEERING LTD.
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CLIENT	VIDKA HOLDINGS LTD c/o TECTONIA MANAGEMENT INC
PROJECT	WATER REVIEW 2094 PENINSULA ROAD

TITLE		DISTRICT OF UCLUELET EXISTING WATER SYSTEM	
APPROVED	CD	SCALE	NTS
DATE	JUNE 2023	DWG No.	2335-
PROJECT No.	2335		

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 Development Limits Caused by Sanitary Sewer Capacity James MacIntosh, Di...




KOERS & ASSOCIATES
ENGINEERING LTD.
Consulting Engineers

CLIENT: VIDKA HOLDINGS LTD.
 c/o TECTONICA MANAGEMENT INC.
 PROJECT: SANITARY SEWER REVIEW
 2094 PENINSULA RD
 (PROPOSED HEALTH CARE BUILDING)

TITLE		DISTRICT OF UCLUELET EXISTING SANITARY SEWER COLLECTION SYSTEM	
APPROVED	CH	SCALE	1:8000
DATE	JUNE 27, 2023	DWG No.	2335-02
PROJECT No.	2335		



INFORMATION REPORT TO COUNCIL

Council Meeting: October 23, 2023
500 Matterson Drive, Ucluelet, BC V0R 3A0

FROM:	BRUCE GREIG, DIRECTOR OF COMMUNITY PLANNING	FILE NO: 6630-24 HAF
SUBJECT:	CMHC HOUSING ACCELERATOR FUND – ACTION PLAN	REPORT NO: 23-138

PURPOSE:

To update Council on the CMHC Housing Accelerator Fund (HAF) application, with detail of the proposed actions, housing projections and funding plan.

BACKGROUND:

This spring, the Government of Canada announced through the Canada Mortgage and Housing Corporation (CMHC) a new, one-time Housing Accelerator Fund (HAF) program available to local governments. A report was provided to Council at its [June 8, 2023, regular meeting](#). At that meeting Council directed staff to prepare an application to the HAF grant program as a strategic priority.

Ucluelet subsequently submitted an application to the HAF program in August.

The goal of the \$4 billion federal HAF program is twofold: to provide incentive for the creation of 100,000 more housing units (above what would have been built otherwise) across the country over four years, and to create long-term structural changes to streamline how housing developments are approved by local communities. The overall goal is to create more supply - and more diverse forms - of housing.

Two required components of a HAF application are:

1. an **action plan** with specific initiatives aimed at accelerating the development of new housing; and,
2. a **funding plan**, which is quite flexible.

Discussion:

The CMHC is beginning to announce grants awarded under the HAF program. So far, the announcements have been for larger cities and communities (London, Hamilton, Halifax). It is expected that awards to rural communities will be announced before the end of the year. The HAF program aligns well with a number of actions that are already forecast by the OCP and the recent strategic planning discussions of Council. Funding from the HAF program could provide

additional capacity to tackle a number of projects and changes sooner rather than later. Deciding to pursue the HAF program commits staff time to this initiative; it means a commitment to improving the local context for new housing development.

The initiatives included in the “action plan”:

1. streamline permitting processes:
 - i. delegate authority for issuing Development Permits;
 - ii. delegate authority for issuing variances when creating new accessory housing units;
 - iii. adopt streamlined terms of reference for environmental DP studies;
 - iv. adopt streamlined form & character Development Permit Area guidelines;
 - v. adopt new Development Application Procedures bylaw;
 - vi. adopt updated Building bylaw to ensure consistency with west coast communities;
 - vii. streamline permit processing and filing systems;
 - viii. offer a 5-day residential building permit stream;
2. realign regulations to match housing needs:
 - i. add secondary suites and accessory dwelling units in all residential zones;
 - ii. adopt a policy of targeting 75% of housing in new developments to be attainable by Ucluelet residential households;
 - iii. remove resort condo uses from commercial mixed-use zones to prioritize mixed-use forms of housing;
 - iv. cap the number of short-term vacation rentals in existing residential neighbourhoods;
 - v. remove short-term vacation rentals from zoning in new residential neighbourhoods;
 - vi. apply rental-only zoning to existing and future rental housing developments;
 - vii. pre-zone appropriate lands for multi-family housing
3. create housing incentives:
 - i. initiate and communicate an “amnesty” program for legalizing secondary suites;
 - ii. offset permit fees for legalizing existing secondary suites;
 - iii. create a prospective applicant information package, checklist and video for new accessory dwellings;
 - iv. offset permit fees for creating new accessory dwelling units (secondary suites or ADU’s);
 - v. require an occupied accessory dwelling prior to permitting a short-term rental;
 - vi. create a municipal interest-free loan program for building new secondary suites and ADU’s;
 - vii. explore the use of local improvement charges as a financing option for the creation of new accessory dwellings;

4. align infrastructure priorities with community goals for new housing:
 - i. update the Development Cost Charges bylaw to align with updated infrastructure master plans and long-term capital plans;
 - ii. update Subdivision and Development Servicing Standards bylaw to streamline the creation of low-impact development and green infrastructure;
 - iii. review infrastructure master plans to ensure infill and densification are prioritized and adequately serviced;
 - iv. identify and fix infiltration to extend capacity of existing sewer system;
 - v. complete asset management program and long-term capital strategy;
5. develop affordable housing:
 - i. partner with non-profit housing developers and operators to create new non-market housing;
 - ii. develop a Housing Authority function to support the application, vetting and monitoring of affordable housing units and housing agreements;
 - iii. support for-profit developers of attainable and affordable housing;
 - iv. identify, acquire and/or service land to support the development of workforce housing;
6. improve regional context for housing:
 - i. understand development goals of local Indigenous communities and, through servicing agreements, provide support (e.g., infrastructure, services) where appropriate;
 - ii. develop better protocols for referral on new major developments;

Common themes found throughout the tasks in the grant application include:

- accelerate efforts to modernize regulatory tools;
- update processes, bylaws, policies;
- make housing approvals clear, consistent and fast;
- match bylaws and processes to the housing needs of the community;
- lower barriers to creating new accessory dwellings;
- “right-size’ infrastructure to support new housing development;
- capture current construction costs of infrastructure while creating incentives in the form of cost reductions for beneficial forms of housing;
- work with local non-profits to increase supply of non-market housing in the community;

The HAF application required that staff identify milestones for each of the proposed tasks under the six housing actions (for future measurement of success and reporting back to CMHC). Many of the tasks share common elements that could serve as milestones on the District’s progress under the program:

- initiating planning process;
- hiring consultant(s) as required;

- Council input on options;
- develop communication strategy;
- develop communication materials;
- host information session / workshop etc.
- statutory referral (i.e., where required for new bylaws);
- public consultation & input;
- adoption (bylaw /policy / process change);

The projected impact on housing supply includes:

- doubling the number of accessory dwellings built in the next 4 years;
- in residential areas, shift from construction of tourist accommodation to re-focus on housing;
- accelerate the creation of ADU housing as infill;
- accelerate infrastructure upgrades to support infill housing;
- increase local capacity to build and manage non-market housing.

System impacts stemming from these changes include:

- streamline the application process;
- provide a more predictable system of approvals and timelines;
- cut permit processing times;

Other expected results of pursuing this initiative include:

- de-mystify municipal processes;
- improve framework for long-term infrastructure funding decisions;
- build on relationships with other agencies on the west coast with a shared interest in improving the housing situation;
- organizational provide in making progress on the housing challenges facing the community;

Housing Projections:

2. Action Plan	
Section B: Targets and Other Estimates	
Projections should be based on a three-year period ending no later than September 1, 2026.	
1. Total number of housing units projected to be permitted without any support afforded by HAF. If this projection does not align with historical trends as provided in Section E: Historical Building Permit Issuances, use the comment box below to explain and provide supporting details or analysis.	75
<p>Comments</p> <p>Based on 2016 - 2021 census data of annual average of 25 new private dwellings occupied by usual residents per year.</p>	
Provide a breakdown by type of housing:	
1.1 Single detached homes	54
1.2 Multi-unit housing (in close proximity to rapid transit)	
1.3 Multi-unit housing (missing middle)	21
1.4 Multi-unit housing (other)	
Total:	75
2. Total number of housing units projected to be permitted with the support afforded by the HAF. This is referred to as the "HAF housing supply growth target."	345
Provide a breakdown by type of housing:	
2.1 Single detached homes	87
2.2 Multi-unit housing (in close proximity to rapid transit)	
2.3 Multi-unit housing (missing middle)	258
2.4 Multi-unit housing (other)	
Total:	345
Provide a breakdown by year of the HAF program:	
2.5 For the year ending September 1, 2024	99
2.6 For the year ending September 1, 2025	111
2.7 For the year ending September 1, 2026	135
Total:	345
3. Total number of "HAF incented units" (units projected with HAF minus units projected without HAF).	270
4. Percentage of affordable units projected to be permitted without any support afforded by HAF.	2.00%
5. Percentage of affordable units projected to be permitted with the support afforded by HAF.	15.00%
6. Total number of dwellings (i.e., current housing stock).	860
7. Projected average annual housing supply growth rate without HAF.	2.91%
8. Projected average annual housing supply growth rate with HAF aka Annual Growth Rate - Min. Target to exceed 1.1%	13.37%
9. Projected increase in the housing supply growth rate aka Annual Growth Rate percentage change - Min. Target 10%	360.00%
For the purposes of the HAF program and the affordable housing bonus, please indicate how the affordable units will be identified. This could include, for example, a local definition, other level of government definition, a program definition, or a combination thereof. While this is intended to accommodate the range of definitions used across the country, and to reflect the objectives of different programs, permitted units counted under the affordable housing bonus need to meet the "below market" intentions of HAF and affordable housing.	
Affordable housing units are identified as below-market ownership or rental units. These may include units developed by non-profit housing providers, under housing agreements with the municipality, or with funding support from agencies such as BC Housing. Ucluelet's policy and success in past projects has included a range of housing types attainable by local residents with middle incomes or less.	

As noted in the June report, an additional 270 homes represents significant growth for Ucluelet in the short term. It would still be consistent with the OCP growth projections if this housing is targeted to meet the current deficit of 250 – 350 residential units appropriate for current Ucluelet residents. Rental housing, secondary suites, accessory dwelling units and other forms of "missing middle" housing can meet the goals of the HAF program and the needs of the community.



Working Together Community Lunch:
West Coast - An Update Lisa...

Li Domae, President of North Island College,
and the NIC team invite you to be our guest at a

Working Together Community Lunch: NIC on the West Coast An Update

Drop in for coffee, lunch and conversation.

Friday, November 3, 2023, 12 – 2 pm
Quelet Community Centre
500 Matterson Dr

RSVP by email to president@nic.bc.ca

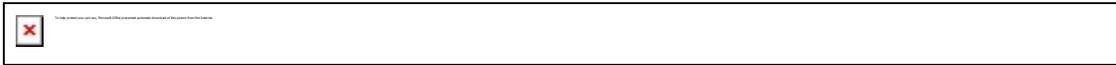


Admin Support

From: National Defence / Défense nationale
<DNDRemembrance.SouvenirMDN@forces.gc.ca>
Sent: October 11, 2023 6:01 AM
To: Info Ucluelet
Subject: Reminder: National Veterans' Week Speakers Program 2023 / Rappel: Programme national des conférenciers de la Semaine des vétérans de 2023

[External]

[View this email in your browser](#)



(Le français suit)

Register now for a presentation from a CAF speaker during Veteran's Week!

October 11, 2023

Calling all Educators and Community Leaders!

Earlier this year, we invited you to start thinking about what you could do this Veterans' Week (November 5-11) to make it memorable and to consider registering for our program – it's an engaging and educational way to bring history to life!

The Department of National Defence's National Veterans' Week Speakers Program (NVWSP) provides an opportunity for you to connect with active members of the military, giving your audiences a better understanding of how members of the Canadian Armed Forces (CAF) continue to contribute locally, nationally and around the world.

The NVWSP will be making available three options this year – in-person presentations, virtual presentations, and the pre-recorded NVWSP videos. There is no charge for this service, and we encourage you to submit your request early as we receive several thousand requests and may not be able to accommodate them all.

If you'd like your classroom or group to hear more about our members' stories, we offer both in person and virtual presentations. We also offer pre-recorded NVWSP videos that can be included as part of a presentation or could be viewed in preparation for a CAF members visit. The 2023 edition of our videos are geared toward various audiences and age levels and are a great addition to your Veterans' Week activities.

If you would like to register for any of those options, visit the 2023 National Veterans' Week Speakers Program webpage (<http://Canada.ca/caf-veterans-week-speakers>)

The deadlines to submit a request are as follows:

- In-person presentations - October 19;
- Virtual presentations - October 19; and
- CAF speaker videos - November 5.

Video links will be available by mid-October and will be shared with everyone who submits a request.

If you have any questions about this year's program, please contact our national coordinator, Mélodie Gratton at 1-833-223-8322 or via email at: DNDRemembrance.SouvenirMDN@forces.gc.ca.

To supplement your activities, Veterans Affairs Canada offers an array of free, bilingual learning resources available in electronic and print format to help students remember the importance of honouring Canada's veterans. Materials

can be ordered directly at: <http://www.veterans.gc.ca/educators>.

In celebration of the 75th anniversary of UN Peacekeeping, the Canadian Peacekeeping Veterans Association (CPVA) has developed an anthology that focuses on Canada's historic contributions to peacekeeping through the eyes of more than 100 individual Canadian peacekeepers and those who have significantly impacted and enabled their efforts. Please visit the CPVA site for more information: <https://www.cpva.ca/cpva-pk75-anthology>

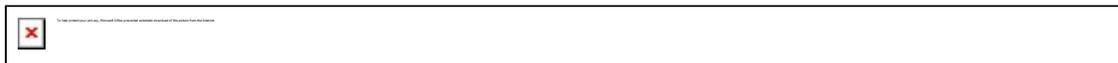
We also encourage you to consider writing to our troops. Our members truly appreciate hearing from Canadians. To find out how you can send a message to our members, please visit our Write to the Troops webpage (<https://www.canada.ca/en/department-national-defence/services/contact-us/write-troops.html>)

Sincerely,

Vance White

Manager, Stakeholder Engagement Team

Assistant Deputy Minister (Public Affairs), Department of National Defence



Inscrivez-vous dès maintenant afin d'inclure une présentation de conférencier des FAC dans vos activités de la Semaine des vétérans!

Le 11 octobre 2023

Appel à tous les éducateurs et dirigeants communautaires!

Plus tôt cette année, nous vous avons invités à réfléchir à ce que vous pourriez faire pour rendre la Semaine des vétérans (du 5 au 11 novembre) plus mémorable cette année et à envisager de vous inscrire à notre programme, qui vous offre une façon attrayante et éducative de faire revivre l'histoire!

Le Programme national des conférenciers de la Semaine des vétérans (PNCSV) du ministère de la Défense nationale vous offre la chance de rencontrer des membres actifs des Forces armées canadiennes (FAC) et de permettre à vos auditoires de mieux comprendre comment nos militaires continuent d'apporter leur contribution dans la communauté, au pays et partout dans le monde.

Cette année, le PNCSV proposera trois options, soit : des présentations en personnes, des présentations virtuelles et des vidéos préenregistrées. Ce service vous est offert gratuitement et nous vous encourageons à soumettre vos demandes le plus tôt possible, car nous recevons des milliers de demandes et il se peut que nous ne puissions pas toutes les satisfaire.

Ainsi, si vous souhaitez que votre classe ou groupe en apprenne davantage sur les récits de nos militaires, nous vous offrons des présentations en personne et virtuelle. Nous avons aussi préparé des vidéos préenregistrées qui peuvent être incluses dans le cadre d'une présentation ou être visionnées en préparation de la visite de membres des FAC. Nos vidéos conçues pour 2023 sont destinées à des publics et groupes d'âge variés et seront un excellent ajout à vos activités de la Semaine des vétérans.

Si vous souhaitez faire une demande pour profiter de ces options, veuillez visiter la page Web du Programme national des conférenciers de la Semaine des vétérans 2023 (<http://canada.ca/fac-conferenciers-semaine-veterans>).

Les dates limites pour présenter vos demandes sont les suivantes :

- Présentations en personne – 19 octobre;

- Présentations virtuelles – 19 octobre;
- Vidéos des conférenciers des FAC – 5 novembre.

Les liens pour les vidéos seront accessibles dès la mi-octobre et seront transmis à toutes les personnes qui soumettent une demande.

Pour toutes questions au sujet du programme de cette année, n'hésitez surtout pas à communiquer avec notre coordonnatrice nationale, Mélodie Gratton, par téléphone au 1-833-223-8322 ou par courriel à DNDRemembrance.SouvenirMDN@forces.gc.ca.

Par ailleurs, pour compléter vos activités, Anciens Combattants Canada offre également toute une panoplie de ressources d'apprentissage gratuites et bilingues sous forme électronique et imprimée pour aider les élèves à se souvenir de l'importance de rendre hommage aux vétérans du Canada. Ce matériel peut être commandé directement sur le site suivant : www.veterans.gc.ca/educateurs.

De plus, pour souligner le 75^e anniversaire de la première opération de maintien de la paix des Nations Unies, l'Association canadienne des vétérans pour le maintien de la paix a préparé une anthologie qui met l'accent sur les contributions historiques du Canada au maintien de la paix à travers les yeux de 100 soldats de la paix canadiens et de ceux et celles qui ont eu un impact significatif sur leurs efforts et les ont rendus possibles. Pour en savoir plus, visitez la page Web de l'Association : <https://www.cpva.ca/cpva-pk75-anthology>.

Enfin, nous vous encourageons aussi à écrire à nos militaires, qui sont toujours heureux que les Canadiens et les Canadiennes prennent le temps de communiquer avec eux. Pour découvrir comment envoyer un message à nos militaires, veuillez consulter notre page Web Écrivez aux militaires (<https://www.canada.ca/fr/ministere-defense-nationale/services/contactez->

[nous/crivez-militaires.html](#)).

Je vous prie d'agréer mes salutations distinguées.

Vance White

Gestionnaire, Équipe de l'engagement des partenaires

Sous-ministre adjoint (Affaires publiques), ministère de la Défense nationale



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